



19th TSCAP Annual Meeting

台灣兒童青少年精神醫學會十九周年年會暨學術研討會

# 較佳兒童精神臨床服務 - 實證醫療

Better Child Psychiatric Service - Evidence-Based Treatment

## 大會手冊暨論文摘要集

Date: JUN 11. 2017 (Sunday)

Venue: NTUH International Convention Center 台大國際會議中心3樓

(100 台北市中正區徐州路2號)



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**19<sup>th</sup> TSCAP Annual Meeting**  
**台灣兒童青少年精神醫學會十九周年年會暨學術研討會**  
**較佳兒童精神臨床服務—實證醫療**  
**Better Child Psychiatric Service - Evidence-Based Treatment**

Date: JUN 11, 2017 (Sunday)

Venue: NTUH International Convention Center

台大國際會議中心 3 樓

( 100 台北市中正區徐州路 2 號 )

時 間	內 容
8:00-8:40	報到
8:40-8:50	Opening Ceremony / 開幕式 President of TSCAP 高淑芬 理事長
8:50-10:00	Keynote Speech / 專題演講 外 賓：Prof. Bung Nyun Kim Gene-Environment, Brain and Behavior: ADHD Translational Research Center in Korea. 主持人：Prof. Susan SF Gau (高淑芬教授)
10:00-10:20	group photo 團體照 / Tea Break / 茶點時間
10:20-12:10	English Oral Presentation / 講述論文發表 主持人：陳映雪醫師、葉啟斌醫師 評 審：Prof. Bung Nyun Kim、宋維村醫師、陳映雪醫師、葉啟斌醫師 1. 自閉症類群疾患之扣帶迴結構與臨床症狀之相關研究 Cingulate anatomy in autism spectrum disorder and its association with symptom severity (簡意玲 Yi-Ling Chien 10:20~10:35) 2. 自閉症成人心智理論的神經基礎：社會動畫作業的功能性核磁造影研究 Neural substrates of Theory of Mind for Adults with Autism Spectrum Disorder: an fMRI Study of the Social Animation Task (陳庭 Ting Chen 10:35~10:50)

時 間	內 容	
10:40-12:20	3. 泛自閉症候群青少年、未發病手足與典型發展青少年之社交溝通技能的神經機轉差異 Neural substrates for the social communication in youths with autism spectrum disorder, unaffected siblings, and typically developing youths (羅仔君 Yu-Chun Lo 10:50~11:05) 4. 多巴胺轉運基因變異對於注意力不足過動症的紋狀體功能聯結之作用 The Effects of the Dopamine Transporter Gene Variants on the Striatal Functional Connectivity in Attention Deficit Hyperactivity Disorder (商志雍 Chi-Yung Shang 11:05~11:20) 5. 年齡對注意力不足過動症患者腦部結構之影響 Brain volume abnormalities in Attention-Deficit/Hyperactivity Disorder concerning age effect: A voxel-based morphometry study (蔡佳勸 Chia-Jui Tsai 11:20~11:35) 6. 注意力缺失過動疾患兒童中STS基因與SULT2A1基因多型性與神經內分泌物質 Polymorphisms of the STS gene and SULT2A1 gene and neurosteroid levels in children with attention-deficit/hyperactivity disorder (王亮人 Liang-Jen Wang 11:35~11:50)	
12:10-13:00	Committee Meeting / 會員大會、Lunch / 午餐 主持人：高淑芬理事長	
14:00-15:30	第一屆台灣兒童青少年精神醫學專科醫師 訓練教學與研習工作坊 工作坊（一）教師教學研討工作坊 （3樓301） 主持人：高淑芬理事長、邱顯智醫師 工作坊（二）受訓學員工作坊（2樓203） 主持人：丘彥南醫師、陳質采醫師	12:00-16:00 Poster Section / 壁報論文討論 主持人兼評審： 張學岑醫師、周文君醫師、 陳錦宏醫師、黃玉書醫師 （13:00-14:00 投稿人需在現場 3樓lobby）
15:30-16:00	茶點時間	
16:00-16:50	Symposia / 專題討論會（法規） 主 題：兒童性侵害的早期鑑定模式經驗分享 主持人：宋維村醫師 演講人：蔡景宏醫師 回應人：林亮吟醫師	
16:50-17:00	閉幕 頒獎	



# 大會歡迎詞

與會的嘉賓以及本會會員們，大家好！歡迎參加臺灣兒童青少年精神醫學會第十九周年年會暨學術研討會。會議於 2017 年 6 月 10 ~ 11 日於台大醫院國際會議中心舉行。

隨著網路的發達，各式的資訊可以輕易的取得並且散布，我們的臨床服務碰到許多的挑戰。一些似是而非的言論藉由某些看似專業或績優機關團體或專業人士傳播，民眾難以判斷而被誤導，不單抨擊影響到兒童精神專科的專業，更影響了民眾獲得正確診斷治療的機會。以實證導正視聽是我們刻不容緩的責任，在今年，學會以醫學實證為基礎發表了對多元性別的立場，也在多位醫師協助下，整理出有關於注意力不足過動症的實證資料，出席立法院的公聽會，清楚向立法機關、新聞媒體、社會大眾傳達正確觀念。

今年，我們年會的主題是「較佳兒童精神臨床服務—實證醫療」。會前專題研討會和年會的內容，旨在兼顧兒童精神醫療專業的全方位角色，要能步出臨床服務的診間，將研究的實證結果運用到對社區、對校園心理健康以及高品質臨床服務的倡議與紮根。

協助兒青精神醫療的夥伴們，提供患者及家庭最適合的治療模式，尋求更好的醫療品質，一直是臺灣兒童青少年精神醫學會的宗旨。學會很榮幸邀請到 Prof. Bung Nyun Kim 擔任這次年會的 Keynote Speaker。韓國在醫學研究這十年來的進展值得我們學習，希望這次年會可以讓我們見證兒童青少年精神疾病中「生物—心理—社會」交互影響的實證模式，並與其他相關專業共同應用在臨床服務上。

臺灣兒童青少年精神醫學會作為一個專業團體，有責任為台灣提供更多有能力進行高品質醫療服務的專科醫師。除了仰賴各專科訓練醫院的培訓外，今年特地籌備了「第一屆臺灣兒童青少年精神醫學專科醫師訓練教學與研習工作坊」，希望共享資深醫師的經驗及教學長才，藉此投注更多紮實且一致的訓練，更促進訓練中的醫師與學會及彼此的交流和相互學習。

隨著兒童虐待被重視，為減少重複偵訊造成兒童的傷害，兒童性侵害的早期鑑定也成為一個兒童精神科醫師被期待的專業工作，學會因此在年會安排法規專題，以提升會員執行能力。

過去一個世紀是科學研究興盛的世代，也是挑戰人性的時代。社會整體的不確定感以及不安，政府政策的介入、家庭及學校功能的劇烈轉變，兒青精神醫療的業務越來

越繁重，也因此我們更須要互相合作、彼此支持，精進專業技能，沈著解決蜂擁而至的問題及挑戰。

在此，謹代表學會向籌辦本次年會的所有會員及工作人員、贊助單位，獻上十二萬分的謝意。也謝謝理監事們的指導、以及會員們對學會各項活動的支持及積極參與。

敬祝各位會員  
身體健康 萬事如意

台灣兒童青少年精神醫學會

理事長 高淑芬

2017 年 6 月 11 日

# 台灣兒童青少年精神醫學會

## 第十屆理監事暨秘書處名單

理事長：高淑芬

常務理事：周文君、陳俊鶯、陳質采、陳錦宏

常務監事：丘彥南

理事：吳佑佑、林志堅、林健禾、邱顯智、侯育銘、徐如維、商志雍、  
梁歆宜、黃玉書、葉啟斌

監事：陳信昭、鄒國蘇、劉弘仁、鄭瑋

秘書長：倪信章

副秘書長：王明鈺、王春惠、李吉特、李冠瑩、李國平、林祥源、陳牧宏、  
楊立光、劉黛玲、蔡佳叡、蔣立德、謝依璇、蘇泓洸

## 各委員會暨工作小組名單

一、甄審委員會：理事長為當然委員暨召集人，任期同理監事，每期改選不得超過三分之一。

主任委員：高淑芬

委員：丘彥南、王明鈺、周文君、林志堅、徐如維、陳質采、邱顯智、  
顏正芳

專科醫師甄審試務小組：（104/10-106/10）

召集人：陳質采

副召集人：周文君、顏正芳

成員：林志堅、商志雍、梁歆宜、王亮人、劉珣瑛、劉弘仁、蘇泓洸、  
蔣立德

二、學術節目委員會：委員由理事會就會員之學術代表性推選之，主任委員由理事會指派。任期同理監事。

召集人：葉啟斌

委員：王亮人、林育如、徐如維、商志雍、陳質采、陳錦宏、黃玉書、  
顏正芳

三、醫療策略委員會：理事長為主任委員，委員由理事長就本會會員中推薦，任期同理監事。

主任委員：高淑芬

委員：王春惠、周文君、林志堅、林健禾、邱顯智、侯育銘、陳俊鶯、  
陳信昭、陳質采、陳錦宏、黃玉書、劉弘仁、鄭琿、顏正芳

四、司法精神醫學暨身心障礙鑑定委員會：小組召集人及副召集人由委員相互推舉產生。任期二年。

主任委員：丘彥南

成員：劉士愷（副主任委員）、王迺燕、周文君、林志堅、林亮吟、  
邱佩寧、侯育銘、郭豐榮、黃凱琳、蔡景宏

五、發展障礙暨早期療育委員會：主任委員、副主任委員及委員由理事長就會員中提名，經理事會同意後聘任。任期二年。

主任委員：侯育銘

委員：鄒國蘇（副主任委員）、何淑賢、吳佑佑、周文君、林志堅、  
商志雍、劉士愷、劉弘仁、鄭琿、賴柔吟

The background features a complex, light-colored geometric pattern of overlapping triangles and lines, creating a sense of depth and structure. The pattern is most prominent in the corners and fades towards the center.

# 專題演講





## UNIVERSITY CURRICULUM VITAE



**Bung Nyun, Kim**

### Current Position

- Professor, Department of Psychiatry (Child & Adolescent) College of Medicine, Seoul National University
- Director, ADHD and Neurodevelopmental Disorders Translational Research Center
- Director, Division of Child and Adolescent Psychiatry, Seoul National University Hospital
- Director, Career Development Center, College of Medicine, Seoul National University
- Director, Emotion & Quality of Life Center, Seoul National University Children's Hospital.

### Education

- 1992. 2. Graduate from the college of medicine, Seoul National University
- 1992. 2: Licence of Medical Doctor(46763)
- 1997. 2: M.S.(psychiatry in Seoul National Univ.)
- 2003. 2: Ph.D.(Child & Adolescent psychiatry in Seoul National Univ.)

### Positions in Professional academic association

1. Past President, Korean Society of Autism
2. a managing treasurer in the scientific affair department of Korean Association of Child and Adolescent Psychiatry
3. a trustee of Korean School Health Association
4. a full member of Asian Society for Child and Adolescent Psychiatry and International Association for Child and Adolescent Psychiatry
5. Executive Committee member of International Association for Child and Adolescent Psychiatry and allied professionals (IACAPAP)

### AWARDS

- 2012 Sochern Research Award for Excellence in ADHD research from Korean Academy of Child & Adolescent Psychiatry
- 2012 Lilly Research Award for Highest Impact factor article from Korean Academy of Neuropsychiatry

- 2015 Award for Excellence in Academic Literature. Korean Academy of Child & Adolescent Psychiatry
- 2015 Award for Highest Impact Factor . Seoul National University College of Medicine

## Research Activities

### 1. Research Fields from 2006 to 2015

- Genetic Studies of ADHD, Autism and Tourette Disorder
- Brain Imaging Studies of ADHD, Autism and Tourette Disorder
- Neuropsychological studies of ADHD, High functioning Autism and Tourette Disorder
- Environmental Toxin Studies for pathophysiology of ADHD & Autism
- Birth Cohort Study for Environmental toxin and Neurocognitive function (ADHD & ASD)
- Integrative Studies using genetic-imaging-environmental toxin studies: Imaging genetics, Environmental toxin genetics
- Epigenetic studies using animal model and imaging-epigenetic method for ADHD
- Longitudinal long-term follow-up studies for Traumatized children and adolescent: PTSD studies
- Epidemiologic studies and Community Mental Health studies for Children & Adolescents

### 2. Research Grants from 2006 to 2015 (Selective descriptions)

- Principal Investigator, 2015-2020 (5 Yr Grant from Ministry of Science): New Diagnostic & Therapeutics by Interpretation of Neural Circuits for Neurodevelopmental Disorders(NDDs: ADHD and ASD)
- Principal Investigator & Director, 2012-2017 (5 Yr Grant from Ministry of Health & Welfare): ADHD translational Research Center
- Principal Investigator, 2011-2014(4Yr Grant from Ministry of Health & Welfare): Endocrine disruptor, NE system genes and ADHD pathophysiology
- Co-PI, 2012-2014 Grant from Ministry of Environment: Infant Cohort Study for Environmental toxin and Neurocognitive functions
- Co-PI, 2014-2017 Grant from Ministry of Culture: Cohort Study for Game use and child & Adolescent Development
- Principal Investigator, 2014-2015 Grant From Industry (KT & G): On-line Stress Management Program for Adolescents
- Co-PI, 2014-2016 Grant from Ministry of Health & Welfare: Behavior Problems Assessment Tool and Treatment Guideline for Autism Spectrum Disorder

## New Genetic & Brain imaging Biomarkers & Gene-environment interaction in attention-deficit hyperactivity disorder

*Bung-Nyun Kim*<sup>1,2,3</sup>

### Seoul, Korea.

Some evidence has supported the existence of an association between phthalate exposure and inattention symptoms, hyperactivity symptoms, and other externalizing behaviors of childhood. However, additional research in humans is needed to investigate the contribution of phthalates to the pathophysiological mechanisms leading to attention-deficit hyperactivity disorder (ADHD). First, case-control studies are needed to examine whether phthalate metabolites concentrations are higher in children with ADHD than in healthy controls. Second, neurobiological studies are required to know how phthalate affect the neural system, leading to cognitive and/or behavioral changes. Third, gene-environmental interactions should be investigated. A cross-sectional examination of urine phthalate concentrations was performed on 180 Korean children with ADHD who were recruited from a psychiatric outpatient clinic. Measures of ADHD symptoms, other externalizing behaviors, and neuropsychological performance were administered. The urinary phthalate concentrations of the children with ADHD were compared with those of children without ADHD recruited from the community. Associations between urinary phthalate concentrations, clinical and neuropsychological measures, cortical thickness, and the dopamine receptor D4 polymorphism were investigated. The urinary phthalate concentrations were significantly higher among boys with ADHD than among the age-matched boys without ADHD and correlated significantly with the ADHD patients' symptom severity and neuropsychological deficits on the Continuous Performance Test (CPT). The association between the urine phthalate concentrations and the CPT scores was observed only in those subjects with the DRD 4/4 genotype. There were significant correlations between urine phthalate metabolite concentrations and cortical thickness. Further prospective and neurobiological studies are needed to investigate causality and pathophysiological mechanisms.

<sup>1</sup> College of Medicine and Behavioral Medicine Institute, Seoul National University, Seoul, Korea;

<sup>2</sup> Division of Child & Adolescent Psychiatry, Department of Psychiatry, Seoul National University Hospital; <sup>3</sup> National ADHD Translational Research Center & Neurodevelopmental Research Initiative

The background features a complex, light-colored geometric pattern of overlapping triangles and lines, creating a crystalline or low-poly aesthetic. The pattern is most prominent in the top-left and bottom-right corners, fading towards the center.

# 專題討論會





## 蔡景宏醫師 簡歷

### 現職：

高雄市立凱旋醫院兒童及青少年精神科主任  
樹德科技大學兼任部定助理教授  
法務部高雄監獄家暴暨性侵診療評估會議委員  
法務部高雄明陽中學青少年妨害性自主評估小組之委員  
高雄市衛生局妨害性自主社區處遇治療評估會議委員

### 學歷：

樹德科技大學應用學院人類性學研究所哲學博士  
高雄醫學大學健康學院行為科學研究所理學碩士  
國防醫學院醫學系

### 經歷：

台灣精神醫學會副秘書長  
國軍左營總醫院精神科主任  
國軍高雄總醫院精神科主治醫師  
台灣精神醫學會家暴暨性侵害防治學術委員會召集人  
法務部高雄監獄性侵害加害人強制診療專科醫師  
法務部高雄明陽中學青少年性侵犯強制診療專科醫師  
高雄市社會局家暴暨性侵害防治中心諮詢委員

### 近二年發表論文：

1. Shu-Kai Lin, Ching-Hong Tsai, Hsing-Jung Li, Chien-Yu Huang(2017). Theory of mind predominantly associated with the quality, not quantity, of pretend play in children with autism spectrum disorder. Eur Child Adolesc Psychiatry(Accepted: 3 March 2017) IF: 3.339.
2. Ling-Hsiang Wang, Ti Lu, Ching-Hong Tsai(2016). Children's disclosures of sexual abuse in Early Forensic Psychiatry Evaluations in Taiwan. Journal of the Formosan Medical Association, 115, 1069-1075.IF: 2.018.
3. Yu-Shi Lu, Yu-Cheng Chen, Shih-Hsien Kuo, Ching-Hong Tsai (2016). Prevalence of

antipsychotics related constipation in patients with schizophrenia. Taiwanese Journal of Psychiatry, 30(4):294-299.

4. 王麟祥 陸悌 蔡景宏 (2015)。被性侵兒童之案情揭露：文獻回顧台灣醫界，第 58 卷第 1 期，9-11。

著作：

1. 家庭暴力與性侵害防治（醫事人員工作手冊，行政人員手冊）。衛生福利部。2017。編輯暨共同作者。
2. 司法精神醫學手冊。台灣精神醫學會。2014。共同作者。
3. DSM-5, DSM-IV-TR, ICD-10 及 ICD-9 中英文精神疾病診斷分類詞彙對照。台灣精神醫學會。2013。共同作者。
4. 性侵害犯罪防治學——理論與臨床實務運用（初版）。五南圖書出版公司，2006。共同作者。

專業證照：

1. 醫字第 021334 號
2. 精神科專科醫師第 0516 號
3. 兒童青少年精神科專科醫師第 192 號
4. 台灣青少年醫學專科醫師第 0062 號





### 報告大綱

- 緣起
- 兒童性侵害現況回顧
- 兒童性侵害的早期鑑定
- 司法端的回應
- 揭露之研究
- 問題與討論

### 學會角色

- 1998年--台灣兒童青少年精神醫學會成立。
- 2002年--開始台灣兒童青少年精神科專科醫師甄審認證及訓練制度。
- 2007年--成立身心障礙鑑定暨司法精神醫學工作小組。
- 2013年--將兒童保護及司法精神鑑定明列於兒童青少年精神科專科醫師訓練之必修課程中，以彰顯此二主題在兒童青少年精神科專科醫師養成中之重要性。

### Academy Awards winning Best Picture, 2016

MARK RUFFALO MICHAEL KEATON RACHEL McADAMS LIEV SCHREIBER JOHN SLATTERY STANLEY TUCCI

# SPOTLIGHT

Catholic priest for child molestation

GRIPPING THRILLER BASED ON THE PULITZER PRIZE-WINNING INVESTIGATION HITS UK CINEMAS THIS JANUARY

25% of females and 17% of males experience sexual abuse before reaching adulthood

(Centers for Disease Control and Prevention, 2005)

Before they turn 18...

