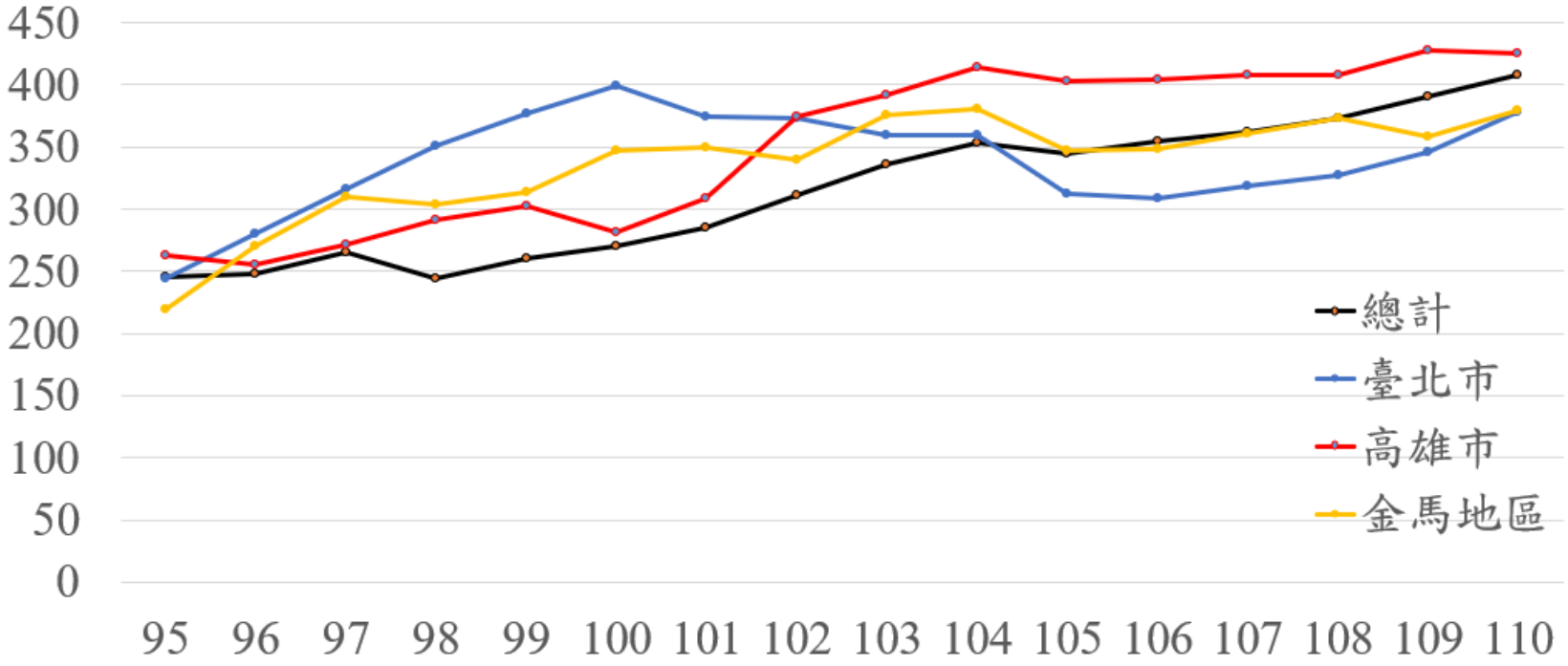
認識情緒行為障礙

高雄長庚醫院 兒童心智科
蔡景淑醫師/科主任

國中小特殊教育身心障礙類學生
民國95年至110年 16年期間盛行率[2]變化趨勢

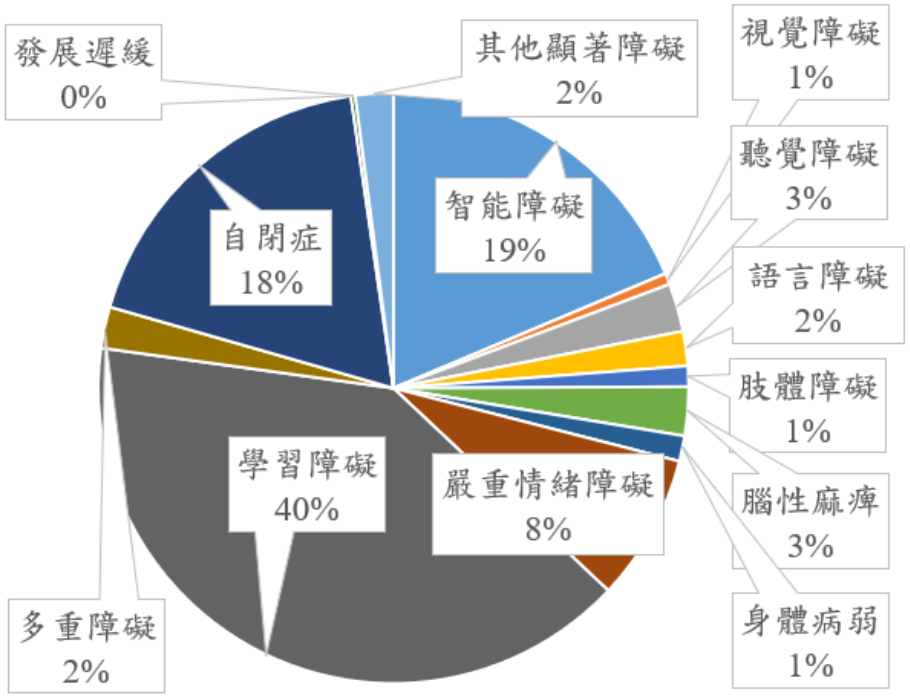