1 in 6 boys experience some form of sexual abuse

1 in 4 girls experience some form of sexual abuse

### 性侵害被害人年齡統計

年份	0-未滿6歲	6-未滿12歲	12-未滿18歲	18-未滿24歲	24-未滿30歲	30-未滿36歲	36-未滿42歲	42-未滿48歲	48-未滿54歲	54-未滿60歲	60歲以上
2010	262	822	4,546	1,105	631	671	296	109	34	844	9,320
2011	294	944	5,787	1,235	593	573	293	130	23	1,249	11,121
2012	308	948	6,352	1,359	626	661	331	130	35	1,316	12,066
2013	255	796	5,733	1,260	535	678	335	152	20	1,137	10,901
2014 1~6月	127	385	3,125	756	284	322	142	72	11	577	5,801

• 性侵害受害人以12-18歲最多，約佔60%；若將0-12歲加入則佔70%。  
• 事預防重需加強兒童青少年自我保護、防範性侵害之發生。

資料來源:衛生福利部統計處  
[http://www.mohw.gov.tw/cht/DOS/Statistic.aspx?f\\_list\\_no=312&fod\\_list\\_no=4189](http://www.mohw.gov.tw/cht/DOS/Statistic.aspx?f_list_no=312&fod_list_no=4189)

### 法規歷史回顧

- 1995：兒童及少年性交易防制條例
- 1996：彭婉如事件
- 1997：性侵害犯罪防治法
- 1998：家庭暴力防治法
- 1999：刑法妨害性自主罪
- 2002：兩性工作平等法
- 2004：性別平等教育法
- 2005：性騷擾防治法

### 立法院三讀通過「性侵害犯罪防治法」部分條文修正

本法 104.12.23 增訂之第 15-1 條條文自中華民國一百零六年一月一日起施行。

- 最大的突破是明定對兒童及心智障礙被害人，於司法偵審階段應有專業人士協助進行詢（訊）問、確立專家證人之法定地位以及司法審判過程禁制被告
- 周延性侵害被害人個人身分隱私之保護

### 個案

- 一位35歲女性主訴最近斷斷續續無法入睡已有數周之久，個案已婚5年，並有一子，婚姻關係和諧，當問及最近是否有些生活變化或壓力時，突然表情愁苦，眼眶泛淚，並出現輕微換氣過度現象。
- 幾次支持性心理治療及藥物治療後，失眠情況改善，但焦慮依舊。
- 經詢問後，弟弟最近要舉行婚禮，日期越來越近更讓他感到焦慮不安，甚至無法專心工作。

### 律師：女童第一時間證詞 具可信度

2017-3-14

2017-03-14

【記者羅維、陳祥宏／台北報導】陳姓男子涉嫌強姦、指證女童案，士林地方法院認定指證證據不足，有違證據法則，兒童說稱遭性侵犯機率極低，合議庭卻忽視女童第一時間的指證，在保護人權當下，可能犧牲「發現真實」的司法正義。



該名律師表示，美國有研究指出，兒童故意說稱遭性侵犯的機率不到1%，因此，美國在審理兒童性侵害案件時，都先假定兒童陳述內容為真，再嘗試推翻指證的可能性；我方卻反過來，藉由稱強證據證實兒童的供詞。

他說，四歲女童表達能力有限，也從未接觸性事，第一時間能清楚陳述「錯處眾人的地方」，就有一定可信度；之後出庭的指證內容，可能因記憶模糊，或與其他經驗混淆，真實性反而下降。

士林地方法院認定指證證據不足，有違證據法則，兒童說稱遭性侵犯機率極低，合議庭卻忽視女童第一時間的指證，在保護人權當下，可能犧牲「發現真實」的司法正義。（記者王仁修攝）

### 兒童性侵事件的特性

- 兒童是被害人，可能是唯一證人
- 加害者常是兒童的家人、親屬或熟識之人
- 常非以暴力方式為之，未必有身體上之證據足以證明犯罪
- 心理智能發展不完全，邏輯思考未臻成熟
- 欠缺記憶歷史事件之建構能力
- 身心受創及易受外界壓力影響(不願陳述或受到暗示)

### 兒童是否會在性侵害案件中故意說謊？

### Reliable and Fictitious Accounts of Sexual Abuse to Children

DAVID P. H. JONES  
Park Hospital for Children, Oxford

J. MELBOURNE McGRAW  
University of Colorado School of Medicine

Journal of Interpersonal Violence, 2, 27-45, 1987

**Abstract**

The various categories of reports of child sexual abuse were examined in Phase 1 of a two-part study. In this first phase, all the reports (N = 576) of child sexual abuse made to the Denver Department of Social Services were categorized. Most reports were reliable accounts (72%), but a small proportion appeared to be fictitious (8%). In Phase 2, fictitious (false) reports of child sexual abuse were examined in detail. Certain clinical features appeared to mark the fictitious reports: lack of emotion and an absence of coercion and threat in the child's account, absence of detail, and several of the children and some adults were suffering from neurotic personality disorder. Based


576位因性侵被轉介至丹佛社會福利部 兒童，發現只有1%認定指控為虛構

### 兒童曾遭生殖器插入，檢查顯示身體證據的比例如何？



4歲被  
14歲哥哥  
多次  
性侵

正常



9歲被  
13歲表  
哥多次  
性侵

懷疑

**PEDIATRICS**  
OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

**Examination Findings in Legally Confirmed Child Sexual Abuse: It's Normal to be Normal**  
Joyce A. Adams, Katherine Harper, Sandra Knudson and Juliette Revilla  
*Pediatrics* 1994;94:310-317

The online version of this article, along with updated information and services, is located on the World Wide Web at: <http://www.pediatrics.org>

**1994**

1. Genital examination findings in girls were normal in 28%, nonspecific in 49%, suspicious in 9%, and abnormal in 14% of cases. Abnormal anal findings were found in only 1% of patients.
2. 相關因子: 事件與檢查間時間, 事件發生時有流血

**TABLE 3. Frequency of Findings, by Type**

Classification	Genital Findings in Girls (n = 213)*		Anal Findings in Boys and Girls (n = 213)†	
	n	%	n	%
Normal	59	28%	67	31%
Nonspecific	104	49%	132	62%
Suspicious	20	9%	12	6%
Suggestive	10	5%	0	0%
Clear evidence	20	9%	2	1%

\* Genital photos on girls were unable to be classified in two cases, due to inability to clearly visualize the entire hymenal rim.  
† Anal photos were not taken on 23 girls.

**Reports of Repetitive Penile-Genital Penetration Often Have No Definitive Evidence of Penetration**

CONTRIBUTORS: Jan Anderson, MD, MSQ; Nancy Keating, MD; and Howard Jung, PhD  
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**KEY WORDS:** Child sexual abuse; rape  
**ABBREVIATIONS:** SAC—children's advocacy center  
DOI—doi:10.1542/pep.2008.0028  
[www.pediatrics.org/cgi/content/full/121/04/e403](http://www.pediatrics.org/cgi/content/full/121/04/e403)  
DOI: 10.1542/pep.2008.0028  
Accepted for publication April 16, 2009

**WHAT IS KNOWN ON THIS SUBJECT:** Most genitital examinations of child sexual abuse victims reveal no definitive evidence of abuse; however, individuals involved in abuse cases may assume an association between an increasing number of reported genital penetrations and the presence of definitive findings of penetration.

**WHAT THIS STUDY ADDS:** Most child sexual abuse victims who report repetitive penile-genital contact that involves some degree of perceived penetration have no definitive evidence of penetration on examination of the hymen.

**506位5-17歲主訴有被重複陰莖插入性侵其處女膜未發現有性侵的確定證據**  
*Pediatrics* 2009;124:e403-e409

**Child sexual abuse accommodation**

ROLAND C. SUMMIT, M.D., 1983

- Secrecy
- Helplessness
- Entrapment and accommodation
- Delayed, unconvincing disclosure
- Retraction

Child Abuse Negl 1983; 7: 177-193

**Secrecy (秘密)**

- 被性侵兒童傾向於保守秘密。其理由很多，可能害怕加害人恐嚇或加害人是他所愛的人。身體受虐兒有可能害怕再次被打。加害人可能承諾他們的安全與愛，如果他們保持沉默。被疏忽或情緒受虐的小朋友，長期渴望父母的肯定及關愛，因為擔心會失去父母的愛，常會保持沉默。

**無助感 (Helplessness)**

- 兒童原本天生就無助與順從。他們個子比較小、依賴、情緒尚未成熟，無法自我逃離危險的情境。企圖保護自己的小孩常常會被比他們較強而有力的大人所越控。當他們企圖保護自己失敗時，小孩就會感到無助。最後他們停止保護自己，而變成退縮自己，甚至離離。

**困陷與適應**  
**Entrapment and accommodation**

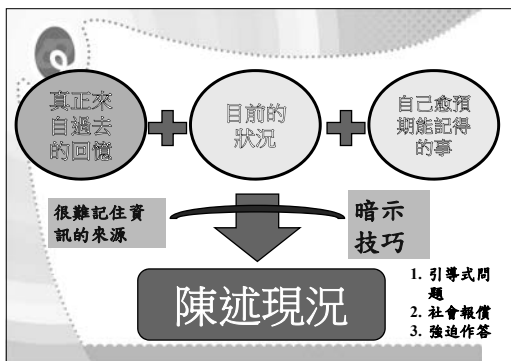
- 兒童持續保守被性侵秘密與習得無助之後，最後會覺得自己被困住。然而他們會漸漸接受此一狀況而生存下來。持續受虐的無助感兒童還是必須學習發展出因應的力量與控制力。最後兒童可能轉而責備自己，進而相信虐待是自己造成的，被虐待是應該的。最後他們會發展出各種防禦機轉(例如:解離/抽離或阻擋記憶)去適應面對不同的虐待。

**延遲, 矛盾及難以相信的揭露**  
**Delayed, unconvincing disclosure**

- 當大人詢問受虐兒童揭露事實時，必須了解這過程會造成兒童面對危機。初次的揭露可能充滿了焦慮、撤回揭露、前後矛盾。因此，兒童的陳述有可能難以被相信。由於兒童習慣使用各類不同的防衛機轉去因應虐待，記憶因此片斷、知覺可能會改變、訊息可能紛亂而稀少。

### 撤回(Retraction)

- 揭露的兒童可能面臨罪惡感、恐懼、背叛及迷網的情緒。大人的反應可能會影響到兒童的揭露。例如兒童立即被安置到寄養機構，父母被送進監獄，及造成家庭其他成員的衝擊。這些都可能造成兒童撤回揭露。兒童傾向安全而熟悉的環境，即使內心充滿了痛苦，如果可以選擇，受虐兒童還是希望忠於自己的父母及家庭，留在自己的家中。



### 記憶七罪

- 健忘:** 記憶的基本特質，隨時間愈來愈...
  - 失神:** 注意力與記憶介面出了問題
  - 空白:** 一時努力找卻想不起來，之後突然想起
  - 認錯:** 將記憶認錯了源頭，把幻想誤為真實，把報上頭到的誤記由朋友說告知的。比想像中普遍，對司法判決上可能會有影響。
  - 暗示:** 喚起過去的記憶時，因受到引導性的問題、評論、或建議的影響，使記憶遭到扭曲，與法律審判息息相關。
  - 偏頗:** 以現有的知識、信念、感受對自己過去回憶的強大影響力。
  - 糾纏:** 明明想徹底忘卻的個人資訊或事件，卻依再反覆地回想起來。
- 《記憶七罪》(The Seven Sins of Memory: How the Mind Forgets and Remembers)  
丹尼爾·沙克特(Daniel L. Schacter)



### Day-care sex-abuse hysteria

- a moral panic that occurred primarily in the 1980s and early 1990s featuring charges against day-care providers of several forms of child abuse.



He and his family deny the charges, which supporters regard as a conspicuous example of day care sex abuse hysteria.

審判不公

NO CRUELER TYRANNIES  
ACCUSATIONS, FALSE WITNESSES, AND OTHER TERRORS OF OUR TIMES  
DOROTHY RABINOWITZ  
Pulitzer Prize-winning author of the New York Times bestseller

2001 Pulitzer Prize for Commentary  
Dorothy Rabinowitz  
The Hill Street Journal

Amirault was released on April 30, 2004, 18 years after his conviction.

- T:小丑有摸你嗎?  
C:沒有.....  
T:你說小丑脫掉你的衣服?  
C:對。  
T:接下來發生什麼事?  
C:嗯，沒什麼啦!  
T:小丑有沒有摸.....你可不可以比一下小丑摸你甚麼地方?  
C:沒有，他沒有摸我什麼.....  
T:現在假裝這是你。小丑有沒有摸你?摸你哪裡?
- C:就是這裡(指自己的腳)。  
T:他有沒有脫你的內褲?  
C:(沒回答)  
T:他接下來怎麼樣?  
C:沒有了。  
T:沒有?他有摸你嗎?  
C:我要把那個穿起來。  
T:噢，不過我希望你告訴我，小丑有沒有摸你?  
C:有。

The New Jersey Supreme Court overturned the lower court's decision and declared

"the interviews of the children were highly improper and utilized coercive and unduly suggestive methods."

Testimony of children questioned in a highly suggestive manner.

1. Introduce new suggestive information into the interview 詢問中引入新的暗示性資訊
2. Provide praise, promises, and positive reinforcement 給予讚美、承諾、正向的增強
3. Express disapproval, disbelief, or disagreement with children 表達不贊成、不相信、不同意的態度
4. Exert conformity pressure 施予遵從的壓力
5. Invite children to pretend or speculate about supposed events. 請求假裝或推測假定的事件

## 緣起

- 幼童或心智缺陷之性侵害案件被害人，常因認知及語言表達能力造成詢問案情與製作筆錄之困難，且筆錄之證據能力亦多遭質疑。
- 實務上，地檢署或法院會因為被害人無法陳述或沒有一致性的陳述，無法給予被告起訴處分或做出有罪的判決，並且，當地檢署或法院認為被害人需要接受鑑定而委請醫療機構進行鑑定時，往往已距離案發時間甚久，據此所得到的鑑定效果亦受時間因素影響。

## 對象

- 本市12歲以下或（疑似）心智障礙之性侵害被害人。
- 以家內亂倫個案優先。

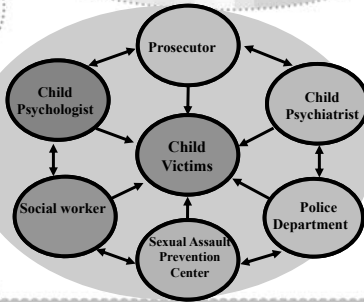
## 專業團隊

- 團隊成員：專業團隊領銜者需具備精神科醫師資格，除醫師外，應有心理師、社工師及其他依被害人所需之醫事人員。
- 承辦醫院：
  1. 高雄榮民總醫院：自99年試辦方案迄今。
  2. 高雄市立凱旋醫院：100年加入團隊運作。
  3. 高雄慈惠醫院：103年正式加入團隊。
  4. 高雄醫學大學附設中和紀念醫院：104年正式加入團隊。

## 網絡合作與分工

- 司法部門：檢察官直接指揮偵辦並製作減述筆錄，為嫌疑人必要之司法處置，例如：聲押、限制出境等。
- 警察部門：協助檢察官調查證物證人等必要之工作；協助社政部門維護被害人人身安全。
- 醫療部門：鑑定被害人心智狀態、創傷反應等之醫療診斷，提供社工後續輔導建議。
- 社政部門：評估、擬定被害人人身安全計畫並進行適當之處遇服務，陪同被害人進行偵訊、驗傷、鑑定等流程。

## Collaboration Team



## 業務內容

- 一、協助幼童或心智缺陷之性侵害案件被害人製作警詢筆錄
- 二、鑑定被害人在受到性侵害後的立即創傷反應
- 三、鑑定被害人智力狀況及表達能力年齡與證詞之可信度
- 四、比較提前在受理時進行鑑定與司法機關論今鑑定之差異與成效

## 凱旋醫院早期鑑定資訊 鑑定團隊之設備

- 高解析彩色攝影機2台、5-15m鏡頭自動光圈及超廣角鏡頭
- 影像攝取卡
- 42吋液晶顯示器
- 隱藏式無線耳機
- 集音系統
- DVD高解析錄放系統
- 電腦
- 傳真機
- 防焰壁紙及地毯
- 安全活動桌椅 (1桌4椅)
- 兒童沙發(單人座及雙人座)
- 兒童玩具 1 組

## 鑑定室





鑑定前討論暨觀察室

### 鑑定評估及診斷重點

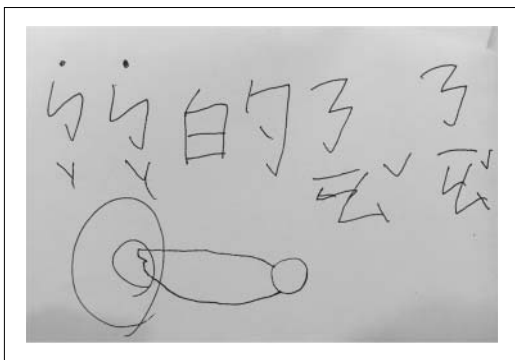
- 被害人遭被性侵害事件的反應為何？
- 被害人的情緒狀態診斷評估？
- 被害人的思考、判斷及表達的能力程度？
- 被害人證詞可信度？

### 兒童證詞關注的議題

- 理解與認知能力
- 證詞可信度
- 暗示性問題
- 汙染性問題
- 威脅式問題(重複詢問)
- 瑕疵記憶(一個或多個不正確的細節)
- 偽記憶(未曾發生，卻有全新的記憶..)
- (急性)創傷壓力症候群反應

### 判斷性侵案件兒童證人證言真實性檢核表 (Faller, 1993)

1. 事件揭露時間與情境脈絡
2. 陳述內容是否符合發展年齡
3. 陳述細節的質與量
4. 性知識符合發展年齡
5. 陳述的內在與外在一致性
6. 加害人行為描述
7. 性侵說詞的真實性
8. 會議情緒反應
9. 撤銷先前說法



### 偵訊娃娃

### 高雄市性侵害案件專業團隊 早期鑑定模式成效評估研究案(103年)

委託單位：高雄市政府社會局家庭暴力暨性侵害防治中心

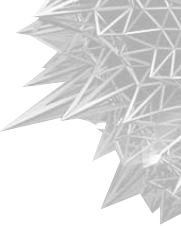
執行單位：國立屏東科技大學社會工作系

計畫主持人：趙善如老師

共同主持人：陸 梯醫師、蔡景宏醫師、張麗珠老師、林宏陽老師

協同主持人：郭致遠老師

研究助理群：陳婕誼、湯于瑩、劉怡芳、黃楷婷



### 處分書引用早鑑報告

	引用	無引用	小計(N=34)
起訴	19	2	21
不起訴	10	1	11
案結	1	1	2

**起訴書引用：**證詞可信度(66.7%)，創傷後壓力疾患(61.9%)，理解能力及表達能力(42.8%)

**不起訴書引用：**10份不起訴書，6份採信鑑定報告，3份不採信，1份部分採信

2016/4/9 49

### 檢察官的看法與建議

- 在實務運作中，法官對於早鑑報告相當重視，肯定早鑑報告的證據能力，且在判決書引用上較為有把握，亦無提出相關之抗辯...(p. 254)

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- 有檢察官表示，較強調個案的理解與表達能力，以及證詞可信度...進一步了解個案的陳述是否有受到外界之干擾、個案是否能夠清楚分辨事實等情形...(p. 258)
- 創傷後壓力疾患僅作為工作上之參考，一方面是因為最高法院對於創傷後壓力疾患的見解，個案可能會因為過去的事件所導致；此外則是個案本身若有心智障礙並發展遲緩時，個案的創傷後壓力疾患之反應較不明顯等...(p. 258)

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- 與醫療鑑定團隊進行早期鑑定都有正向的合作經驗，不過，兩家醫院在進行早期鑑定的程序不一樣。例如有一家醫院直接是與檢察官一起跟個案互動，問個案問題；另一家則是擔任輔助者之角色，不直接與個案對話互動，僅會於必要的時間點提出建議。(p. 262)

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- 期待早鑑報告的撰寫內容能夠更具體、詳細的說明早期鑑定結論之依據，藉此有助於檢察官之判斷。例如：個案目前沒有明顯創傷後壓力疾患，但不表示其未來發展不會受到影響；或者醫療鑑定團隊可以進一步說明典型創傷壓力症候群的症狀為何，目前個案有符合之症狀有哪些。(p. 270)

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### 「有罪」判決書引用早鑑報告

鑑定項目	一審(n=13)	二審(n=8)	三審(n=5)	總計
立即創傷反應	0	1	0	1
創傷後壓力疾患(含部分症狀者)	8	8	1	17
理解能力與表達能力	4	3	1	8
證詞可信度	6	5	1	12
其他(如心性發展)	3	1	0	4

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### 法官的看法與建議

- 早鑑是用比較人性、貼近個案的發展狀況來進行鑑定，基本上對於個案是另一種陪伴。雖然，對年紀小的個案在案發時，還不能夠了解被性侵這件事的意義，不過等他們長大對事件有更多的想法之後，或許此事件對他有衝擊...(p. 277)

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- 依據法律規定早鑑報告是證據能力，不過早鑑報告的證據鑑定人的意見或是所做的結論能力是僅限於，譬如如鑑定人員在診間跟被害人的互動他觀察到什麼事情，那是他自己的見聞，才是真正當性的證據，是可以引用。相反的，若是報告中是個案或是家屬講的話...仍較屬於傳聞證據，是不能引用...不是鑑定人員親身見聞...所以，早鑑報告的證據能力是沒有問題，不過也只會引用部分內容。(p. 282)

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### 影響法官評斷早鑑報告證明力之因素

(pp. 290-292)

- 不清楚鑑定的人員背景與操作過程
- 心理衡鑑工具的常模是否以台灣的孩子為依據
- 對於早鑑報告的相關專業知能有限，無法確實的實質審理早鑑報告之內涵

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### 法官對早鑑報告之建議

- 鑑定報告文字陳述可貼近生活化、強化鑑定結論具邏輯性
- 鑑定報告內容期待可以強化證詞可信度
- 鑑定報告中的語言可以符合法律用語
- 在早鑑報告中有醫療鑑定人員的具結，或是設有聯絡窗口
- 後續的偵查的重點可再增加鑑定的內容

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- 另外，早期鑑定的特色之一，是醫療鑑定人員協助檢察官進行減述筆錄的問訊，但是又擔心在錄影畫面中會呈現出是醫療鑑定人員在問訊的畫面，進而影響了減述筆錄的證據能力。因次，未來的修法中，對於協助筆錄問訊的專家透過修法給予法律地位，保障早鑑制度中的減述筆錄的輔助問訊的法律地位。(p. 297)

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2016-高雄性侵害案件專業團隊早期鑑定模式作業流程研究案

2016-高雄性侵害案件專業團隊早期鑑定模式作業流程操作手冊

### 司法精神醫學手冊

第二十一章 兒童青少年司法精神鑑定實務—虐待、性侵害與監護之司法精神鑑定

作者：王育森 副主委

本章學習重點：

- 兒童青少年司法精神鑑定之範圍及一般程序
- 兒童青少年司法精神鑑定與問訊之區別
- 兒童青少年司法精神鑑定與問訊之區別
- 兒童青少年司法精神鑑定之司法精神鑑定

### 家庭暴力、性侵害防治

警政人員工作手冊

第一節 司法詢問 (Forensic Interview) 的總則與規範

司法詢問 (Forensic Interview) 的總則與規範

司法詢問 (Forensic Interview) 的總則與規範

2016年12月

### 孩子，請告訴我發生了什麼事？

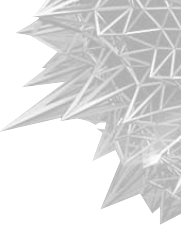
Child, please tell me what happened?

### Conviction rate

50% Before → 90% After

From Dec. 2010 to Dec. 2016, 68 cases





### Children's Disclosure of Sexual Abuse during Early Forensic Psychiatric Evaluation in Southern Taiwan

2016/49

### Aim-1

- Extensive research into children's disclosures of CSA and its predictors over the last three decades in western societies.
- Very few studies of CSA disclosure have been conducted in Asian societies.
- A study in Korea, focusing on psychosocial factors influencing the competency of children's testimonies, found the competence of statements of CSA victims is significantly related to parental emotional states and support. (*Child Abuse Negl* 2011;35:173-9)

### Aim-2

- One review probing into low rates of CSA in China indicated a great reluctance to disclose among Chinese victims. (*Child Abuse Neglect* 2013;37:852-60)
- 22.2% of adolescents reported experience of physical abuse and 2.5% reported sexual abuse in their childhood in Taiwan. (*Child Abuse & Neglect* 2008; 32 :429-438)
- No research findings are yet available concerning children's disclosures of CSA in Taiwan

### Method

- Early Forensic Psychiatry Evaluations (EFPE) at two hospitals in Kaohsiung City from 2010 to 2015, totalling 60 forensic reports.
- All cases were divided into categories of full or non-full disclosers.
- Using *t*-test and the Chi-squared test and binary logistic regression analysis was done to determine correlates for predictors of full disclosure.

### Variables

- Child age
- Time from abuse onset to the first interview
- Full IQ(PIQ)
- Past psychiatric visit
- PTSD
- Intellectual disability
- Relationship to suspect
- Familiar with suspect
- Numbers of abuse
- Vaginal or anal penetration
- Threatened with consequences of disclosure
- Living with who

2016/49

### Results

- Among the 60 cases, 36 (58%) were full disclosers(8 boys and 52 girls).
- The mean age at the first forensic interview was 6.65 ± 3.31 years.
- Only 14% fully met the DSM-IV-TR PTSD criteria.

**Table 2** Logistic regression results testing the prediction model for full disclosure.

Predictor	B	SE	Wald	OR	95% CI
Child age (years) at first interview*	0.33	0.14	5.21	1.39	1.05-1.84
Past psychiatric visit (yes vs. no)	-0.78	1.09	0.51	0.46	0.06-3.87
Mental retardation (yes vs. no) <sup>†</sup>	-3.32	1.19	7.82	0.04	0.00-0.37
Familiar with the suspect (yes vs. no)	0.55	0.76	0.52	1.73	0.39-7.69
Number of abuse events (more than once vs. once)*	1.78	0.82	4.64	5.90	1.17-29.67

\*p < 0.05; <sup>†</sup>p < 0.01.

B = regression coefficient; CI = confidence interval; OR = odds ratio; SE = standard error of the coefficients  
Wald = Wald's statistic.

### Discussion-1

- Disclosure rates among selected subsamples of children who came before authorities and found disclosure rates between 43% and 61% of London's review. (*Memory* 2008;16:29-47; *Psychol. Public Policy Law* 2005;11:194-226)
- The percentage found in our sample (58%) is among the highest in the range of London's review.

### Discussion-2

- Our results do not support the concept that PTSD interferes with a child's ability to describe their traumatizing experiences.
- The current study showed no association between PTSD and full disclosure, replicating the findings of three prior studies.
- Only a minority of children (14%) in the PTSD group fully met the DSM-IV-TR criteria for PTSD.

### Discussion-3


- 91% of the children gave informal and incomplete disclosures before our interview, possibly reflecting a child's willingness to report abuse to an authority figure.
- We suppose that prompt referral of CSA cases for forensic psychiatric evaluation is critical to facilitating children's disclosures.
- Our early evaluation model may reduce risk factors affecting the competency of children's testimonies

### Discussion-4

- Studies have Inconsistent findings on the relationship between abuse severity and disclosure of sexual abuse.
- Our study showed that the number of abuses was related to the disclosure of sexual abuse.
- The previous studies(London et al) believed that the variety of criteria used to indicate the severity of abuse could have contributed to these inconsistent findings.

### Limitations

1. The data was only based on the children's forensic psychiatric evaluation reports.
2. Discussion of the impact of the interviewer's dimensions on the children's disclosures is beyond the scope of this study.
3. The use of a standardized tool for assessing an individual's psychopathology is lacking.
4. Reliability of psychiatric diagnoses acquired from each psychiatrist.
5. The number of cases is limited.



ORIGINAL ARTICLE

#### Children's disclosure of sexual abuse during early forensic psychiatric evaluation in Southern Taiwan

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**揭露率：58%**

• 年紀  
• 智力  
• 性侵  
• 次數

### Thanks for your attention



and TAIWAN round

The background features a complex, light-colored geometric pattern of overlapping triangles and lines, creating a crystalline or low-poly aesthetic. The pattern is most prominent in the corners and fades towards the center.

# 講述論文發表



## Cingulate anatomy in autism spectrum disorder and its association with symptom severity

### 自閉症類群疾患之扣帶迴結構與臨床症狀之相關研究

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簡意玲<sup>1</sup> 高淑芬<sup>1,2</sup> 陳昱潔<sup>1</sup>

**Objective:** Cingulate cortex has been shown to be associated with social cognition. Studies investigating cingulate structure reported inconsistent results in autism spectrum disorder (ASD). This study aimed to examine the anatomical structure of cingulate gyrus in ASD, including gray matter, white matter volumes, and cortical thickness. The relationship between cingulate structure and clinical autistic symptoms were also examined.

**Method:** We recruited 122 patients with ASD and 118 typically-developing controls. All the participants underwent brain MRI imaging. Brain volume, white matter volume, cortical thickness, and gyrification of cingulate gyrus were analyzed by FreeSurfer software with 74 automatic parcellation. Cingulate gyrus was divided into anterior, middle (anterior and posterior), and posterior cingulate (dorsal and ventral) when comparing volume and cortical thickness. The correlation between cingulate structure and the severity of autistic symptoms measured by Social Responsiveness Scale and Social Communication Questionnaire was examined.

**Results:** Patients with ASD showed no difference in gray and white matter volumes of all subregions of bilateral cingulate gyri. However, they showed thinner cortical thickness of bilateral cingulate subregions except for left anterior cingulate cortex and anterior middle cortex. Regarding the association between cingulate structures and autistic symptoms, the white matter volumes of right anterior cingulate and middle cingulate gyri were correlated with the severity of the stereotyped behaviors and social awareness deficits in ASD respectively.

**Conclusions:** Our findings suggest that patients with ASD may have abnormal cortical thickness of bilateral cingulate cortices. The cingulate structure may be associated with the severity of autistic symptoms.

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## Neural substrates of Theory of Mind for Adults with Autism Spectrum Disorder: an fMRI Study of the Social Animation Task

### 自閉症成人心智理論的神經基礎： 社會動畫作業的功能性核磁造影研究

*Ting Chen<sup>1</sup>, Susan Shur-Fen Gau<sup>1,2</sup>, Tai-Li Chou<sup>1</sup>*

陳庭<sup>1</sup> 高淑芬<sup>1,2</sup> 周泰立<sup>1</sup>

**Objective:** Theory of Mind (ToM), defined as the ability to infer another person's mental states, such as beliefs, desires, and intentions, is a fundamental process of social interaction. The deficit of ToM is one of the core features of autism spectrum disorder (ASD). The present study aimed to explore the differential neural substrates of ToM using the social animation task between ASD adults and healthy controls.

**Method:** We assessed 24 healthy controls (mean age: 20.99±2.03) and 24 adults with ASD (mean age: 23.66±2.91) with the social animation task of ToM (Castelli et al., 2000), which featured two triangles moving on a framed background with ToM and control animations. Participants were asked to decide if a social interaction was presented for each animation. Functional MRI was used while the participants were simultaneously doing the social animation task. They reported on the Social responsiveness scale (SRS) and their parents were interviewed with the Chinese version of Autism Diagnostic Interview, Revised (ADI-R).

**Results:** In within-group contrast, the [ToM-Random] exhibited common activation in the bilateral temporo-parietal junctions (TPJ), bilateral middle temporal gyri (MTG), and left inferior frontal gyrus (IFG) across two groups. In between-groups contrast, the [ToM-Random] displayed greater activation in the left precuneus, left inferior parietal lobule (IPL), right middle frontal gyrus, and right superior frontal gyrus in ASD than the controls. For correlation analysis, greater IPL activation was positively correlated with the ADIR Qualitative Communication Abnormalities in ASD. Moreover, there was a significant group difference in the relationships between the right middle frontal/left precuneus activation and the Social Awareness of the SRS.

**Conclusions:** The results suggest that the ASD group might spend additional cognitive process during the ToM animation task and then imply that ASD adults might have deficits on understanding another person's mental states and intentions.

**Keyword:** theory of mind, social animation, fMRI, autism spectrum disorder

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## Neural substrates for the social communication in youths with autism spectrum disorder, unaffected siblings, and typically developing youths

### 泛自閉症症候群青少年、未發病手足與典型發展青少年之社交溝通技能的神經機轉差異

Yu-Chun Lo, Ph.D.<sup>1,2\*</sup>, Wen-Yih Isaac Tseng, MD, Ph.D.<sup>1</sup>,

Susan Shur-Fen Gau, MD, Ph.D.<sup>3</sup>

羅仔君<sup>1,2\*</sup> 曾文毅<sup>1</sup> 高淑芬<sup>3</sup>

**Background:** Autism spectrum disorder (ASD) is a neurodevelopmental disorder with social communication deficits as one of the core symptoms. Genetics of ASD is a remarkable factor contributing the etiology of the ASD. However, the neural substrate associated with the functions of social communication in siblings of ASD are still unclear. Given that a five-level model for the social communication has been proposed in which white matter tracts corresponding to each level of the model are identified, we hypothesized that siblings of individuals with ASD would have a neural substrate of white matter alterations related to the social communication compared to the ASD and TD groups.

**Methods:** Thirty right-handed boys with ASD, 27 unaffected siblings, and 30 typically developing (TD) boys received clinical evaluations, intelligence tests, the Chinese version of the Social Responsiveness Scale (Chinese SRS), and MRI scans. Generalized fractional anisotropy (GFA) was measured by diffusion spectrum imaging to indicate the microstructural integrity of the tracts for each level of the social communication model. Group difference in the tract integrity and its relationship with the SRS subscales of social communication were investigated.

**Results:** The three groups showed significant differences in the GFA of the frontal aslant tracts (FAT, level 2) with highest GFA of FAT in TD and lowest GFA of FAT in ASD. Moreover, the GFA value of FAT was associated with the social communication subscales in SRS in the sibling group ( $r = -0.62$ ,  $p = 0.002$ ).

**Conclusions:** Our results support the hypothesis that the tract integrity of the model for social communication is altered in ASD and siblings even unaffected, and further imply that the FAT might be an imaging trait marker of social communication deficits in ASD.

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## The Effects of the Dopamine Transporter Gene Variants on the Striatal Functional Connectivity in Attention Deficit Hyperactivity Disorder

### 多巴胺轉運基因變異對於注意力不足過動症的 紋狀體功能聯結之作用

Chi-Yung Shang, M.D., Ph.D.<sup>1,2\*</sup>, Hsiang-Yuan Lin, M.D.<sup>1,2</sup>,

Susan Shur-Fen Gau, M.D., Ph.D.<sup>1,2</sup>

商志雍<sup>1,2\*</sup> 林祥源<sup>1,2</sup> 高淑芬<sup>1,2</sup>

**Background:** The dopamine transporter gene (DAT1) and corticostriatal network dysfunction have been consistently reported to be associated with attention-deficit hyperactivity disorder (ADHD). This study aimed to examine the effects of the DAT1 rs27048 (C)/rs429699 (T) haplotype on the striatal functional connectivity in children with ADHD.

**Methods:** A total of 96 drug-naïve children with ADHD and 114 typically developing (TD) children were recruited. We examined the effects of diagnosis, genotype, and the diagnosis-genotype interaction of this CT haplotype on the striatal functional connectivity measured by resting-state functional magnetic resonance imaging. The correlation between the functional connectivity of striatal subregions showing significant diagnosis-genotype interaction and neuropsychological performance was also examined.

**Results:** Compared with TD children, children with ADHD showed significant hypoconnectivity of the left dorsal caudate (DC) with bilateral postcentral gyri, precentral gyri, and paracentral lobules. Significant diagnosis-genotype interactions were found in the connectivity between the left DC and the right sensorimotor cluster, and between the right DC and the left dorsolateral prefrontal/bilateral anterior cingulate cluster.

**Conclusions:** A novel gene-brain-behavior association was identified in which functional connectivity of the DC was related to ADHD with the DAT1 rs27048 (C)/rs429699 (T) haplotype.

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## Brain volume abnormalities in Attention-Deficit/ Hyperactivity Disorder concerning age effect: A voxel- based morphometry study

### 年齡對注意力不足過動症患者腦部結構之影響

*Chia-Jui Tsai<sup>1,2\*</sup>, Hsiang-Yuan Lin<sup>3</sup>, Isaac Wen-Yih Tseng<sup>4</sup>, Susan Shur-Fen Gau<sup>2,3\*</sup>*

蔡佳叡<sup>1,2\*</sup> 林祥源<sup>3</sup> 曾文毅<sup>4</sup> 高淑芬<sup>2,3\*</sup>

#### Abstract

**Background/Objectives:** Age effect is discussed in Attention-Deficit/Hyperactivity Disorder (ADHD) but the result is controversial owing to heterogeneity within and between studies and limited sample sizes. This study aimed to explore brain structures by comparing ADHD participants using large sample across wide range of age to those typically developing controls (TDC) and discuss about the influence of age effect.

**Methods:** In this cross-sectional study, voxel-based morphometry was performed to obtain gray matter (GM) and white matter (WM) volumes in 146 youth with ADHD and 223 TDC (aged 7 to 40 years). General linear analyses of the proportional volumes of brain regions, adjusting for age, full-scale IQ, and sex were used to for the regional group comparison and age by group interaction were analyzed for comparison of difference rate of change between the two groups.

**Results:** ADHD and TDC did not differ significantly in total GM or WM volumes, but ADHD had significantly lower rate of general GM increase and higher rate of general WM decrease with age. For regional volume, ADHD had two clusters significantly smaller GM volumes as compared with TDC which were right lingual gyrus/vermis and right orbital frontal area. However, significant age by group interaction were found in right anterior cingulum, left frontal rectal gyrus, bilateral superior temporal gyrus and bilateral cerebellum posterior lobe of GM where ADHD brain volume decreased with age while TDC increased with age.

**Conclusions:** Our findings suggest ADHD had a different pattern of volume changes with age in several regional GM clusters and different rate of volume changes in general GM and WM area. It might support the relevance of different brain developmental trajectories between ADHD and TDC.

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## Polymorphisms of the STS gene and SULT2A1 gene and neurosteroid levels in children with attention-deficit/hyperactivity disorder

### 注意力缺失過動疾患兒童中 STS 基因與 SULT2A1 基因多型性與神經內分泌物質

*Liang-Jen Wang<sup>\*</sup>, Miao-Chun Chou, Wen-Jiun Chou, Min-Jing Lee*

王亮人<sup>\*</sup> 周妙純 周文君 李旻靜

**Background:** The aim of this study is to investigate the relationships among polymorphisms of the STS gene and SULT2A1 gene, dehydroepiandrosterone (DHEA) and its sulfated form (DHEA-S), and characteristics of attention-deficit/hyperactivity disorder (ADHD).

**Methods:** We used cheek swabs to obtain the genomic DNA of 255 ADHD probands (mean age: 8.7 years; 200 boys and 55 girls) and their biological parents. Three SNPs in the STS gene (rs6639786, rs2270112, and rs17268988) and one SNP in the SULT2A1 gene (rs182420) were genotyped. Saliva samples were collected from the ADHD patients between 7:00 and 8:00 am to analyze DHEA and DHEA-S levels.

**Results:** We found rs2270112 within the STS gene to be over-transmitted in males with ADHD, but not in the female patients. Polymorphisms of rs182420 within the SULT2A1 gene were not associated with ADHD. In the male patients, the C allele carriers of rs2270112 demonstrated significantly higher DHEA-S levels than non-C carriers. In contrast, the C allele carriers of rs17268988 had significantly lower DHEA levels than non-C carriers in the female patients. Salivary levels of DHEA and DHEA-S were positively correlated with attention as measured by a neuropsychological test in both boys and in girls.

**Conclusion:** These findings support potential sex differences in the underlying biological pathogenesis of ADHD with regard to STS polymorphisms and neurosteroid levels.

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The background is a light gray color with a complex, abstract geometric pattern. It features numerous overlapping triangles and lines of varying sizes and orientations, creating a sense of depth and movement. The pattern is most prominent in the corners and along the edges, with some elements appearing as if they are floating or layered in the foreground.

# 壁報展示



## Association Between Callous-Unemotional Traits and Various Types of Involvement in School Bullying Among Adolescents in Taiwan

### 探討台灣青少年個性中的冷酷特質與各類型校園霸凌間之相關性

Chen-Hsiang Su, MD<sup>1</sup>, Cheng-Fang Yen, MD, PhD<sup>1,2</sup>

蘇振翔<sup>1</sup> 顏正芳<sup>1,2</sup>

**Background:** The aims of the present study were to examine the associations of multiple dimensions of callous-emotional traits with various type of involvement in school bullying, including victimization of passive bullying, victimization of active bullying, perpetration of passive bullying, and perpetration of active bullying among adolescents in Taiwan.

**Methods:** Callous-emotional traits and involvement in school bullying among 613 adolescents were determined through use of the self-reported Chinese version of Inventory of Callous and Unemotional Traits (C-ICUT) and Chinese version of the School Bullying Experience Questionnaire (C-SBEQ), respectively. The associations of multiple dimensions of callous-emotional traits with various type of involvement in school bullying were examined using logistic regression analysis.

**Results:** The results indicated that after controlling for the effects of age, gender and residential background, a higher tendency of callous trait was positively associated with higher risks of being victims of active bullying ( $p = .003$ , odds ratio [OR] = 1.204, 95% confidence interval [CI]: 1.064-1.363), perpetrators of passive bullying ( $p = .002$ , OR = 1.146, 95% CI: 1.053-1.247), and perpetrators of active bullying ( $p = .049$ , OR = 1.169, 95% CI: 1.000-1.366). A higher tendency of unemotional trait was positively associated with higher risks of being passive bullying ( $p < .001$ , OR = 1.250, 95% CI: 1.111-1.407). Uncaring trait was not significantly associated with any type of bullying involvement.

**Conclusion:** The various roles of multi-dimensional callous-emotional traits with various type of involvement in school bullying must be taken into consideration when developing programs for prevention, detection, and intervention of school bullying among adolescents.

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## Case report: atypical depression during high dose of steroid treatment in a liver transplantation adolescent

### 個案報告：肝移植術後抗排斥用高劑量類固醇所產生之憂鬱症狀

Ming-Chia Liu<sup>1</sup>, Kai-Ting Ko<sup>1,2</sup>, Chau-Shoun Lee<sup>1,2</sup>

劉明佳<sup>1</sup> 柯凱婷<sup>1,2</sup> 李朝雄<sup>1,2</sup>

**Objective:** To report an adolescent developing depressive episodes under high dose corticosteroid and to discuss the possible mechanism and management.

**Case report:** An 18-year-old girl with history of liver transplantation received high dose steroid treatment for graft rejection at admission. She had liver transplantation 3 years ago and her mood was stable previously. Methylprednisolone pulse therapy was given for 2 days at the beginning—with equivalent prednisolone dosage 1250mg/day. Low mood, general malaise and loss of energy developed soon thereafter but relieved after discharge. During the period of outpatient treatment, low dose of prednisolone (20mg/day) was given, she could attend school and maintained a part-time job. After 3 months, she was admitted for 2<sup>nd</sup> pulse therapy due to immunosuppressant-induced focal segmental glomerulosclerosis. Methylprednisolone – with equivalent prednisolone 300mg/day – was given for 2 weeks. Methylprednisolone was then tapered and shifted to prednisolone to 40mg/day. One month later, another pulse therapy with equivalent prednisolone 100mg/day was given for 1 week and she was discharged with higher dose of Prednisolone (80mg/day). However, she was readmitted 5 days later for general malaise, bilateral legs edema and proteinuria. During the 2 month period of the 2<sup>nd</sup> admission, Cushingoid appearance developed with weight gain 5kg. Depressed look, loss of energy and hypersomnia were found. She was bed-ridden and unwilling to talk to anyone. Her mood was slightly brightened to some positive events, but mostly restricted. Suicide idea developed and she wanted to give up treatment. After tapering her prednisolone dosage gradually to 20mg per day. Her energy got better and she would like to take a walk and talk with her family. 2 months later, prednisolone was tapered to 10mg per day. Her mood and energy recovered and she was presently able to study for her college entrance exam, hanged out with friends and went jogging regularly.

**Conclusion:** The steroid-induced depressive symptoms are dose and duration dependent. Monitoring the risk and benefit of steroid therapy is important to prevent this mental adverse effect.

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## Nationwide School-Based Study of the Association between Autistic Trait and School Bullying: A Linear or Bell Curve Relationship?

### 自閉症特質與校園霸凌相關性之全國性校園研究： 線性或鐘形關係？

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余正元<sup>1</sup> 陳儀龍<sup>1,2,3</sup> 高淑芬<sup>1,2,3</sup>

**Objective:** School bullying is a common and pervasive problem among children and adolescents nowadays. Previous studies have revealed that individuals with autism spectrum disorder (ASD) are at an increased risk of bullying victimization and perpetration. However, whether the relationships between the severity of autistic trait and the severity of bullying is a linear or bell curve relationship remains unclear. In this study, we examined the possible relationships between autistic trait and school bullying using a national survey.

**Method:** A nationwide school-based study was conducted to enroll 9560 students of grade 3, 5, and 7. The Social Responsiveness Scale (SRS) and the School Bullying Experience Questionnaire (C-SBEQ) were administered to examine the severity of autistic trait and school bullying, respectively. The association between the severity of autistic trait and the severity of bullying is examined with adjustment for covariates: attention-deficit/hyperactivity trait, gender, and grade. The interactions between gender, grade and autistic trait with school bullying were further explored.

**Results:** Our results revealed a remarkable positive linear correlation between the severity of autistic trait and the severity of bullying (both in victimization and perpetration). The gender and grade interaction were found. The gender difference was remarkable that boys experienced more severe bullying than girls with the same severity of autistic trait, whereas students in different grades also revealed a difference, but the pattern was different between victimization and perpetration.

**Conclusions:** The result of this study corresponds to our expectation that the severity of school bullying was positively correlated with the severity of autistic trait. This linear relationship, associated with the different patterns of gender and grade, is helpful in establishing a gender- and grade-specific effective program for bully prevention in the future.

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## The problematic internet use in adolescents predicts self-harm and suicidal behaviors one year later

### 網路問題使用可以預測青少年一年後的自傷及自殺行為

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**Objective:** Internet addiction is an emerging disorder with growing public health concerns for its comorbid psychiatric disorders and associated function impairment. It showed that adolescents with pathological Internet use have a higher risk of self injury behaviors. However, there is scarce longitudinal study investigating the relationship between Internet addiction and suicidality. Therefore, this study aimed to investigate the role of Internet addiction on the development of self-harm/suicidal behaviors among adolescents one year later.

**Method:** A one-year, prospective cohort study was conducted in a senior high school in Taiwan. The sample included 1861 adolescents with mean age 15.9. There were 1735 respondents (93.2%) classified as having no history of self-harm/suicidal attempts in the initial assessment. Chen Internet Addiction Scale was used to identify the individuals with problematic internet use. The participants were evaluated for suicidality again one-year later and the “noncase” cohort was selected for statistical analysis.

**Results:** Internet addiction was significantly associated with the development of self-harm/suicidal behavior after adjusting for potential confounding factors (sex, poor sleep quality, depression and psychological health) at baseline evaluation. Moreover, those adolescents who used the Internet pathologically had the greater relative risk for newly emerged self-destructive behaviors (incidence rate ratio, 2.0; 95% CI, 1.0-4.0,  $p = 0.048$ ) than those without Internet addiction.

**Conclusions:** Our findings indicate that Internet addiction is prospectively associated with incidence of self-harm/suicidal behaviors in adolescents. Screening out the students with pathological Internet use in school setting is considered a crucial approach for early identifying the at-risk individuals and provide intervention to prevent suicide in this population.

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## The efficacy of adjuvant with aripiprazole for DMDD in youths with ADHD

### 合併 aripiprazole 治療於共病 DMDD 的 ADHD 兒童之療效

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**Objective:** Disruptive mood dysregulation disorder (DMDD) in children and adolescents with attention-deficit/hyperactivity disorder (ADHD) is a common clinical challenge and leads to severe impact and burden on both the patients and their family. However, there is still lack of well-established pharmacological treatment for DMDD. Therefore, this study aimed to compare clinical manifestations of youths with ADHD only and those with both ADHD and DMDD, and to investigate the effectiveness of combination of aripiprazole (APZ) and methylphenidate (MPH) in patients with ADHD comorbid DMDD.

**Method:** The subjects were divided into ADHD + DMDD group (n = 31) and ADHD only group (n = 12). Those subjects were evaluated with SNAP-IV, CBCL and Beck Youth Inventories 2nd version as well as neuropsychological tests including continuous performance test (CPT) and Color Trails Test (CTT) at baseline assessment. Then, subjects in ADHD+DMDD group received 6 weeks' combination treatment of MPH+ APZ with flexible dosage according to clinical judgment. All the initial evaluations were administered again after treatment.

**Results:** The baseline comparison of clinical features showed that the ADHD+DMDD group has more severe oppositional defiant symptoms, anxiety and depression, social problems, rule breaking behaviors and aggressive behaviors compared to ADHD only group. After treatment, the subjects in ADHD + DMDD group got significant improvement in all three subscale ratings of SNAP-IV (p < 0.001). In addition, both the scores of internalizing problem and externalizing problem subscales in CBCL significantly reduced after treatment. The subjects had weight gain of 2.50 ± 4.07 kg after treatment. All the adverse events were considered mild severity and resolved without adjusting the dosage of medicine.

**Conclusions:** The preliminary results of our investigation implicated that adjuvant APZ on MPH was an effective and well tolerated treatment in youth with ADHD and DMDD.

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## 注意力不足過動症之學齡兒童問題行為治療： 一案例報告

### Treatment for behavioral problems of ADHD Child: A Case Report

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目的：協助注意力不足過動症 Attention-Deficit hyperactivity disorder (ADHD) 之學齡兒童改善偷竊、人際互動及功課完成困難等問題。

個案報告：個案為 8 歲男性，幼稚園時期開始會未經同意拿取他人物品，被詢問時說是別人給他的；逛大賣場時將未結帳的糖果餅乾放到口袋，被路人發現後，對大人詢問事件相關過程及原因皆不回應或說不知道；模範生選舉時自己提名自己落選後，回家主動跟長輩說自己獲選模範生；小一下學期時於班上獨處時未經同意直接拿同學的蛋塔來吃，被同學排擠；由於年齡在家族中最小，備受寵愛，多被兄長禮讓，較自我中心，不懂如何與人相處。上課時會突然大聲插話，力求表現，但常打斷老師的教學，注意力不集中，頻轉頭和同學講話，也常未經同意就動手摸別人東西，提醒別人哪裡寫錯、沒寫到，告誡個案後仍時常如此，易與同學發生衝突。寫作業不專注，摸東摸西，花相當長時間寫功課，亦常因玩樂、打電動而延遲睡覺時間或早上起不來遲到。案母來院主述上述問題行為及擔憂個案向母親表示「沒有朋友」。經完整的病史詢問、行為評估及綜合心理衡鑑報告，診斷為注意力不足過動症，並訂立治療計畫，包括藥物治療、行為治療及親職教養技巧訓練等，結構化其日常生活，訂定規範建立獎懲制度、教導人際互動技巧，協助父母及老師於生活中落實，處理其問題行為。綜合討論與分析部分藉由探討孩童道德發展歷程，注意力不足過動的症狀如何影響問題行為；個案治療過程中運用的獎懲制度、人際互動訓練技巧及個別化家長訓練在實證醫學上的有效性，研究顯示有搭配藥物治療的孩童改善行為的結果較好。

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## Comorbidity of narcolepsy, intellectual disability, and psychosis: A case report and review of literature

### 猝睡症之個案合併智能不足及精神病： 個案報告與文獻探討

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**Objective:** Narcolepsy is a central disorder of hypersomnolence with a prevalence of 0.05%, and usually begins in the teens and early twenties. It is characterized by symptoms that include excessive sleepiness during the daytime, cataplexy, hypnagogic hallucinations and sleep paralysis. Here, we report a case of difficult-to-treat patient who had concurrent narcolepsy, intellectual disability, and psychosis.

**Case Report:** A 13-year-old boy was diagnosed with narcolepsy since age of 8 with initial presentation of generalized weakness and excessive daytime sleepiness. He was given methylphenidate 20 mg per day since then. No obvious cataplexy was found. However, his condition deteriorated since the age of 11. Irritability, shouting, poor impulse control with destructive behavior, and hallucinatory behaviors were noticed. Hypnagogic hallucination was noted, which had visual quality, such as seeing a ghost. Fragmented nighttime sleep was also observed. Hypersexuality with touching girls inappropriately and erection in front of everyone were reported in the school. Psychological tests revealed mild intellectual disability by WISC-IV, attention deficit by Gordon diagnostic system, and psychiatric disturbances by Bender-Gestalt test. Since the age of 13, he had experienced more daytime hallucinatory behaviors even when he felt alert. Paranoia with excessive worrying and insecurity were also noted. Impulsive violent and self-harm behaviors appeared after argument with his mother. Medications were titrated to methylphenidate 60 mg per day and amisulpride 400mg per day, but still limited improvement. Thus, he was admitted to child and adolescent psychiatric ward for management on 2017/3. We hypothesized the psychotic symptoms were the profound form of narcolepsy, so amisulpride was discontinued gradually and methylphenidate was added up to 70 mg per day. Fortunately, less hallucinatory behaviors with relative more awakens in the daytime were noted after treatment. Impulsivity with disturbance behaviors were still presented, but could relieve under behavior therapy.

**Discussion:** To the best of our knowledge, this is the first case report about the comorbidity of narcolepsy, intellectual disability, and psychosis. Reviewing the previous literature, four diagnostic possibilities were impressed that could explain the comorbidity. First, the patient has a psychotic form of narcolepsy with hypnagogic and hypnopompic hallucination, which can be misinterpreted as the active psychotic state of schizophrenia and lead to misdiagnoses and inappropriate treatment. Second, the patient has the concurrent psychosis of schizophrenia with narcolepsy. Third, there are psychotic episodes that occur in patient with intellectual disability. Fourth, the psychotic symptom is as a result of psycho-stimulant use in patient with narcolepsy. In our patient, he is a possible case of narcolepsy type 2 due to no cataplexy found, and modafinil may not be beneficial because of normal hypocretin-1 levels. The combination of antipsychotics and a psycho-stimulant was poor response in hallucinatory symptoms of our case. Finally, using psycho-stimulant agent alone with high dosage was therapeutically effective in our patient. In conclusion, there is a limited number of studies providing evidence-based treatment suggestion for these difficult-to-treat patients who comorbid narcolepsy, intellectual disability, and psychosis. Further research with focusing on pathophysiology and management of the complex presentation is warranted.

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## Gender dysphoria and autism spectrum disorder in a male adolescent

### 一位合併自閉症與性別不安患者的病程與治療

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洪珊

**Background:** gender dysphoria (GD) and autistic spectrum disorder (ASD) are both rare in prevalence. GD and ASD were found to co-occur frequently sometimes characterized by atypical presentation of GD, which makes a correct diagnosis and determination of treatment options for GD difficult.

**Case report:** a 19-year-old male patient is a case of autistic spectrum disorder, and was diagnosed since he was 11 years old. He has aggressive behavior frequently toward family and classmates and admitted to acute ward several times. However, he presented with gender dysphoria and homosexual in sexual orientation abruptly since 19 years old. He also received hormone therapy after evaluation by psychiatrist. After hormone therapy, improvement of aggressive behavior was noted.

**Discussion:** Incidence of 7.8% ASD in GD clinic referred children and adolescents is ten times higher than the prevalence of 0.6-1% of ASD in general population according to previous study. There is point of view about GD and ASD: cross gender behavior results from the inherent predisposition toward unusual interests characteristic of ASD. Besides, low GD persistence rate was found in boys. Thus, more long term follow-up, complete evaluation should be done before sex reassignment surgery in this population. Hormone therapy of antiandrogen, estrogen could reduce aggressive behaviors in ASD patient was firstly described in this case. It could be explained by higher plasma testosterone level correlated to irritability and aggressive symptoms in ASD patients.

## 青少年安非他命使用障礙症之治療經驗： 一個案報告

### Treatment of Amphetamine Use Disorder in Adolescent: A Case Report

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目的：隨著我國用藥人口年輕化，青少年藥物濫用日益激增，且青少年期為之後持續藥物濫用的重要階段，更突顯及時介入之重要性。用藥青少年多面臨自我認同不穩定、家庭失能、不良同儕、社會支持欠佳，及各種情緒／行為問題，需要在完整評估後，多面向且多元介入處遇。本文報告一安非他命使用障礙症青少年之治療經驗。

個案報告：病人 17 歲 7 個月，為非婚生子女，有一雙胞胎姊妹。病人 13 歲時，案母在案父經商失敗後便離家。病人自幼相較於案姊之溫和、聽話，顯得個性衝動、服從性差，與案姊長期存在手足競爭議題，成長過程缺乏自信與安全感。國中後與案姊更常因競爭同儕、異性或父母而起口語或肢體衝突。病人的情緒及人際關係亦不穩定，過去有多次自我傷害紀錄。

病人 12 歲時，在朋友介紹下開始吸菸、使用 K 他命，13 歲開始頻繁使用安非他命，出現耐受性、戒斷症狀、渴求、無法戒除等症狀，且無法完成學業。因違反毒品危害防制條例，自 15 歲起陸續於少年觀護所接受勒戒（共 4 次）。病人 14 歲時曾遭友人用槍威脅生命及性侵害，至今仍有侵入性症狀，逃避相關事件，負面認知（例如，覺得下體很髒），及警醒反應。病人 15 歲開始長期情緒低落，合併失眠、易疲累、低自尊、無助無望感，反覆有自我傷害及自殺意念。病人於 17 歲結束第 4 次勒戒後，仍持續使用安非他命，且情緒起伏大，多次於情緒激躁或極度憂鬱時，與家人發生肢體衝突或自我傷害，經轉介開始至本院就醫，接受住院及門診治療。

討論：治療除針對安非他命使用部分加強戒癮動機，討論渴望使用的因應技巧，並以抗憂鬱藥物、抗精神病藥物，及認知行為治療處理情緒障礙與創傷後壓力症。個案長期處於親職教養失能、手足競爭、人際關係不穩、自我肯定缺乏等狀態，我們結合醫療與司法資源，持續且深入給予病人多面向且多元的協助。

## The effectiveness of habit reversal therapy in the treatment of Tourette syndrome: a case series.

### 習慣反向治療於妥瑞氏症的治療效果之病例報告

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**Background:** Tourette syndrome (TS) is a neurodevelopmental disorder characterized by multiple tics. Tics are defined as repetitive, involuntary, non-rhythmic, sudden movements or vocalizations that can involve discrete muscle groups. It is recognized that behavioral techniques, especially habit reversal therapy (HRT), can provide an alternative or complementary treatment to pharmacotherapy.

**Objective:** To perform HRT in patients with TS to evaluate its treatment effectiveness.

**Methods:** Fourteen patients (12 men and 2 women; mean  $\pm$  SD age, 8.7 years ( $\pm$  1.7) years) were included to be treated with an 8-session HRT in China Medical University Hospital. One of the patients received concomitant treatment with methylphenidate, and 6 of the patients received nutritional supplement with vitamin B6.

**Results:** Eight patients had completed the sessions, and treatment for the other 6 patients are still in process. All of the eight patients exhibited a considerable reduction in Yale Global Tic Severity Scale (YGTSS) scores after the intervention. Mean reduction in tic scores was 25.1 ( $\pm$  12.7). All of the eight patients also reported additional beneficial effects on behavioral comorbidities such as inattention and hyperactivity with a mean reduction in SNAP-IV percentile of 27.1 ( $\pm$  10.9). No patient dropped out of the treatment so far. We will follow the effectiveness of treatment by scale scores after 3 months.

**Conclusion:** Overall, our results to the present corroborate current evidence suggesting that HRT can significantly reduce tic severity in most patients. HRT offers an effective alternative to pharmacotherapy in TS. Further studies to compare the efficacy of HRT with other behavioral interventions for tic management are needed.

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## 選擇性緘默症兒童之行為塑造歷程——個案報告

### Behavior Shaping in Selective Mutism: A Case Report

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目的：因選擇性緘默症的孩子在臨床上屬於較容易被忽略的一群，關注、治療資源均相對弱勢，故本報告藉由選擇性緘默症個案之行為塑造治療歷程、綜合討論分析，期能對選擇性緘默症在診斷上更具敏感度，並以更具系統性的方式協助患者。

個案報告：六歲五個月女童，無重大行為、發展問題，亦無精神科家族病史。

個案自三歲起即不太與母親以外的大人說話，也不回答問題。上幼稚園後，老師亦觀察到個案與其他孩童互動極少，大多在外圍觀察，不加入遊戲。但能配合低度口語溝通負荷的遊戲與活動。即使同學主動與其互動，個案亦無法以語言回應。

個案在家中能與母親、妹妹正常溝通互動，故未於幼稚園期間尋求醫療協助。母親否認個案曾經有重大壓力事件，亦無被嘲笑或霸凌的經驗。個案入小學二個月後，老師觀察到個案幾乎完全不說話，有時會使用筆談、手指等替代溝通策略，但大多數狀況中與他人互動極少，對於發言要求亦堅持拒絕。遇到困難亦無法向他人尋求幫助，故強烈建議母親帶來醫院。診斷為：選擇性緘默症（Selective Mutism），需進一步觀察，考慮有無共病社交焦慮症（Social Anxiety Disorder）。

透過行為治療，以「行為塑造」（behavior shaping）概念，以情境融入（situational fading）與個體融入（individual fading）方式，循序漸進治療，協助個案習得面對新情境與新認識的個人時，之表達能力，並能夠類化至日常生活適應。亦給予適當的親職教育和疾病衛教，亦提前給予藥物治療的相關知識。

討論：選擇性緘默症的診斷特徵、治療方式，與可能之風險因子與預後因子。

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## 自閉症合併轉化症及拒食行為之治療經驗： 一則案例報告

### Treatment of Autism Spectrum Disorder with Conversion Disorder and Food Refusal: A Case Report

潘欣平\* 商志雍 高淑芬

*Hsin-Ping, Pan\*, Chi-Yung Shang, Susan Shur-Fen Gau*

目的：自閉症患者可能呈現非典型的功能性神經學症狀或異常飲食行為，由於其辨識及表達情緒以及溝通功能不佳，造成治療的困難。本文報告一自閉症類群疾患合併轉化症及拒食行為之男性病患的治療經驗。

個案報告：個案幼時語言發展遲緩，小學時有學習障礙但未經正式診斷，人際功能稍差但未有明顯行為問題，父母亦未察覺個案有異常之處。

小六下學期個案開始出現雙下肢無力症狀，於小兒科住院治療，然而實驗室檢查、影像檢查及神經生理檢查均無明顯異常，因此照會兒童心智科，評估疑似轉化症。於此同時，個案開始減少進食，於兩個月內體重降低 20 公斤；個案否認刻意減重之意圖或對身體形象之不滿，亦未有憂鬱情緒、興趣低落等憂鬱症狀；因進食問題，個案反覆住院，但強烈抗拒進食或置入鼻胃管，而後轉至精神科病房住院。

住院期間，經由行為觀察、回溯成長史及量表施測，個案被診斷有自閉類群疾患。因其拒食行為，進行周邊靜脈營養輸注及鼻胃管灌食。但個案口咽部對異物十分敏感，即使經局部麻醉仍激烈抗拒，且置入管路後即被其扯脫，因此照會小兒科進行數次全身麻醉以便置入鼻胃管。同時，在一次學校教育及輔導人員來訪後，個案的情緒有明顯起伏，推測近數個月開始的異常行為可能與畢業及將進入新學校之焦慮有關，因此開始行為治療，並指導個案父母學習執行行為治療。數週後，個案較可勉強容忍鼻胃管置放，不再扯脫。並且照會復健科協助其練習步行。在與個案家屬互動的同時，團隊也發現特殊的家庭動力並介入治療。而後，在醫療團隊堅定的行為治療下，個案開始接受以口進食，並出院於門診追蹤。

目前個案已恢復至病前體重，已開始至新學校上學，其雙下肢無力情形亦逐漸改善中。

討論：異常行為可能是自閉類群疾患個案因應表達缺陷的替代溝通方式，常見有攻擊、自傷等行為，異常飲食行為或功能性神經學症狀亦可能發生，應逐一審視可能引起其負面情緒的任何變化。同時，以往未被注意的家庭結構或家庭動力亦可能在此時凸顯，需適當介入，以增加家庭之支持功能。



## Title: A Multidisciplinary Team Approach of Psychosocial Dwarfism: A Case Report

### 疑似心理社會性身材矮小症案例之多面向評估 與介入：案例報告

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**Objective:** Psychosocial dwarfism is a disorder of short stature associated with emotional deprivation and pathological rearing environment. Disturbed caregiver-child relationship and family stress are often observed with aberrant food acquisition behavior and sleep disturbances. Here we present a multidisciplinary approach for evaluation, management and support of a patient with the disorder.

**Case Report:** The 6 year-old girl was adopted at the age of 2.5 years. She has had decelerated growth velocity and decreased body weight since the age of 3.5years, with frequently waking up in the midnight, gorging and rummaging around in the refrigerator. The pediatric endocrinologist arranged a series of laboratory exam without significant findings of systemic disease. With the finding of intense relationship and harsh parenting within the family, psychosocial dwarfism was a probable diagnosis. Her growth velocity and body weight went up during and after psychiatric hospitalization for two months. She had received individual psychotherapy and family counseling on weekly basis for more than two years. There are less power struggle and contention between the girl and her adoptive mother now. The aberrant food acquisition behavior, though it still exists, present in a milder and less provocative way. The dietitian's advices also help the girl's family form more practical and flexible consensus on the girl's food intake.

**Discussion:** There is considerable discussion over the impact of psychosocial stress on physical growth, primarily on the growth hormone-insulin-like growth factor axis(GH-IGF-1 system). However, little is known about psychosocial evaluation and intervention of psychosocial dwarfism. Intensive approaches, such as hospitalization with multidisciplinary consultations, along with individual psychotherapy and family counseling, may introduce a long lasting improvement.

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## 系統減敏法選擇性緘默症合併社交畏懼症之 治療經驗：一個案報告

### Treatment of Selective mutism with social anxiety disorder by System desensitization: A Case Report

陳昱文

*Yu-Wen Chen*

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目的：選擇性緘默症流行率雖低，但可能影響個案社交功能與生活適應，且造成照顧者極大負荷。本文報告以系統減敏法治療選擇性緘默症合併社交畏懼症男性病患之治療經驗。

個案報告：病患自幼個性內向敏感，且容易焦慮緊張。幼兒期個案有明顯分離焦慮，及嚴重怕生。學齡前期個案害怕被點到名，在班上大多沉默。

學齡期個案與他人交談會臉紅發抖心悸；個案害怕成為注目的焦點，慢慢發展成不與家人以外的人對話。個案無法獨自出門。小學低中被霸凌，社交焦慮度急遽增高，開始出現憂鬱心情。高年級時，社交功能損害越來越嚴重，導師強烈建議家屬帶個案就醫。一開始案家配合意願低，多次衛教後，已與案家建立治療同盟，願意密集就醫。目前系統減敏法實施中，此外採用“增加非口語表達機會”改善其受疾病症狀之溝通限制，針對其開口困難，採用低焦慮度社交情境讓個案練習開口。

討論：社交畏懼症治療除藥物外，行為治療是最常被併用的一種治療方法。已有研究顯示，暴露療法是最常用來治療社交畏懼症和選擇性緘默症的行為療法。暴露療法分為較激進的洪水法及較溫和的系統減敏法。減敏法用在社交畏懼症治療分為三個步驟：學習放鬆技巧→列出焦慮階層→治療者根據焦慮階層循序漸進地讓患者執行不同階層的目標。在這個個案應用上，這個案診斷為社交畏懼症且合併選擇性緘默症，且案家與個案有足夠的病識感，個案也有強烈治療動機，所以適合減敏法。用減敏法減少出糞的焦慮，此外用“增加非口語表達機會”減少害怕說話的焦慮。經過支持性心理治療及放鬆技巧訓練及給予最低焦慮度社交情境讓個案練習開口，個案目前在語言輸出方面已有部分進展。

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## Gender Differences of Sleep Patterns among Seventh to Twelfth Graders: a Longitudinal Follow-up Study in Taiwan

### 七至十二年級學生睡眠型態之性別差異： 台灣之追蹤研究結果

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**Objective:** To demonstrate the different relationships between gender and sleep patterns in adolescents from grade 7 to 12.

**Method:** Longitudinal data from annually school-based assessments of sleep habits among secondary school adolescents in northern Taiwan were analyzed. Measures of sleep patterns included the sleep length on (1) weekdays (WDL) and (2) weekends (WEL), (3) the sleep extension (SE, discrepancy of sleep duration between weekdays and weekends), the delay of (4) weekend bed time (WBD) and (5) weekend rise time (WRD), as well as (6) social jetlag (SL, delay of middle time point of weekend). Growth curve models were used to address gender differences in sleep patterns. Associations between other individual covariates and sleep patterns were also explored.

**Results:** A total of 1,747 subjects (926 females, 53%) whose data were complete from the CABLE database were eligible for analysis. Results showed that male subjects had longer WDL than did the female subjects at all time points ( $P < 0.001$ ), shorter WEL at all time points ( $P < 0.01$ ) except for at 12th grade. SE was shorter for the male subjects than the female ones across the followingup ( $P < 0.01$ ). Male subjects had longer WBD at 7th grade to 9th grade ( $P < 0.01$ ) while had shorter WRD at all grades ( $P < 0.001$ ) compared to female ones. SJ was shorter for the male subjects than the female ones at all grades ( $P < 0.05$ ). The pairwise comparisons of the five nested models for each dependent variable revealed that the best-fitted model was quadratic model for the WDL; cubic for the WEL and the SE; and quintic for the WBD, the WRD, and the SJ. The main effects of both time-varying and time-invariant covariates were introduced to evaluate the association between subject's gender and sleep patterns and the results showed gender differences are statistically significant for all dependent variables.

**Conclusions:** Findings from this study suggest decreasing trends in WDL and WEL but a rising trend in SE. Compared to male, females had shorter WDL but longer WEL as well as more SE. Further, females had shorter WBD, longer WRD, and more SJ. Future population-based study is necessary to determine gender difference in trends of sleep patterns and their predictors in adolescents.

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## Contact heat evoked potentials associated with social emotion problems in autism spectrum disorders

### 自閉症類群疾患之接觸性熱誘發電位異常與社會情緒問題之相關研究

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**Objective:** Sensory disturbance is associated with socio-emotional problems in individuals with autism spectrum disorder (ASD). Most studies assess sensory symptoms by self-reports, which are largely limited by the language ability and self-awareness of the individuals. This study aims to investigate sensory disturbance by contact heat-evoked potentials (CHEP) in ASD individuals, and to examine the clinical correlates of CHEP parameters.

**Method(s):** Thirty-one individuals with ASDs (aged  $20.5 \pm 5.2$  years) and 22 typically-developing (TD) controls (TD, aged  $21.4 \pm 2.6$ ) completed the questionnaire of Adolescent/Adult Sensory Profile and the task of CHEPs (51 degrees over leg). The amplitude and latency of CHEPs were compared between ASD and TD. Correlations between the Sensory Profile and CHEPs parameters were examined.

**Result(s):** The results showed that ASD individuals showed smaller P2-wave amplitudes than TD, even though they reported a similar level of pain. In TD individuals, a smaller P2-wave amplitude was related to higher scores on 'low registration,' 'attention to detail,' and 'attention switching difficulties.' In ASD individuals, longer N2-wave latency was related to higher scores on 'sensory sensitivity' and socio-emotional problems; while higher reported pain was associated with higher scores on 'low registration,' overall autistic severity, and longer N2-wave latency.

**Conclusion(s):** Our findings of attenuated CHEP response in ASD, which was associated with sensory symptoms and socio-emotional problems, suggest a potential role for CHEP in studying sensory disturbances in ASD.

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# Boredom Proneness and its Correlation with Internet Addiction and Internet Activities in Adolescents with Attention-Deficit/Hyperactivity Disorder

## 注意力不足／動症青少年網路成癮和網路活動與無聊傾向之關連

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周文君<sup>1\*</sup> 顏正芳<sup>2,3</sup>

**Objective:** This study examined the associations of boredom proneness with Internet addiction and activities as well as the moderators for such associations in adolescents with attention-deficit/hyperactivity disorder (ADHD).

**Methods:** In total, 300 adolescents who received a diagnosis of ADHD and were 11 to 18 years old participated in this study. Their Internet addiction, the scores for lack of external and internal stimulation on the Boredom Proneness Scale-short form (BPS-SF), ADHD, and parental characteristics were assessed. The types of Internet activities that the participants engaged in were also examined. The associations of boredom proneness with Internet addiction and Internet activities and the moderators of the associations were examined using logistic regression analyses.

**Results:** Higher scores for lack of external stimulation on the BPS-SF were significantly associated with a higher risk of Internet addiction (Odds ratio [OR] = 1.103; 95% confidence interval [CI]: 1.049-1.159). Maternal occupational socioeconomic status moderated the association of lack of external stimulation with Internet addiction. Higher scores for lack of external stimulation were significantly associated with a high tendency to engage in online gaming (OR = 1.109, 95% CI: 1.043-1.180), whereas higher scores for lack of internal stimulation were significantly associated with a low tendency to engage in online studies (OR = .962, 95% CI: .926-.999).

**Conclusion:** Lack of external stimulation on the BPS-SF should be considered a target in prevention and intervention programs for Internet addiction among adolescents with ADHD.

**Keywords:** attention-deficit/hyperactivity disorder, boredom proneness, Internet addiction, Internet gaming.

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## ADHD comorbidity and antidepressant resistance in major depression

### 注意力不足過動症共病與抗憂鬱劑治療困難憂鬱症

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**Background:** The comorbidity between attention deficit hyperactivity disorder (ADHD) and major depression is common. However, the influence of ADHD comorbidity in the response or resistance to antidepressants remains unknown among patients with major depression. **Methods:** 1891 patients with major depression and ADHD and 1891 age-/sex-matched patients with major depression only were enrolled and followed for 1 year in our study. Use of antidepressants and ADHD medications during 1-year follow-up period were assessed. Antidepressant resistance was defined as treatment failure in two or more than two different antidepressants for adequate treatment dose and duration. **Results:** Patients with major depression and ADHD had an increased risk of treatment resistance to antidepressants (odds ratio [OR]: 2.32, 95% confidence interval [CI]: 1.63~3.32) compared with patients with major depression only after adjusting for demographic characteristics and other psychiatric comorbidities. Regular treatment for ADHD would reduce this risk (OR: 1.76, 95% CI: 0.72~4.27). Anxiety (OR: 3.15, 95% CI: 2.24~4.44) and substance use (OR: 2.45, 95% CI: 1.16~5.17) disorders were also associated with an elevated likelihood of resistance to antidepressants during the follow-up. **Discussion:** Patients who had dual diagnoses of major depression and ADHD were more likely to have treatment resistance to antidepressants compared with patients with major depression only. Prompt and regular treatment for ADHD would reduce this risk.

**Keywords:** ADHD; Major depression; Antidepressant resistance.

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## Intake of Polyunsaturated Fatty Acids (PUFAs) and Delay Aversion in Children with Attention Deficit Hyperactivity Disorder

### 多元不飽和脂肪酸之攝取與注意力不足過動症之延宕厭惡之相關性

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**Background:** Deficiency in omega-3 polyunsaturated fatty acids (n3-PUFAs), a type of essential fatty acids (EFA), has been associated with cognitive function and emotional regulation, and it has also been associated with manifestation of attention deficit hyperactivity disorder (ADHD). This study investigated the association between n3-PUFAs intake and neurocognitive functions in children with ADHD.

**Methods:** Forty-two subjects were enrolled in the study, where 21 of them were diagnosed with DSM-IV ADHD, and 21 of them were typically developing youth (TD). The n-3 PUFAs intake were recorded, while EFA deficiency and ADHD symptom severity were assessed by EFA deficiency scale and SNPA-IV, respectively. The children were also assessed by Go-No-Go Task, Delayed Reaction Time Task, and Finger Tapping Task for inhibitory control, delay aversion, and temporal processing.

**Results:** The ADHD youth, when compared with TD, had a greater severity in EFA deficiency (7.24 + 4.56,  $p = .02$ ) and poorer performances in both delay aversion (-177.88+280.40,  $p = .02$ ) and temporal processing (85.34+10.96,  $p < .001$ ) tasks. Moreover, severity in ADHD symptoms was positively correlated with severity in EFA deficiency. In addition, severity in EFA deficiency was associated with a higher delay aversion ( $p < 0.001$ ).

**Conclusion:** Children with ADHD had a higher EFA deficiency, and the EFA deficiency was associated with a greater severity in ADHD symptomatology and delay aversion.

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## Mothering and Family Process in Siblings of Children and Adolescents with Autism Spectrum Disorders (ASD)

### 泛自閉症孩童與青少年之手足之母子與家庭關係

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**Objective:** Maternal stress and impaired family processing has been reported in mothers of children with ASD. However, there is no study on mothering and family process in siblings of children with ASD. This work examined mothering and family process in unaffected siblings of children and adolescents with ASD as compared to that of children and adolescents with ASD and typically developing youths (TD).

**Methods:** We enrolled 274 probands, aged 6-18, with clinical diagnosis of ASD according to DSM-IV criteria confirmed by the Autism Diagnostic Interview-Revised, 274 age- matched non-affected siblings, and 296 age and sex- matched TD. The ASD group consisted of 81 typical autism (TA), 87 high-functioning autism (HFA), and 106 Asperger syndrome (AS). Mothers received psychiatric interviews for ADHD diagnosis and reported on their parenting styles and family function.

**Results:** Maternal reports showed that ASD regardless of age, maternal education level, ASD subtype, or the presences of ADHD had a less favorable mother-child interaction and family process than the siblings or TD. All ASD subtypes and siblings of TA, but not of HFA or AS, had more impaired mother-child relationship and home behavioral problems than TD. The correlates for mothering and family process in ASD probands and TD are age, social reciprocity, maternal anxiety/depressive symptoms, and maternal Autism Quotient (AQ) scores; while the correlates for mothering and family process in siblings of ASD are age, social reciprocity, maternal educational level and maternal AQ scores.

**Conclusion:** The finding suggested that the presence of ASD had a great impact on maternal parenting behaviors in the family as a whole. Maternal mood symptoms and autistic traits may also affect mothering and family process in families with ASD children.

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## Comorbidity of Narcolepsy and a Depressive Disorder: A Nationwide Population-based Study in Taiwan

### 猝睡症與憂鬱症的共病探討： 以台灣人口為基礎的流行病學研究

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**Objective:** Narcolepsy is a chronic sleep disorder that is likely to have neuropsychiatric comorbidities. Depression is a serious mood disorder that affects individuals' daily activities and functions. This study aims to investigate the relationship between narcolepsy and depressive disorders.

**Methods:** This study consists of patients diagnosed with narcolepsy between January 2002 to December 2011 (n = 258) and age- and gender-matched controls (n = 2580) from Taiwan's National Health Insurance database. Both the patients and the controls were monitored through December 31, 2011 to identify the occurrence of a depressive disorder. We used a multivariate logistic regression model to assess the narcolepsy's potential influence on the comorbidity of a depressive disorder.

**Results:** During the study period, 32.7%, 24.8%, and 10.9% of the narcoleptic patients were comorbid with any depressive disorder, dysthymic disorder, and major depressive disorder, respectively. When compared to the control subjects, the patients with narcolepsy were at greater risks of having any depressive disorder (aOR, 6.77; 95% CI, 4.90–9.37), dysthymic disorder (aOR, 6.62; 95% CI, 4.61–9.57) and major depressive disorder (aOR, 6.83; 95% CI, 4.06–11.48). Of the narcoleptic patients that were comorbid with depression, more than 50% had been diagnosed with depression prior to being diagnosed with narcolepsy. Being female and an older age of narcolepsy diagnosis were both associated with the co-occurrence of depression.

**Conclusion:** Our nationwide data study revealed that narcolepsy and depression commonly co-occur. Since some symptoms of narcolepsy overlap with those of depressive disorders, our findings serve as a reminder that clinicians must pay attention to the comorbidity of narcolepsy and depression.

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## Pain, Bullying Involvement, and Mental Health Problems among Children and Adolescents with Attention-Deficit/Hyperactivity Disorder in Taiwan

### 探討台灣患有注意力不足過動症的兒童青少年的身體疼痛、霸凌涉入經驗、與身心健康問題

Huei-Fan Hu<sup>1\*</sup>, Cheng-Fang Yen<sup>2</sup>

胡慧芳<sup>1\*</sup> 顏正芳<sup>2</sup>

#### Abstract

**Objective:** To examine the relationships of pain and pain-induced functional impairment with bullying involvement, as well as the relationships between pain and mental health problems among 474 children and adolescents with attention-deficit/hyperactivity disorder (ADHD).

**Method:** The levels of pain, pain-induced functional impairment, involvement in bullying, depression, anxiety, ADHD symptoms, and sleep quality were assessed.

**Results:** Both victims of verbal and relational bullying and victims of physical bullying were more likely to have pain and pain-induced functional impairment than nonvictims. The perpetrators of verbal and relational bullying were more likely to have pain than the nonperpetrators. Participants with pain and pain-induced functional impairment experienced more severe depression and anxiety and worse sleep quality than did those without pain or pain-induced functional impairment.

**Conclusion:** Clinical and educational professionals should consider the possibility of involvement in bullying and comorbid depression, anxiety, and poor sleep quality among ADHD children and adolescents with pain problems.

**Key words:** Anxiety, attention-deficit/hyperactivity disorder, bullying, depression, pain, sleep quality.

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## The Effect of Foot Bath on Heart Rate Variation, Depression and Anxiety in Young Males

### 足浴對年輕男性之心率變異性、焦慮及 憂鬱療效研究

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楊立光\* 許崇智 戴月明

**Objective:** Whole body warm water bath has been recognized as a method to improved sleep quality and decreased anxiety and depression; and the cold water shower may have anti-depressive effect as well. However, there is no evidence whether the warm water foot bathing (FB) could have the same effect. This study aimed to investigate the effect of warm water FB on the symptoms of anxiety and depression, and the heart rate variability among young males.

**Methods:** Thirteen hospitalized males with anxiety and depression symptoms were divided into group A (N = 8, aged  $23.1 \pm 1.8$ , FB in the 1<sup>st</sup> week), and group B (aged  $23.6 \pm 1.1$ , FB in the 2<sup>nd</sup> week). All received the assessment of Beck's anxiety inventory (BAI), Beck's depression inventory (BDI) and heart rate variability (HRV). The HRV parameters include the time domain of RR interval (RR), standard deviation of the heart rate (SD), the frequency domain of total power (TP), high frequency (HF) and the low frequency (LF). Cross-over design was employed.

**Results:** Warm water FB led to decrease of all the HRV parameters, including SD, TP, HR, and LF, with the exception of RR. The effect was most significant in the first 15 minutes and lasted through the whole duration of FB. Moreover, both the two groups had significantly improvement on BAI and BDI scores. While, in group A, which received FB earlier, the BDI scores improved significantly earlier than group B. The BAI of group A also improved significantly since the second time of FB and lasted through the whole study.

**Conclusions:** We found that early intervention with warm water FB may have positive effect on the hospitalized young males with anxiety and depression. Moreover, comparing with the change of RR, SD and HF, FB has the similar effect with the effects of exercise on HRV, with the exception for the heart rate acceleration. We suggested that warm water FB may be more suitable for those with poor cardiovascular tolerability, who cannot take the strength of exercise.

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## The Clinical Manifestation of the Child and Adolescent Comorbid Autism Spectrum Disorders and Attention Deficit Hyperactivity Disorder

### 針對合併自閉症類群障礙及注意力不足過動症的兒童及青少年：探討臨床表現

*Yi Ting Hsieh, Ching Ling Chu, Jui Chien Huang, Tzu I Lee,  
Mei Hung Chi, Po See Chen, Yen Kuang Yung*

謝依婷 朱慶琳 黃睿謙 李姿誼 紀美宏 陳柏熹 楊延光

**Objective:** Recent studies revealed several similar symptoms between autism spectrum disorders (ASD) and attention-deficit/hyperactivity disorder (ADHD). In the clinical situation, the combined symptoms were common, and the comorbid diagnosis was approved by DSM-5 on 2013. The manifestation with comorbid diagnosis of ASD and ADHD needs further study. The aim of our study is evaluate the common or distinctive clinical features between ASD and ADHD in order to identify possible different phenotypes. The influence of clinical phenotype and parenting stress will also be compared for two groups.

**Method:** We enrolled 23 children and adolescents from National Cheng-Kung University Hospital child and adolescent psychiatry outpatient department, and divided into two diagnostic groups: ADHD group (n = 13) and ASD + ADHD (n = 10) group. Intelligent quotient (IQ), emotional and behavior problems, ADHD symptoms, ASD symptoms, social communication function and parenting stress were evaluated through the following test: Wechsler Intelligence Scale for Children/ Wechsler Preschool and Primary, Scale of Intelligence, Child Behavior Checklist, Social Communication Questionnaire, Parenting Stress Index, SNAP-IV Rating Scale and executive function tasks.

**Results:** Socio-demographic characteristics of ADHD and ADHD + ASD groups showed no significant differences between two groups in age, gender and IQ. ASD symptoms severity and social ability were assessed with SCQ, SRS and ToM showed a statistically significant difference between the groups in SRS ( $P < 0.001$ ) and SCQ ( $P = 0.02$ ). There's no significant difference in ToM ( $P = 0.12$ ). Emotional and behaviors problems assessed with CBCL showed a statistically significant difference between the two groups in internalizing ( $P = 0.01$ ), externalizing ( $P = 0.03$ ), and total problems ( $P < 0.005$ ). ASD + ADHD group showed higher internalizing scores, externalizing and total scores compared with the ADHD group. Parenting stress was evaluated with PSI showed no statistically difference between two groups.

**Conclusions:** In our study, the significant differences between ADHD and ADHD + ASD groups in emotional and behavior problems and autistic symptoms severity were noted. The results still need further studies to validate. However, more aid for the child and adolescents with ADHD + ASD may be considered.

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# Potential Role of Pre- and Postnatal Testosterone Levels in Attention-Deficit/Hyperactivity Disorder

## 產前與出生後的睪固酮在注意力缺失過動症中的角色

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周妙純 王亮人\* 周文君 李旻靜

### Abstract

**Objective:** This study examined the potential correlation between pre- and postnatal testosterone (T) levels and behavioral and neurocognitive profiles of children with attention-deficit/hyperactivity disorder (ADHD).

**Method:** Two hundred ADHD patients with a mean age of  $8.7 \pm 2.0$  y (158 boys and 42 girls) were recruited. The ratio of the length of the right 2nd and 4th digits (2D/4D ratio) served as a surrogate of prenatal T exposure, and postnatal T was determined using salivary T concentration. Behavioral symptoms were evaluated using the Swanson, Nolan, and Pelham Version IV Scale for ADHD (SNAP-IV). Neurocognitive function was assessed using the Wechsler Intelligence Scale for Children-Fourth Edition (WISC-IV) and Conners' Continuous Performance Test (CPT).

**Results:** Lower 2D/4D ratios were associated with comorbid disruptive behavior disorders ( $t = 2.15, p = .033$ ). Among the boys with ADHD, neither 2D/4D ratios nor salivary T levels were associated with behavioral symptoms or neurocognitive function. Among the girls with ADHD, the salivary T level was positively correlated with the Perceptual Reasoning Index of the WISC-IV ( $r = .48, p = .001$ ) and the Confidence Index ( $r = .37, p = .017$ ) and Omission Errors of the CPT ( $r = .62, p < .001$ ).

**Conclusions:** A higher prenatal T exposure is associated with a greater risk of developing disruptive behavior disorders, and T may exert differential neurocognitive effects between boys and girls with ADHD. However, the neurobiological mechanisms of T involved in the pathogenesis of ADHD warrant further investigation.

**Keywords:** ADHD, endocrinology, cognition; psychopathology; gender difference

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## Relationships of Harassment due to Gender Non-Conformity and Sexual Orientation During Childhood and Adolescence with Problematic Internet and Smartphone Use among Homosexual and Bisexual Men in Taiwan

### 臺灣同性戀與雙性戀男性在兒童青少年時期因性別不順常規和性取向而遭受騷擾之經驗與成年期網路和智慧型手機問題使用之關聯性

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**Background:** This study examined the relationships of victimization of traditional and cyber harassment due to gender non-conformity and sexual orientation during childhood and adolescence with problematic internet and smartphone use during early adulthood among males with homosexuality or bisexuality in Taiwan.

**Method:** A total of 500 males with homosexuality or bisexuality participated in this study. The experiences of traditional and cyber-harassment due to gender non-conformity and sexual orientation during childhood and adolescence were examined. The severities of problematic internet and smartphone use and activities in early adulthood were compared between victims and non-victims of harassment. The severities of problematic internet and smartphone use were also compared among the groups of different types of harassment as well as among the groups of different durations of being harassed.

**Results:** Victims of traditional bullying and cyber-harassment had more severe problematic internet and smartphone use than non-victims. Victims of both traditional bullying and cyber-harassment had more severe problematic internet use than victims of either traditional bullying or cyber-harassment. Prolonged victimization was significantly associated with problematic internet and smartphone use.

**Conclusions:** Victimization of traditional and cyber harassment during childhood and adolescence predicts Internet and smartphone addiction during early adulthood among males with homosexuality or bisexuality.

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## Long Term Effects of Methylphenidate on the sleep problems of children with attention-Deficit/hyperactivity disorder

### Methylphenidate 長期治療對 ADHD 孩童睡眠狀況之影響

Yu-Shu Huang<sup>1,2</sup>, Wei-Chih Chin<sup>2</sup>

黃玉書<sup>1,2</sup> 金韋志<sup>2</sup>

**Background:** We investigate the sleep problems of attention-Deficit/hyperactivity disorder (ADHD) children using objective and subjective measurement with yearly testing for five years, and investigated the effect on sleep and sleep complaints, of methylphenidate-MPH- prescribed to these children for 5 years.

**Methods:** From July 2009 to December 20015, we recruited ADHD children age between 6 and 12 years old. 266 children were enrolled in our study. We use objective measurements: Polysomnography (PSG) and, Continuous Performance Test (CPT) and subjective measurements: OSA-18 Questionnaire, Disruptive Behavior Rating Scale (DBRS) and Child Behavior Checklist (CBCL) to analyze sleep complaints and problems and ADHD symptoms at each yearly testing. All ADHD children received MPH treatment, and all children with OSA and enlarged adenotonsils-T&A-were treated the 1<sup>st</sup> year with T&A surgery. Descriptive statistics and repeat measure tests were used to analyze the datas.

**Results:** 266 ADHD children (mean age  $8.8 \pm 2.3$  years old) were included. 173 (65%) children had associated obstructive sleep apnea ( $AHI = 9.0 \pm 0.8/\text{hour}$ ) and 93 (35%) children were without OSA ( $AHI = 0.9 \pm 0.2/\text{hour}$ ). In sleep study finding, PSG data show AHI (Apnea-hypopnea index), HI, ODI (Oxygen desaturation index), and sleep efficiency showed significant improvement ( $P < 0.001, 0.001, < 0.001, 0.001$ ) at first year follow-up. Similarly CPT data ( $p = 0.047$ ), DBRS ( $p < 0.001$ ) and some domains of CBCL questionnaires were significantly improved. But at 5 years follow-up ODI, sleep efficiency and mean SaO<sub>2</sub> show slight worsening ( $p = 0.002, < 0.001, < 0.001$ ) as did the OSA 18 Questionnaire, and performance and ADHD tests- CBCL and DBRS – showed worsening despite continuous MPH intake at five years follow-up.

**Conclusion:** After initial treatment of ADHD with and without OSA, sleep problems and ADHD symptoms have significant improvement. But long term follow-up indicate worsening of the tests at 5 years, raising the question of why, and indicating needs for regular re-testing.

**Keywords:** attention-Deficit/hyperactivity disorder, Obstructive sleep apnea, Methylphenidate, sleep problem

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## School dysfunction in youths with autistic spectrum disorders in Taiwan: the effect of subtype and ADHD

### 台灣自閉症類群疾患兒童的社會功能缺損在學校場域的表現：探討臨床症狀及注意力不足過動症狀的影響

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**Objective:** Youths with autism spectrum disorder (ASD) tend to encounter varied levels of difficulties at school, such as lower academic performance, fewer reciprocal friendships and behavioral problems. However, little is known about how personal characteristics impact their school function, and what we should emphasize when evaluating their difficulties at school. Therefore, we investigated the children with ASD in Taiwan to see whether the extend of impaired school functions varied according to ASD subtypes, intelligence level, the presence of attention-deficit hyperactivity disorder (ADHD) and other demographics.

**Method:** The mothers of 160 youths with ASD, aged 6-18 years old, and 160 age- and gender-matched healthy controls without ASD reports youth's school functions on the Social Adjustment Inventory for Children and Adolescents. Of 160 youths with ASD, there were 44 with typical autism, 55 with high-functioning autism and 61 with Asperger's disorder.

**Results:** We found that youths with high-functioning autism and Asperger's disorder had better academic performance, but worse attitude toward school than youths with typical autism. Co-occurrence with ADHD negatively impacted all domains of school functions in youths with ASD. Some other personal characteristics associated with school dysfunction included oppositional symptoms, lower intelligence, older age and female gender in youths, as well as their mothers' autistic trait and college and above educational level.

**Conclusions:** Our results confirm that youths with ASD have school dysfunction in several domains and indicate that low intelligence and comorbid ADHD play an important role in school dysfunction.

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## Medication Effects of Autistic Symptoms, Aggressive Behaviors between Sensory Over-Response and Social Adjustment at Home in Children with Autism.

### 自閉症孩童家庭關係與感覺過度反應相關研究： 探討自閉症狀及激躁行為之中介效果

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**Objective:** This study aims to explore the mediation effects of autistic symptoms and aggressive behavior between the link from sensory over responsibility (SOR) to social adjustment at home among children with autism spectrum disorder (ASD).

**Method:** A total of 124 youths with ASD (108 males, 87.1%, mean age:  $10.58 \pm 3.48$  years) were recruited from psychiatric clinic in National Taiwan University Hospital. They are clinically diagnosed with ASD according to the DSM-IV diagnostic criteria before the study implementation. In the first period of this longitudinal study design, participants' parents reported on the SCQ and CBCL about their children's behaviors. All participants were followed up at about 3 more years later ( $3.14 \pm 1.25$  years). Then, their parents reported on the SAICA for social adjustment of the participants.

**Results:** The prevalence of SOR, in this study, among clinic children with ASD is 45.97% (95% confidential interval = 37.08% to 54.86%). They also represented higher mean scores of behavior problems in CBCL and home-related problems in SAICA (Table 1). In general, early SOR in children with ASD correlated with family impairment and parenting stress (Table 2). Individually, both SCQ and aggressive behavior completely mediate overall home problems (Table 3). In combination, the latter represented dominant mediation effects on overall home problems and almost its sub-items in the parallel mediation models (Table 4-1). However, in the serial mediation models (Table 4-2), symptoms of autism (SCQ) still play a mediating role between SOR and overall home problems and problems with siblings and father although their magnitudes were lower indeed. More interestingly, a totally different mediation pattern was found with mother relationship from others, while the strong medication effect of SCQ was found independently but became faded and insignificant after adding another mediator, aggressive behavior.

**Conclusions:** The study, we found that mothers of children with ASD might have different copying strategies at times adjusting themselves for relatively longer time than that of fathers and siblings. Besides that mothers are described, on average, as spending much more time in the care of children with ASD than fathers (Baker & Drapela, 2010). Children with ASD tends to engaged in more relational plays with mothers than in unsupported play or just play with fathers (Flippin & Watson, 2011). In addition, children with ASD express less positive emotionality overall and more negative emotionality during fear with father (Hirschler-Guttenberg, Golan, Ostfeld-Etzion, & Feldman, 2015) Therefore, our finding indicates a more salient mediation effects of SCQ, instead of aggressive behaviors, between SOR and mother relationship problems than those of fathers and siblings.

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## The deficits of facial emotion recognition and emotional responses in adolescents with attention-deficit hyperactivity disorder

### 面部表情辨識能力及情緒反應缺損於注意力不足過動疾患青少年的研究

Tai-Ling Liu<sup>1\*</sup>, Cheng-Fang Yen<sup>1,2</sup>

劉黛玲<sup>1\*</sup> 顏正芳<sup>1,2</sup>

**Objective:** Attention deficit/hyperactivity disorder (ADHD) is the most prevalent neuropsychiatric disorder affecting 4% to 12% of the school-age population. Social dysfunction is the common symptom in ADHD and ASD. Although evidence has accumulated on impairment in social cognition in autism spectrum disorder, less is known about the impairment of social cognition in ADHD. The aims of this study were to compare the performance of emotion recognition and emotional responses between ADHD and normal population in adolescents.

**Methods:** The study recruited 108 adolescents with ADHD who aged at 11 to 16 years old from the child and adolescent mental health clinics and 63 adolescents without major psychiatric diseases from community as the participants. We investigated the facial emotion recognition of adolescents with ADHD and control group by using the Facial Emotion Recognition Task (6 emotional expressions and 4-degree intensity of emotion) and Implicit-association test (for testing the strength of a person's automatic association between mental representations of emotion in memory).

**Results:** After controlling of sex and age, adolescents with ADHD performed significantly worse on differentiation of facial emotion, ranking and rating intensity of emotion in Facial Emotion Recognition Task. In addition, adolescents with ADHD have stronger implicit attitude toward facial emotion ( $p < 0.001$ ).

**Conclusions:** The results suggested that subtle deficits in facial emotion processing and emotional responses in adolescents with ADHD.

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## Decision-making in adults with attention deficit/ hyperactivity disorder (ADHD): an age-stratified analysis 成人注意力不足過動症之決策特徵：年齡分層分析

Yu-Ju Lin<sup>1,2\*</sup>, Susan Shur-Fen Gau<sup>2</sup>

林育如<sup>1,2\*</sup> 高淑芬<sup>2</sup>

**Objective:** Impulsivity and careless decision-making are characteristics of ADHD. We intend to investigate the decision-making in the face of risk and pre-decisional processing in adults with ADHD stratified by age.

**Method:** We recruited 212 adults who were diagnosed with DSM-5 ADHD and 240 non-ADHD. All participants were interviewed by the K-SADS-E to confirm their previous and current ADHD status and other psychiatric diagnoses. The sample was stratified into two age periods: 16-24 [young ADHD group (YA): n = 114 and young control group (YC): n = 134] and 25-35 years old [old ADHD group (OA): n = 98 and old control group (OC): n = 106]. Decision-making was measured by the Cambridge Gambling Task (CGT), and Information Sampling Task (IST) and executive functions were measured by the Cambridge Spatial Working Memory (SWM) and One touch Stocking of Cambridge (OTS). Generalized linear regression was used to analyze the group differences of the neuropsychological tasks.

**Results:** The YA group had longer deliberation time, worse quality of decision making and risk adjustment in CGT than the YC group while the OC group had an unexpectedly higher delay aversion than and comparable quality of decision-making and risk adjustment to those in the OA group after adjusting for age and sex. There was no difference in the performance of risk taking in CGT and all tasks in IST between ADHD and controls regardless of age. Adults with ADHD had a longer latency to correct in OTS and more between errors in SWM than controls in both age periods.

**Conclusion:** There was an age difference in the presentation of decision making in ADHD. Decision making was impaired in younger but not older adults with ADHD. The impaired decision making in younger adults with ADHD was not due to the tendency of risk taking or delay aversion. On the contrary, they were more conservative in making choices than controls either in the gambling or the executive tasks, and this phenomenon was even more significant in older adults with ADHD.

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## The Impacts of Single Session Intermittent Theta-Burst Stimulation over the Dorsolateral Prefrontal Cortex and Posterior Superior Temporal Sulcus on Adults with Autism Spectrum Disorder

### 單次重複性顱磁刺激術作用於背外側前額葉與背顱葉溝上側溝對於成人自閉症的影響

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**Objectives:** Intermittent theta burst stimulation (iTBS), a patterned repetitive transcranial magnetic stimulation, was applied over the posterior superior temporal sulcus (pSTS) or dorsolateral prefrontal cortex (DLPFC) to explore its therapeutic effect in adults with autism spectrum disorder (ASD).

**Methods:** Among 25 adults with ASD, 19 (mean age: 20.8 years) completed the randomized, sham-controlled, crossover trial. Every participant received iTBS over the bilateral DLPFC, bilateral pSTS and inion (as a sham control stimulation) in a randomized order with a 1-week interval. Neuropsychological functions were assessed using the Conners' Continuous Performance Test (CCPT) and the Wisconsin Card Sorting Test (WCST). Behavioral outcomes were measured using the Yale-Brown Obsessive Compulsive Scale (Y-BOCS) and the Social Responsiveness Scale (SRS).

**Results:** In comparison to that in the sham stimulation, the reaction time in the CCPT significantly decreased following the DLPFC session ( $p = 0.04$ , effect size = 0.71) while non-statistically significant increase was found in commission errors in the CCPT and total errors in the WCST ( $p = 0.07$  and  $0.06$ , respectively) following the pSTS session. However, the results in behavioral outcomes were inconsistent and had discrepancy between reports of parents and patients.

**Conclusion:** A single session of iTBS over the bilateral DLPFC and probably over the bilateral pSTS may alter the neuropsychological function in adults with ASD. The therapeutic efficacy of multiple-sessions iTBS over the pSTS or DLPFC deserves further investigations.

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## Vulnerability of antipsychotic medication in prodromal stage/ first episode schizophrenic patient treatment—a case report 前驅症狀期／初次發作思覺失調症患者對抗精神病 藥物之易敏感性之案例報告

*Chein-Heng Lin, M.D.*

林建亨

**Introduction:** Schizophrenia is a disease which causes disability and significantly functional impairment, especially in the adolescent and childhood onset group. Most patient has experienced lengthy prodromal period of unspecific symptoms, such as anxiety or paranoid. Eventually some cases have progressed to full-blown schizophrenia. The psychobiological characteristics of prodromal phase are not fully identical to full-blown schizophrenia, so the treatment in the group of prodromal phase or first episode schizophrenic patient should be treated with caution.

**Case report:** A 15-year-old male patient, who is a senior high school student, has no systemic underlying disease. His father had suffering from schizophrenia, who had committed suicide under the influence of aggravated psychotic symptoms and the patient witness the event at his age 13. Genetic loading is strong in this patient, who also experiences of stigmatize of schizophrenia. He has suffered from paranoid, anxiety, and delusional atmosphere sensation since age 12. However, he does not ask to medical assistance due to stigmatization. Until he is age 15, attenuated auditory hallucination has emerged, he turned to medical help by himself. His mother is reluctant to psychiatric intervention.

Schizophrenia has been impressed, but some symptoms are atypical, such as delusional atmosphere and other primary delusion. Because of strong persecutory delusion, he has refused to school and social withdrawal at home with significantly functional impairment, even with suicidal ideation. So, risperidone 1mg daily dose has been prescribed and gradually escalated to 3mg daily dose. Under the daily dose of risperidone 2mg, paranoid sensation has still significantly influenced his life. Under risperidone 3mg daily dose, his paranoid sensation and delusional atmosphere have completed subsided, but significant rigidity has been complained and the patient refused to take the same medication. Then, risperidone was discontinued and shifted to paliperidone 9mg/day, but in vain. Akathisia sensation made him frequently thought of death with increased suicidal risk. Finally, aripiprazole has been prescribed with 5mg initially daily dose and escalated to 15mg gradually. Under aripiprazole 15mg daily dose, paranoid and primary delusion has significantly improved, but akathisia and restless sensation have been complained. The dosage of aripiprazole has gradually tapered to 2.5mg daily dose; under this dosage, his psychotic symptoms completed subsided and no akathisia nor other adverse effect has been observed. Combined with cognitive behavioral therapy (CBT), his function has improved and he has returned to school life successfully.

**Result:** Because psychobiological characteristics is not completely identical between prodromal stage and full-blown schizophrenia, the treatment of antipsychotic dosage should be cautioned, especially in the vulnerability of adverse effect of antipsychotic medication.

**Discussion:** Vulnerability to adverse effect of antipsychotic medication is an important feature of prodromal phase or first episode schizophrenic patient. This group of patient should be treated with caution. Start with low dosage or very low dosage antipsychotic medication may be inevitable with longer observed treatment course to ensure treatment response and adverse effect. Successful treatment in prodromal phase or first episode schizophrenia has significantly prevented functional impairment and prevent adverse effect can improve drug compliance to prevent disease relapse. Besides, no pharmacological intervention is also crucial in the role of copying skill development, resilience, and relapse prevention.

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# 注意力不足過動症患者藥物治療順應度相關因子之探討

## Exploration of medication adherence and related factors in patients with attention deficit hyperactivity disorder

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**背景：**藥物治療順應度不佳是治療注意力不足過動症患者時的常見現象。如何提升藥物治療順應度是重要的。此研究調查於某南部醫學中心兒童青少年精神科門診追蹤服藥的注意力不足過動症患者及家屬，蒐集其背景資料、症狀嚴重度、藥物種類、及服藥順應度（MPR），追蹤二十四週內的變化；並分析之間的關聯性。期待能對藥物治療順應度行為之形成有更進一步的瞭解。

**研究方法：**此研究屬於世代研究。研究共納入 30 組診斷注意力不足過動症，年齡介於 6～15 歲，並接受藥物治療的患者及家屬。於基線蒐集患者及家屬之背景資料。並於基線、12 週、及 24 週時，評估患者症狀嚴重度（使用 SNAP-IV 及 CBCL 量表）、藥物種類、用藥方式、藥物副作用、及 MPR。因樣本數小，以 Wilcoxon signed ranks test 測試不同時間點各變項的差異性；以 Mann-Whitney U test 測試在基線時變項對 MPR 的影響；以 Spearman's rho correlations 比較基線 MPR 和變項、及半年內變項變化之間的關聯性、以及基線 MPR 和半年內變項變化間的關聯性。

**結果：**患者於納入試驗時平均年齡 8.3 歲，男性百分比為 83%（26/30）。疾病診斷年齡平均為 5.76 歲，接受藥物治療時間平均為 1.42 年。家屬之平均年齡為 38.77 歲，接受之教育年數平均 13.67 年。患者於基線之症狀嚴重度，SNAP-IV 各分項目平均分數為：注意力不足 / 過動衝動 / 對立反抗 = 14.4/12.95/9.55。CBCL 量表各分量尺之平均分數：內化量尺 T 分數 / 外化量尺 T 分數 / 整體問題 T 分數 = 59.43/59.71/63.39。各分量尺中顯示注意力問題最為顯著（T 分數平均 68.70），然均未達到臨床顯著意義。患者與家屬的基本資料，包括患者年齡、性別、或症狀嚴重度等，均對 MPR 無顯著影響。在二十四周的追蹤期間，患者的 MPR 平均值為 0.82-0.85。其中有 13.64% 的患者抱怨有副作用（食慾不振、肚子痛）。至於未規則服藥之原因，有 63.6% 是因家長擔心服藥對身體影響而自行於假日停藥，36.4% 因孩子排斥而未規則服藥。相較於基線，焦慮症狀於十二週時有改善；注意力症狀、社會問題於二十四週時有改善。但攻擊行為於二十四週時比基線惡化，退縮症狀於二十四週比十二週時惡化。

基線時的 MPR 和首次發病的年齡成負相關：發病年齡越小，MPR 越高。除此之外，基線的 MPR 和其它變項於基線、及不同時間點的變化無顯著意義的相關性。

**結論：**注意力不足過動症患者的服藥順應度發病年齡有負相關性。與患者年齡、性別、症狀嚴重度、及半年內的症狀變化程度無顯著相關性。

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## 從偏鄉青少年的問題性上網探討相關的家庭社會維持因子：兩例個案評估

### Exploring the Social-Family Perpetuating Factors of the Problematic Internet Use for the Adolescents in a Remote Town: Evaluation of Two Cases

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*Ya-Cheng Wang<sup>1\*</sup>, Chun-Yuan Lin<sup>2,3</sup>*

個案報告：本院為加強偏鄉青少年個案之精神科服務，開辦夜間網路成癮門診，本報告中的兩例個案皆為門診患者。

第一位個案為 16 歲男性，無生長發展異常史，過去學業成績中等，目前就讀高中一年級。自國中二年級開始接觸線上遊戲，並逐漸每天使用，但學業成績尚可維持。上高中後，會於非上課時間打一多人線上戰術擂台、及另一第一人稱射擊遊戲，平時下課後打 2 至 3 小時，假日則會連續打遊戲 12 至 14 小時，或者使用網路來看影片，及研究「暗網」，以致上課打瞌睡，學業成績落後。高中一年級結束時，10 個科目中有 5 科未及格而被帶來就診。個案為家中長男，與祖父母、父母、妹妹同住於半山腰的家，多利用網路與同儕聯繫。父母整日工作忙碌，因此個案與父母的互動極少；祖母則多指責個案長時間使用電腦，令個案感到不悅而避開互動。

第二位個案為 15 歲男性，就讀國中二年級。從小發展無異常，個性內斂，與父母及妹妹同住。個案自小學六年級開始接觸線上遊戲（一為平面射擊遊戲、及一漫遊式遊戲），自國中一年級起擁有自己的桌上型電腦及智慧型手機。平日上課時，會控制網路使用，且能維持班上中等排名。進入暑假期間，個案每天約花 3 至 5 小時使用電腦，需由父母將網路拔除或將電腦關機而被動停止使用；個案雖然內心不悅，但不會出現強烈的情緒或行為反應。此個案因暑假期間使用網路時間較長，而被帶來就醫。個案父母均關心孩子，但對教養觀念缺乏共識。案父對於個案使用網路之行為多責備，認定自己對孩子的期待不停下修，已經對孩子十分寬容。然而，案父常責備個案且偶爾會情緒暴

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怒，甚至體罰。個案因擔心受案父責罵，而喪失與案父溝通的動力。案母對個案較為包容，較了解個案的優點與弱點，較能堅守使用網路的界線，期待個案未來的志向能投注在其有興趣且能維持動機的事物上，並支持個案接受治療。

討論：問題性上網（Problematic Internet use, PIU）是一種結合認知與行為症狀的症候群，導致社交、學業或工作上的負面影響。

問題性上網容易自青少年開始發生，可能的原因是青少年因應壓力的策略有限，網路是方便可行的紓壓管道；另外，透過網路展現自我，這對處於自我認同發展困惑期的青少年別具吸引力。透過網路，青少年也能從事真實世界較沒機會做的事情。

青少年網路使用的研究，常提到家庭動力可能促成成癮行為產生，同時促使家庭鼓勵或忽略成癮行為。在衝突多且溝通不良家庭的青少年，可能會藉由網路來逃避家庭衝突且尋求支持。青少年花在上網的時間增加，也減少了家庭互動的品質與時間，甚至減弱家庭凝聚力。在台灣的研究中，父母與青少年之間的衝突越多、手足有習慣性地使用酒精、父母對青少年物質使用是隱微的正面態度、家庭功能不佳等，是網路成癮的高風險因子。

在台灣，家長看待孩子的表現，多以學業成績來評斷；而容易忽略自己的態度與行為促發與維持了孩子的問題性網路使用。本報告的兩位個案，第一位在課業退步後，家長單一地認為網路是導致個案退步的原因，而未注意到忙碌的工作導致對個案心理需求的忽略，可能助長個案依賴網路的程度。第二位則是高標準的父親，造成個案在未來願景的規劃上有極大的壓力，而其壓力又難以紓解，導致個案投入更多時間在網路使用上。兩位個案皆受台灣的整體社會文化因素影響俱深。

因人際的需求，青少年可能因為孤獨而特別容易被網路吸引。本報告中的兩位個案，回家後與家長的互動關係較疏離，或因居住地離校較遠、或因下課後無任何課外活動，找好友不易，但又需維持其參與線上活動的人際參與度，可能也是促使非上課時間大量使用網路的原因。本次報告中，2位問題性上網的偏鄉青少年與都會區青少年的特質，並未發現較顯著的差異。未來持續探究問題性上網於偏鄉青少年的特質，以提供個案與家庭適切可行的處遇計畫，是本門診長期的目標。

結論：網路問題使用常見於青少年，除肇因於青少年是個獨特的時期，亦受到家庭、社會文化、環境的影響。因此評估與治療上，也需做全面的評估，及漸進式的條件改變，來達成好的治療效果。因本文章為門診個案評估，僅能部分反映青少年網路問題使用的樣貌，臨床上仍需蒐集更多的個案做統計分析，及探索出屬於個別青少年合宜的治療模式。





## The effects of perceived stress and resilience on suicidal behaviors in adolescents

### 自覺壓力程度與復原力對青少年自殺行為的影響

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陳韻玲 郭柏秀

**Objective:** Suicidal behaviors are significant public health issues in early adolescents. The aim of the current study is to examine the effects of perceived stress and resilience on suicidal ideation, plan, and attempt among Taiwanese adolescents.

**Method:** A cross-sectional study was conducted and 1035 participants completed measures of suicidal behaviors, Perceived Stress Scale, and Inventory of Adolescent Resilience. The mean age of the participants was 13.18 years (SD = 0.35) with 55.4% girls. The data were analyzed using logistic regression analysis.

**Results:** A total of 210 (20.3%) participants reported to have suicidal ideation, 59 (5.7%) had suicide plans, and 49 (4.7%) had suicide attempt. We also found that girls were 1.5-times and 2.2-times more likely than boys to engage in suicidal ideation and suicide attempt, respectively. The occurrence of suicidal ideation was about 1.5-times among students in New Taipei city than those in Taipei city. Our results showed that perceived stress was a strong risk factor for suicidal ideation (OR = 1.16-1.18,  $p < 0.001$ ), suicide plan (OR = 1.20-1.21,  $p < 0.001$ ), and suicide attempt (OR = 1.12-1.16,  $p < 0.001$ ) after controlling for the gender and city. Students who reported higher level of empathy and interpersonal interaction in resilience was less likely to show suicide attempt as compared to those of low level of empathy and interpersonal interaction (OR = 0.92,  $p = 0.02$ ).

**Conclusions:** Suicidal behaviors are common experiences in adolescents residing in Northern Taiwan. In the future, considering both risk and protective factors of suicidal behaviors is essential in designing effective suicidal prevention and intervention programs.

## Relationship between Motor Skills and Language Abilities in Toddlers with Autism Spectrum Disorder

### 自閉症類群障礙幼兒的動作與語言發展之關聯性

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**Objective:** Despite the core symptoms of Autism Spectrum Disorder (ASD) are characterized by delayed language and social-communication deficits, early motor delay and co-occurrence of motor coordination problems have been notably seen in many children with ASD. However, the relationship between motor and language impairments in ASD has been rarely investigated. A prior study has found positive associations of motor and receptive language skills among 2- to 17-year-old children with ASD. Therefore, this study aimed to examine whether any potential relationships lie among varied motor skills and language abilities in toddlers who were currently diagnosed with an ASD during the ages of 24 to 36 months.

**Method:** We recruited 28 toddlers aged 24 to 36 months with a clinical diagnosis of ASD, and assessed their motor development using the Peabody Developmental Motor Scales, Second Edition (PDMS-2) and language development using the Mullen Scales of Early Learning (MSEL). Pearson's correlation and linear regression analyses were conducted to examine the associations among the motor scores of PDMS-2 and receptive and expressive language scores of MSEL.

**Results:** All of participating toddlers showed mild to significant motor and language delay. They performed particularly worst on the visual-motor integration subtest of the PDMS-2. Furthermore, the results showed positive and high degree of correlations of gross motor with both receptive language ( $r = 0.745$ ) and expressive language ( $r = 0.686$ ); and positive and high degree of correlations of fine motor with receptive language ( $r = 0.679$ ). Moreover, lower grasping and visual-motor integration subtests scores were associated with lower receptive language ( $\beta = 0.101$ ,  $R^2 = 0.215$ ) and expressive language scores ( $\beta = 0.121$ ,  $R^2 = 0.498$ ).

**Conclusions:** The results revealed that toddlers with ASD performed different degrees of motor and language delay in the early childhood. The positive relationships between specific domains of motor and language impairments indicated that the connection between early onset of motor and speech-language deficits in ASD. The pattern of associations may have implications for developing motor-based interventions targeting language and social communication in toddlers with ASD.

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# Emotional and behavioral problems for victims and perpetrators of traditional school bullying and cyberbullying

## 情緒行為困擾於傳統學校與網路霸凌之加害者與受害者

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### Abstract

**Object:** Literature documents significant emotional and behavioral problems in traditional and cyber bullying; however, there exists debate as to whether these problems differ between these two forms of bullying. We then used multi-informant approach (child-parent-teacher) to assess the emotional difficulties between victims and perpetrators of traditional and cyber bullying.

**Methods:** 6732 students at grades 3 (n = 1519), 5 (n = 1735), and 7 (n = 3478) were enrolled in this study. School bullying and cyberbullying experience were examined using the Chinese version of the school bullying experience questionnaire and cyberbullying experiences questionnaire, respectively. The participants were assessed for symptoms of attention-deficit hyperactivity disorders (Swanson, Nolan, and Pelham, version IV scale), autistic traits (Social Responsiveness Scale), irritability (Affective Reactivity Index), and behavioral problems (Strengths and Difficulties Questionnaires).

**Results:** The prevalence rates for victims and perpetrators were 13.6% vs. 8.8% for traditional bullying and 8.4% and 14.5% for cyberbullying, respectively. Higher overlapping between victims and perpetrators were found in cyberbullying compared to traditional bullying. Emotional and behavioral problems differed between distinct bullying forms of perpetration and victimization.

**Conclusions:** Differential emotional and behavioral problems identified between the two bullying forms across multi-informants suggest specific measures of preventions and interventions for traditional school bullying and cyberbullying. Different dominant bullying forms between perpetration and victimization suggest specific programs of self-defense and self-control should be provided in different fields. Interventions of traditional and cyber bullying are recommended involving the regulations of external and internal problems because of their specific characteristics.

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## Developmental changes in brain connectivity of semantic processing in youths with autism and typically developing youths

### 自閉症與健康青少年語意處理神經連結機制之發展變化

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**Purpose:** Youths with autism spectrum disorders (ASD) and typically developing (TD) youths have shown differential meaning processing and brain activation. Youths with ASD rely more on lower-level visual processing during semantic judgments, which is related to greater activation in the cuneus. In contrast, TD youths engage more in the higher-level processing of retrieving or selecting semantic features, which is related to greater activation in the inferior frontal gyrus (IFG). However, it is not known how functional connectivity with these regions changes between TD and ASD youths, and whether functional connectivity is age-dependent.

**Methods:** Each group of participants was divided into two age subgroups, including 31 TD children (ages of 8-10 years old), 29 TD adolescents (ages of 13-15 years old), 30 ASD children, and 36 ASD adolescents. Participants were asked to judge whether written word pairs were related in meaning in an fMRI scanner. The psychophysiological interaction (PPI) analysis was conducted to explore functional connectivity. The cuneus and IFG were chosen as the seed regions based on our prior study.

**Results:** The neuroimaging results showed commonly significant activation in the left IFG and middle temporal gyrus (MTG) in both the ASD and TD groups. Additional activation was found in the cuneus in the ASD group compared to the TD group. The PPI results showed significant connectivity between the IFG and right inferior parietal lobule (IPL) and between the cuneus and right IPL in ASD children. Also, significant connectivity was found between the cuneus and MTG in TD children. Furthermore, significant connectivity between the IFG and MTG was found in TD adolescents.

**Conclusions:** There are three main findings. First, two significant connections with the right IPL in ASD children suggest that they may rely on the use of spatial working memory to fulfill task requirements. Second, the connectivity between the cuneus and MTG in TD children indicates reliance on bottom-up visual information to access semantic knowledge during semantic judgments. Third, the connectivity between the IFG and MTG in TD adolescents suggests top-down processing of retrieving or selecting semantic knowledge during semantic judgments.

**Keywords:** semantic; functional connectivity; age; fMRI

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## Neural Correlates of Valuative Processing in Adults with ADHD During Decision-Making

### 成人過動症進行決策評價歷程的神經關聯

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**Objective:** Attention-Deficit Hyperactivity Disorder (ADHD) is associated with a preference for immediate rather than delayed rewards. Such suboptimal risk-taking behavior in patients with ADHD likely stems from low dopamine signaling in the frontostriatal areas. Thus, we evaluated reduced frontostriatal sensitivity to expected value (EV) as a neural mechanism underlying decision behaviors in adults with ADHD.

**Methods:** 31 controls and 24 adults with ADHD underwent a lottery choice task functional magnetic resonance imaging experiment. Participants chose to accept or reject stakes with varying points magnitudes and probabilities of winning that comprised costly to desirable EVs. Subject-level voxel-wise neural responses to choice and trial-wise changes in EV were estimated using model-based fMRI analysis. Group-level whole-brain contrasts were performed to assess significant differences in functional responses between ADHD patients and controls at  $p < 0.001$ , cluster size  $> 20$  voxels.

**Results:** Behaviorally, the ADHD group had significantly higher acceptance rates than controls during middle-middle ( $t_{66} = 1.791$ ,  $p < 0.05$ ) and middle-low ( $t_{66} = 1.772$ ,  $p < 0.05$ ) probabilities of winning high magnitudes, consistent with greater risk-taking preferences in ADHD patients. Whole-brain contrasts revealed that controls showed greater neural sensitivity than ADHD adults to expected value in the paracentral and postcentral regions. Conjunction analysis of the brain data revealed common activation regions across ADHD patients and controls during choice processing in several frontal, occipital, and caudate ROIs. Of these, ADHD adults showed significantly lower neural responses during choice processing than controls in the right medial superior ( $t_{51} = -3.04$ ,  $p < 0.05$ ) and middle ( $t_{51} = -3.03$ ,  $p < 0.05$ ) frontal regions. Critically, ADHD adults showed a lower sensitivity to expected value in the ventral striatum ( $t_{51} = -2.04$ ,  $p < 0.05$ ).

**Conclusion:** Overall, most likely due to reduced frontostriatal dopamine efficacy, ADHD adults showed compromised ability to accurately process stimuli value, which results in a propensity for them to be tempted by even costly stakes.

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## Different Neural Mechanisms of Semantic Processing Among Youths with Autism Spectrum Disorder, their Unaffected Siblings and Typically Developing Youths

### 自閉症青少年、未發病手足與健康青少年 在語意處理歷程之神經機制差異

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**Objective:** Aberrant semantic processing is common in individuals with autism spectrum disorder (ASD). However, little is known about the neural mechanisms of semantic processing in their unaffected siblings. This study aimed to investigate the differences in underlying neural mechanisms of semantic processing in youths with ASD, their unaffected siblings, and typically developing (TD) youths.

**Method:** We recruited 29 ASD youths (mean age = 14.83 years, SD = 3.89), their unaffected siblings (n = 29, mean age = 15.70 years, SD = 5.22), and 30 TD youths (mean age = 14.59 years, SD = 4.72). The three groups were matched in IQ, age, and handedness. Functional magnetic resonance imaging (fMRI) was used to assess their brain activation. Participants were instructed to judge whether two Chinese characters were related in meaning while brain activity was recorded.

**Results:** ASD youths and their unaffected siblings showed common activation in the cuneus compared to TD youths. In addition, TD youths and unaffected siblings showed common activation in the left middle temporal gyrus (MTG) compared to ASD youths. Furthermore, unaffected siblings exhibited intermediate activation in the left inferior frontal gyrus (IFG) between ASD youths and TD youths with the strongest IFG activation in TD and the weakest IFG activation in ASD.

**Conclusions:** Our findings indicate that cuneus activation and weaker IFG activation during semantic judgments may be candidate trait marker for semantic processing in ASD; and weaker MTG activation is suggested to be the state marker for ASD. Moreover, our findings suggest that unaffected siblings may have rather intact lexical representation systems as TD youths but same perception-based strategies as ASD youths.

**Keywords:** autism spectrum disorder (ASD), sibling, semantic processing, functional magnetic resonance imaging (fMRI)

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## Association between the HDAC4 Gene and the symptom severity of Autism Spectrum Disorder

### HDAC4 基因套數的變異與自閉症的症狀相關性

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**Objective:** ASD has been recognized as a brain disorder and in DSM-5, ASD is included in the category of neurodevelopmental disorder. Due to the dysregulation of the developmental trajectories of the brain, patients with ASD present the atypical anatomical structure in multiple areas, such as enlargement amygdala and overgrowth in frontal area (Munson et al., 2006, Roozendaal et al., 2004). We target *HDAC4* gene as a candidate gene for investigation the pathogenesis of ASD cases with this gene. This study is designed to investigate the role of *HDAC4* in the ASD pathology through studying the copy number variation, RNA and protein expression. We are also interested in knowing the clinical/cognitive features of these ASD patients with *HDAC4* gene. With the combination of the results of behavioral/cognitive phenotypes and genetic expressions, this project is expected to provide a comprehensive understanding of *HDAC4* gene function in ASD by a systemic study approach.

**Method:** The matched healthy controls were clinically evaluated and psychiatrically interviewed to confirm that they do not have diagnosis of ASD and any other major psychiatric disorders. A total of 429 ASD patients will be screen to identify the patients with *HDAC4* CNV. We presented the CNVs on the *HDAC4* locus in ASD patients. The data of RNA and protein expression presented as mean  $\pm$  SD compared to the healthy controls. Statistical comparisons will be made using two-tailed Fisher's exact test when compare two groups. Statistical significance level set at 0.05.

**Result:** The findings were validated in the initial screen sample set and replicated in another sample set by real-time qPCR. Total of 6 CNVs at 2q37.3 that spanned different exons of *HDAC4* were identified. The *HDAC4* expression level was down-regulated at exon-dependent manner in cases with deletion. The result revealed that the gene function might be disrupted by exonic deletion. We also observed that the ASD case with exonic deletion demonstrated a more severe interference of *HDAC4* expression and the clinical feature than the ones with deletion at the exons 2-4 of the *HDAC4* gene.

**Conclusions:** Our finding provides evidence to support that CNVs affect *HDAC4* function might contribute to genetic etiology of a proportion of cases with ASD. The intriguing results of this work warrant further study on characterizing the functional impact of various exonic CNVs on the *HDAC4* gene.

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## Executive functions among youths with autism spectrum disorders: Does the Asperger's disorder present similar deficits with the high-functioning autism?

### 自閉症青少年的執行功能：亞斯伯格症和高功能自閉症患者呈現類似的缺損嗎？

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**Objective:** Whether the youth with Asperger's disorder (AS) and high-functioning autism (HFA) present similar deficits has been discussed for decades. Previous studies have investigated executive functions (EF) in youths with autism spectrum disorders (ASD), but little is known about differential EF performance between youth with AS and HFA. The aim of the study is to compare the deficits in EF between youth with AS and HFA.

**Method:** 111 youths with ASD (male, 94.6%) and 114 age- and gender-matched typically developing youth (TD) was recruited and evaluated EF with Digit Span, and Spatial Span (SSP), Spatial Working Memory (SWM) and Stockings of Cambridge (SOC) of the Cambridge Neuropsychological Test Automated Battery (CANTAB). To understand the effects of clinical heterogeneity, we stratified youth with ASD into three groups by clinical diagnosis: autistic disorder (A, n = 33), HFA (n = 15), and AS (n = 63).

**Results:** Youth with ASD showed poorer spatial working memory, short-term memory, and planning than youth with TD. We further analyzed the EF among youth with different ASD subtypes in two comparisons: AS/HFA vs. A vs. TD and AS vs. HFA/A vs. TD. We found that youth with AS or AS/HFA had better performance of digit span (forward), SWM (total and between error) and SOC (problem solved in minimum moves) than youth with HFA/A or autistic disorder, respectively. Furthermore, there's no significant difference between youth with AS and HFA if we directed compared the EF performance between these two ASD subtypes.

**Conclusions:** Our result of no difference in executive dysfunctions between AS and HFA provides evidence to support previous related studies that EF deficits cannot distinguish AS from HFA. Our finding further provides evidence to support only one diagnosis "autism spectrum disorder" with high heterogeneity from the Diagnostic and Statistical Manual of Mental Disorders V (DSM-5) without subtypes.

**Keywords:** Autism Spectrum Disorder, Executive function, symptom severity, subtype of ASD

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## The effect of atomoxetine and methylphenidate on improving behavior/emotional symptoms in children with Attention-deficient hyperactivity disorder

### 比較 atomoxetine 與 methylphenidate 在注意力不足過動症兒童之行為與情緒症狀的治療效果

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**Objects:** Attention-deficient hyperactivity disorder (ADHD) is a common neurodevelopmental disorder. This head-to-head, randomized, long-term (24-week) trial aimed to explore the therapeutic effect of atomoxetine and methylphenidate on emotional/behavior symptoms in children and adolescents with ADHD.

**Method:** The study sample included 160 drug-naïve children and adolescents 7–16 years of age, with DSM-IV-defined ADHD, randomly assigned to osmotic-release oral system methylphenidate (OROS-methylphenidate) (n = 80) and atomoxetine (n = 80) in a 24 week, open-label, head-to-head clinical trial. We measured the emotional/behavior symptoms of ADHD by the Chinese versions of the Children Behavior Check List (CBCL) and the Strength and Difficulties Questionnaire (SDQ).

**Results:** Both methylphenidate and atomoxetine groups showed significant improvement in multiple behavior/emotion problems measured by CBCL; however, the atomoxetine group showed no significant improvement in the somatic complaint at week 8 and the endpoints. In contrast, the methylphenidate group showed more significant improvement than the atomoxetine group in aggressive behaviors, delinquent behaviors and somatic complaints at week 8. Regarding SDQ, both medication groups showed significant improvement on all items but limited effect on pro-social behaviors.

**Conclusions:** Our findings lend evidence to support that both methylphenidate and atomoxetine are effective in improving multiple domains of emotional/behavior symptoms of ADHD. Compared with atomoxetine, methylphenidate is associated with greater reduction in aggression, delinquent behaviors, and somatic complaints.

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## Executive functions in youths with Autism Spectrum Disorder and their unaffected siblings

### 自閉症青年及其未患病手足之執行功能表現

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**Background:** Executive dysfunction theory is one of the three main cognitive theories of autism spectrum disorder (ASD). The studies of executive function impairments in ASD showed a complex picture. There is a lack of information about candidate cognitive endophenotypes for ASD. We aim to use a relatively big sample size to investigate the performance of executive function of ASD probands and their unaffected siblings, who share half the genetic components with probands to explore this issue.

**Method:** We recruited 240 youths of ASD, 147 siblings of probands and 240 matched typically developing (TD) controls. They were assessed by four executive function tasks in the Cambridge Neuropsychological Test Automated Battery (CANTAB), including Intradimensional/Extradimensional Shift (I/ED), Spatial Span (SSP), Spatial Working Memory (SWM) and Stocking of Cambridge (SOC).

**Results:** Youths with ASD have significantly poorer performance in the I/ED, SSP, SWM and SOC tasks compared to the TD controls as well as siblings. The performances of siblings in completed stages of I/ED, total usage errors in SSP, strategy utilization in SWM and total moves in SOC were in an intermediate position between probands and controls.

**Conclusions:** Our findings support impaired executive functions in probands of ASD. Some indexes assessing set-shifting (I/ED), short-term spatial memory (SSP), spatial working memory (SWM), and spatial planning/problem solving (SOC) may be candidate cognitive endophenotypes for ASD.

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## 運用兩性教育團體於未成年心智障礙者之 歷程及成效

### The Process and Efficacy of Gender Education for Young Adults with Intellectual and Developmental Disabilities

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目的：本研究旨在探討兩性教育團體於未成年心智障礙者的團體歷程及成效，並以量化及訪談方式呈現。

方法：以自編教案針對未成年心智障礙者進行4次兩性教育團體，主題分別為：認識身體、兩性差異、正確性知識、人我界線及拒絕性騷擾。並參考中國學者駱一及鄭涌（2006）編製的「青春期性心理量表」，抽取其中10題與課程相關的題目，分別於課前及課後給予機構特殊教育老師填寫，回收後建檔進行相依樣本t檢定分析。此外，亦以機構特殊教育老師填寫的個案行為觀察回饋，作為團體後個案行為改變之評量。

結果：本次團體參與者共18人，男生9人，女生9人，各占總人數之百分之五十。將機構特殊教育老師填寫之「青春期性心理量表」進行相依樣本t檢定分析，結果顯示，個案於前後測之分數表現皆未達顯著差異，然而後測分數皆較前測分數提升，顯示介入仍可能具一定成效。質性回饋之部分，機構老師表示在進行兩性教育團體後，機構的學生們更懂得控制衝動行為、正常抒發性需求、拒絕他人不適切碰觸、及瞭解何為性騷擾。

結論：針對機構教師填寫的量表及回饋，兩性教育團體可增進大部分機構院生對性教育的認識及理解，並且改善學生互動之品質。然此團體中存在個案能力受限及異質性等因素，建議後續可嘗試降低每個團體參與人數並增進同質性，以利兩性教育團體之成效。

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## Effects of an Affect Attunement Intervention for Toddlers With Autism Spectrum Disorder: A Multiple Case Study

### 自閉症類幼兒情感諧調介入療效：多重個案研究

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**Objective:** Joint attention (JA) interventions for children with autism spectrum disorder (ASD) were focused on improving of joint engagement (JE) and JA. In our previous study, a caregiver-mediated JE intervention (CMJE) program merging creative movement play was developed and could improve JE, especially in regards to coordinating JE for young children with ASD. Due to the CMJE program delivered by the parents, it is difficult for parents to focus on the affect attunement when their children with limited language. An affect attunement intervention conducted by professionals is therefore suitable for these toddlers with limited language.

**Method:** A multiple case design was conducted. Three toddler boys with autism spectrum disorder aged 28, 28 and 30 months at enrollment were recruited. One boy had no spoken language, the other two had only one-word phase within 50 meaningful Chinese words at enrollment. The diagnoses were confirmed using DSM-V criterion combined ADOS and ADI-R classification. The program was consisted of 20 sessions with 30 minutes a session and twice a week. The core concept of the AA intervention was to facilitate synchronous engagement through the therapist affective attuning the child. The therapist's behavior of attunement is a matching via cross-modal more than an imitation. Program efficacy and effectiveness were measured by the change between pre- and post- intervention. Caregiver-child plays and standardized tools/tasks by independent testers were conducted.

**Results:** Results indicated that the three ASD toddlers showed fluctuated but overall improved their eye contact, social smile, initiating vocal and initiating gestures with the therapist during intervention period comparing with baseline period. The improvement could maintain at follow-up measure. The structured measure showed improved joint attention and expressive language at post-intervention and 3-month follow-up.

**Conclusions:** Our preliminary findings showed the affect attunement intervention could enhance children-initiated communication and social engagement. Using a creative movement play approach could become a model for efficiently and effectively providing intervention to toddlers with limited language. Future research will include a large sample and additional measures of parental satisfaction.

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# The Correlates of Mental Health and Care Burden among Caregivers of Child and Adolescent Chronic Psychiatric Patients

## 兒童和青少年慢性精神病患者照顧者心理健康與照顧負擔的相關性

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### ABSTRACT

**Objective:** The study Purpose is to investigate the correlation between care burden and mental health condition among caregivers of child and adolescent chronic psychiatric patients.

**Methods:** This study recruited the caregivers of child and adolescent psychiatric patients from the out-patient department in a psychiatric center from June 17, 2013 to September 26, 2013. Caregivers of psychiatric patients who were diagnosed according to ICD-9 system for more than 6 months by board-certified psychiatrists, and biologically related or kinship to the patients were included whereas caregivers with psychiatric illness or younger than 20 years old were excluded. The final study sample included 120 caregivers of child and adolescent psychiatric patients.

**Results:** Our study reported is that the care burden is negatively correlated to mental health condition and care quality of the caregiver. Contradictory, the mental health condition is positively correlated to the project can effectively enhance among caregivers. Among the care givers for psychiatric patients with or without non-psychiatric com-morbidities, no differences were noted. Further studies with larger sample size and with the analysis of more covariates are warranted.

**Key Words:** Child and adolescent chronic psychiatric disease; Caregiver Adult Mental Health Scale (AMHS); Care Burden.

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## Antipsychotics Dosage among Child and Adolescent Patients in a Psychiatric Center

### 某精神專科醫院兒童與青少年抗精神病藥物處方劑量分析

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**Objective:** The purpose of this study is to review the prescribing dosage of antipsychotic drugs in children and adolescents as a concern.

**Methods:** In this retrospective study for all outpatients equal or below 18 years of age in a psychiatric center, we collected related study variables from the study hospital from 2004 to 2013. Reviewing the electronic medical records, we extracted both patients' demographic data such as sex, age, psychiatric diagnosis, and antipsychotic dosage.

**Results:** During the study period, the proportion of participants received antipsychotics was increased significantly (from 13.63% to 15.02%,  $p < 0.001$ ). Among child and adolescent patients, antipsychotics dosage was positively correlated with age whereas there was no significant between-gender difference in antipsychotics dosage. Defined daily dose (DDD) ratios  $\geq 1$  for amisulpride, olanzapine, ziprasidone and clozapine, while for others it was  $< 1$ .

**Conclusions:** Prescriptions of antipsychotic medications among children and adolescents are increasing greatly in recent years. The safety issues of antipsychotics in children and adolescents are especially a major concern. Further investigation about indication, adverse effects, and off-label use of antipsychotics in pediatric population is warranted.

**Key words:** Child and adolescent patients, antipsychotic drugs, dosage, defined daily dose

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## The Association of Harassment due to Gender Non-Conformity and Sexual Orientation with School Difficulties During Childhood and Adolescence Among Homosexual and Bisexual Men

### 同性戀或雙性戀性取向男性在兒童青少年時期遭遇性別不符常規和性取向相關的騷擾與學校困難之關聯性

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**Objective:** This study aimed to examine the associations of harassment due to gender non-conformity and sexual orientation with school difficulties during childhood and adolescence among homosexual and bisexual men in Taiwan.

**Methods:** A total of 500 homosexual or bisexual males aged between 20 and 25 years were recruited into this study. The associations of harassment due to gender non-conformity and sexual orientation with dissatisfaction with academic performance and missing classes or truancy were examined using chi-square test. The associations of multisite and persistent harassment with dissatisfaction with academic performance and missing classes or truancy were also examined using chi-square test.

**Results:** Victimization of harassment was significantly associated with dissatisfaction with academic performance in primary ( $p < .01$ ), junior high ( $p < .01$ ), and senior high schools ( $p < .001$ ). Moreover, those who were harassed in senior high school were more likely to miss classes or be truant than those who were not harassed ( $p < .01$ ). The victims of multisite harassment at senior high school were more likely to miss classes or be truant than those who were harassed only inside senior high school ( $p < .01$ ). Those who had harassment persisting from junior high to senior high schools were more likely to satisfy their academic performance at senior high school than those who had harassment at senior high but no harassment at junior high schools ( $p < .05$ ).

**Conclusion:** Victimization of harassment due to gender non-conformity and sexual orientation was significantly associated with school difficulties and should be prevented and intervened among children and adolescents with homosexuality or bisexuality.

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## Case Report: Autism Spectrum Disorder comorbid with Attention-Deficit/ Hyperactivity Disorder

### 案例報告：自閉症類群障礙症合併注意力不足／ 過動症

*Lin, Wei-Hao, MD, Lin, Chih-Chien, MD, MPH.*

林偉豪 林志堅

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**Case report:** C was a 5-year-7-month boy. He had the history of speech and motor developmental delay and received speech therapy, physical therapy and occupational therapy since 3 years old. The speech production and motor function were improved after 1-year treatment, but poor social interaction with high persistent temperament were noted. C received the evaluation for children's development when aged 3-year-8-months. He got the first cutoff score in social domain and the second cutoff score in communication, behavior domain and the total scores in the Autism Behavior Checklist-Taiwan version.

Individual psychotherapy was arranged when C was 4-year-2-month old. Although the communication and stereotyped behaviors were improved after 6 months of individual psychotherapy, the behavior problems such as hyperactivity, hypertalkative and easily conflict with classmates in the kindergarten were noted when C was 5 years old. He received psychological assessment for suspect ADHD when aged 5-year-2-month. The Gordon Diagnostic System results showed within normal range in delay task and vigilance task. The Autism Behavior Checklist-Taiwan version still showed high possibility for high function autism/Asperger's syndrome.

Because the behavior symptoms of hyperactivity and poor impulse control were not improved after behavior therapy, Ritalin 5mg/QD was used when C was 5-year-5-month old. According to his parents, the symptoms of poor impulse control were mild improved after medication and there was no significant side-effect. The dose of Ritalin were titrated gradually according to C's body weight and the symptoms of ADHD. C still received individual psychotherapy to train the symptoms of ADHD in addition to autism spectrum disorder.

**Discussion:** Although Autism spectrum disorder and attention deficit hyperactivity disorder are neurodevelopmental disorders that cannot be codiagnosed in the DSM-IV diagnostic system, in 2013, the APA changed its stance. With the release of the DSM-5, the APA states that the two conditions can co-occur. The change could improve the clinical attention and management in children and adults with autistic and ADHD symptoms.

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Department of Psychiatry, Taichung Veterans General Hospital  
臺中榮民總醫院精神部



# Traditional and Cyber Harassment due to Gender Non-Conformity and Sexual Orientation During Childhood and Adolescence Among Homosexual and Bisexual Men with in Taiwan: Prevalence and Time and Places Occurred

## 同或雙性戀男性於兒童青少年遭遇性別不符常規和性取向相關的騷擾：盛行率、時間、地點之調查

Cheng-Fang Yen<sup>1,2\*</sup>, Mu-Hong Chen<sup>3,4</sup>

顏正芳<sup>1,2\*</sup> 陳牧宏<sup>3,4</sup>

**Objective:** This study aimed to examine the experiences of traditional and cyber harassment due to gender non-conformity and sexual orientation during childhood and adolescence among homosexual and bisexual men in Taiwan.

**Methods:** A total of 500 homosexual or bisexual males aged between 20 and 25 years were recruited into this study. The ratios of the participants with the experiences of two types of traditional harassment (verbal ridicule and relational exclusion and physical aggression and theft of belongings) and cyber-harassment due to gender non-conformity and sexual orientation were calculated. The time and place of harassment occurred were also examined.

**Results:** A total of 438 (87.6%) participants reported experiencing traditional harassment ( $n = 435$ , 87%) or cyber harassment ( $n = 201$ , 40.2%) during childhood and adolescence. Of the 199 participants experiencing harassment during primary school, 166 (83.4%) and 84 (42.2%) reported that harassment persisted into junior high and senior high school, respectively. Of the 309 participants experiencing harassment during junior high school, 147 (47.6%) reported that harassment persisted into senior high school. Ninety-two (21.1%), 27 (6.2%), and 12 (2.8%) victims reported that they encountered traditional harassment at one, two, and three places outside school, respectively.

**Conclusion:** A high proportion of homosexual and bisexual men suffered from traditional or cyber harassment due to gender non-conformity and sexual orientation during childhood and adolescence.

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# Multimodal Social Skills, Communication and Behavioral Intervention for Children with Autism Spectrum Disorder: Follow-Up of Long-/Intermediate-Term Treatment Outcomes

## 泛自閉症兒童之多元社交溝通行為介入之中長期療效追蹤

*Wei-Jian Hsu, M.D.<sup>2\*</sup>, Shin-Yi Wang, Ph.D.<sup>2</sup>, Chieh-Hsin Chang<sup>2</sup>,  
I-Chia Chien, M.D., Ph.D.<sup>1</sup>*

許維堅<sup>2\*</sup> 王心怡<sup>2</sup> 張介信<sup>2</sup> 簡以嘉<sup>1</sup>

**Objective:** The study aims to investigate the long-/Intermediate-term treatment effectiveness of an evidence-based outpatient intervention program called MSSCB (Multimodal Social Skills, Communication, and Behavioral Intervention). MSSCB was developed in 2013 based on the principle of evidence-based practice for children autism spectrum disorder (ASD) at local community in Central Taiwan. The social validity of this program was published in 2014 and its short-term treatment effectiveness was presented in 2015 WPA International Congress. The study targeted on the long-/Intermediate-term treatment effectiveness for the children have attended MSSCB program for over 6 to 12 months.

**Method:** The 30 participants of the study are the children aged four to twelve with the diagnosis of high-functioning ASD who were confirmed their diagnosis and referred for intervention groups through our clinics. Multiple measurements including psychological assessment, parental and teachers' questionnaire, and interventionist questionnaire have been collected at the beginning and during the intervention course. We compared the measurements of the children who have attended to MSSCB program over 6 to 12 months with the one taken at the beginning to evaluate the progress and adaptive performance of participants' social, communication, and behavioral function. We used t-test and SPSS to analyze the data.

**Results:** Comparing the measures collected through the subscales, domains, or overall scores of ASD screening questionnaires, Vinland's Adaptive Rating Scale, Adaptive Behavior Assessment System, and Child Behavior Checklist from the parents and teachers, a few psychometric indices focused on the social, communication, or behavior functions of the children have been improved. However, not all psychometric indices of the participants had been progressed significantly.

**Conclusions:** The present study implies that MSSCB program might have benefited children with high-functioning ASD in terms of long-/Intermediate-term outcomes detected by several psychometric measurements. Nevertheless, not all indices consistently and significantly supported the long-/Intermediate-term benefits of the program. Based on the results, the import issues regarding the research method and practical practice for the examination of the treatment effectiveness of MSSCB program for children with ASD were discussed. Further recruitment and analysis of other psychometric measurements targeted on the intervention goals and collected from multiple resources should be investigated. More recruitment and extended follow-up of the participants, as well as the adoption of controlled studies, will be helpful in order to support the treatment effectiveness of MSSCB program.

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# Correlates of Traditional and Cyber Bullying Victimization during Childhood and Adolescence among Men with Homosexuality or Bisexuality in Taiwan

## 台灣同性戀與雙性戀男性族群在兒童青少年期 遭受傳統及網路霸凌之相關因子

Chih-Yun Hsu, MD<sup>1,2</sup>, Mu-Hong Chen, MD<sup>3,4</sup>, Nai-Ying Ko, RN, PhD<sup>5,6</sup>,  
Cheng-Fang Yen, MD, PhD<sup>7,8</sup>

徐志雲<sup>1,2</sup> 陳牧宏<sup>3,4</sup> 柯乃熒<sup>5,6</sup> 顏正芳<sup>7,8</sup>

### Abstract

**Objective:** This study aimed to examine the correlates of victimization of traditional and cyber bullying due to gender-nonconformity or sexual orientation during childhood and adolescence among men with homosexuality or bisexuality in Taiwan.

**Methods:** A total of 500 homosexual or bisexual males aged between 20 and 25 years were recruited into this study. The associations of personal and family characteristics, sexual orientation and level of masculinity with victimization of traditional and cyber bullying were examined.

**Results:** The results of multiple logistic regression analysis indicated that lower family support, earlier awareness of sexual orientation, and lower level of masculinity were significantly associated with victimization of traditional bullying. Lower family support, early come-out, and victimization of traditional bullying were significantly associated with victimization of cyber bullying.

**Conclusion:** Family support, ages of initial awareness of sexual orientation and come-out, and the level of masculinity were correlates of victimization of bullying due to gender-nonconformity or sexual orientation during childhood and adolescence among men with homosexuality or bisexuality.

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## How Taiwanese parents of children with autism spectrum disorder experience the process of obtaining a diagnosis: A descriptive phenomenological analysis

### 台灣 ASD 兒童確診過程的家長調適： 描述性現象分析研究

*Hsueh-Ling Chang, MD<sup>1</sup>, Kuo-Yu Chao, PhD<sup>2</sup>, Wei-Chic Chin, MD<sup>3</sup>,  
Hsin-Mei Li, PhD<sup>2</sup>*

張學岑<sup>1</sup> 趙國玉<sup>2</sup> 金韋志<sup>3</sup> 李欣玫<sup>2</sup>

**Objective:** An autism spectrum disorder results in considerable stress and confusion for parents when attempting to understand their child's problems and obtain a diagnosis. Few studies have explored the parental experience in a Chinese culture. The purpose of this study was to understand the coping experiences of parents in Taiwan of children diagnosed with autism spectrum disorder.

**Method:** Fifteen parents, one father and 14 mothers, were recruited by purposive sampling. This qualitative study used semi-structured interviews and descriptive phenomenological analysis.

**Results:** The findings indicated that parents of children diagnosed with autism spectrum disorder underwent five coping experiences during the diagnostic process: (1) difficulty understanding and anxious uncertainty about their child's behaviour, which occurred during the pre-diagnosis phase; (2) reluctant acceptance of professional services and (3) anxious searching for a second opinion, which occurred during the eventual-diagnosis phase; and (4) transformation and internal stability and (5) acceptance and further adjustment during the post-diagnosis phase.

**Conclusion:** These findings could facilitate the understanding of parental coping, provide support, and improve interactions and care for children with autism spectrum disorders.

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## 發展遲緩兒童進步因子初探

### Factors associated with developmental improvement among children with previously diagnosed as developmental delay.

梁孫源

*Sun-Yuan Liang*

目的：分析過去為發展遲緩，追蹤評估發展正常兒童，其發展進步的相關因素。

方法：檢視某兒童發展聯合評中心民國一百零五年複評個案，其中過去屬於發展遲緩，而最近一次評估為正常發展的個案共有十名。分析其年齡、性別、初評年齡、療育狀況、功能性診斷、病因等因子，與其他複評後仍為於發產遲緩兒童的差別。

結果：十名個案中，八名個案接受醫院的療育課程，初評時年齡最多的是3到4歲，有七名為男生。僅有單項遲緩的兒童四名，合併兩項以上遲緩的有六名。有九名兒童過去有語言遲緩，有四名過去有動作遲緩，有四名過去有社會情緒發展遲緩，有兩名過去有認知發展遲緩。病因分析上，有八名為不明原因，一名為心理社會因素，一名為腦傷。

結論：分析的結果與全年收案個案相較，性別比例相似，進步個案進入初評時年齡較小。此結果仍須累積更多個案數，將異質性個案分開分析，才能更清楚發展進步的相關因子為何。進步的因子可作為家長衛教及療育計畫建議時的參考。



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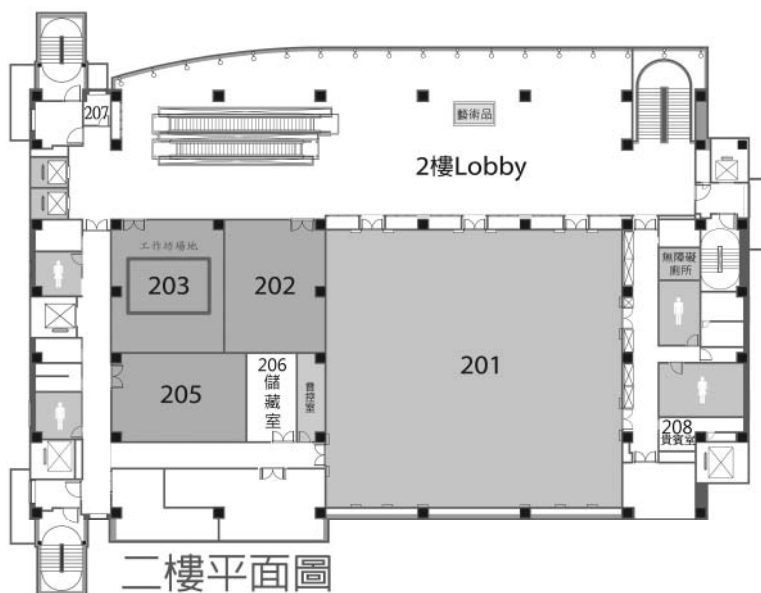
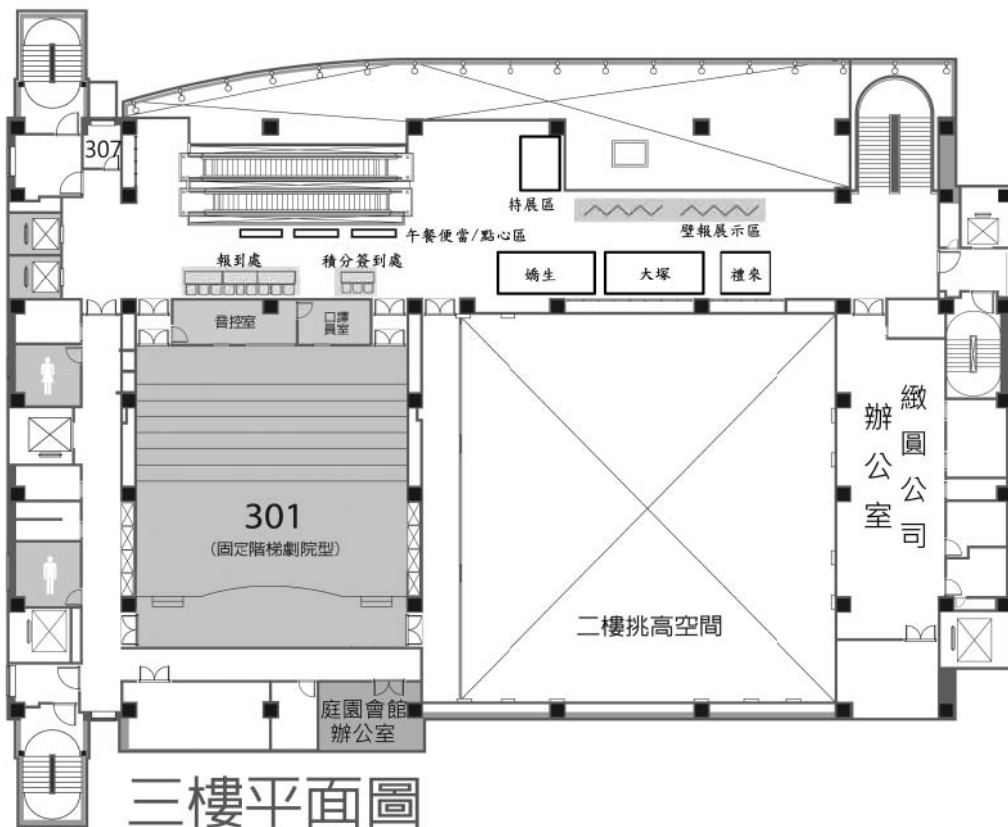
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