註[1]含合併前高雄縣
註[2]每萬人盛行人數



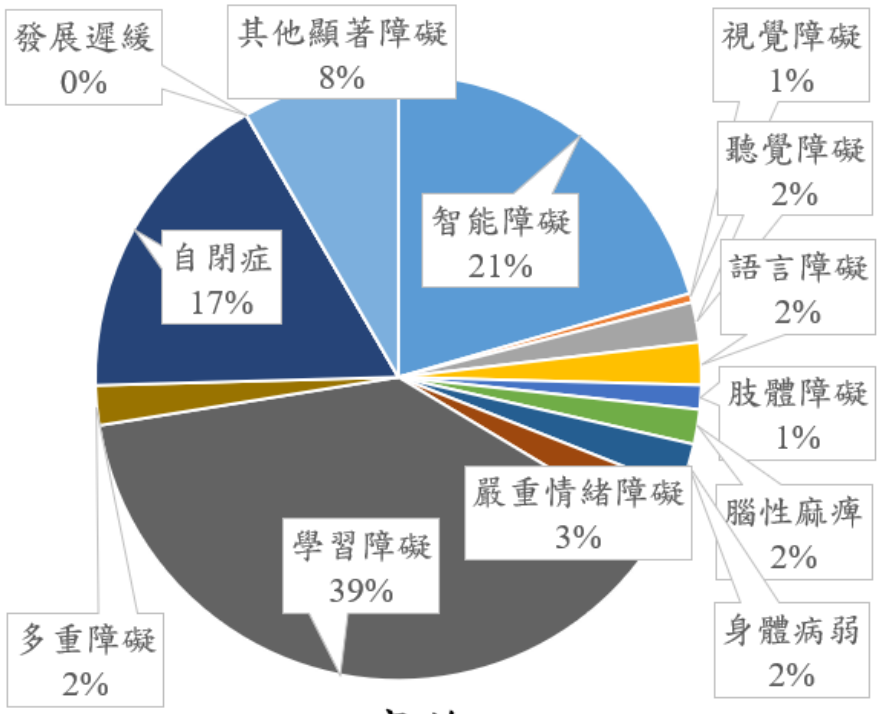
From 教育部統計處

民國110年 國中小特殊教育學生
身心障礙類別百分比

全國總計 72,611人



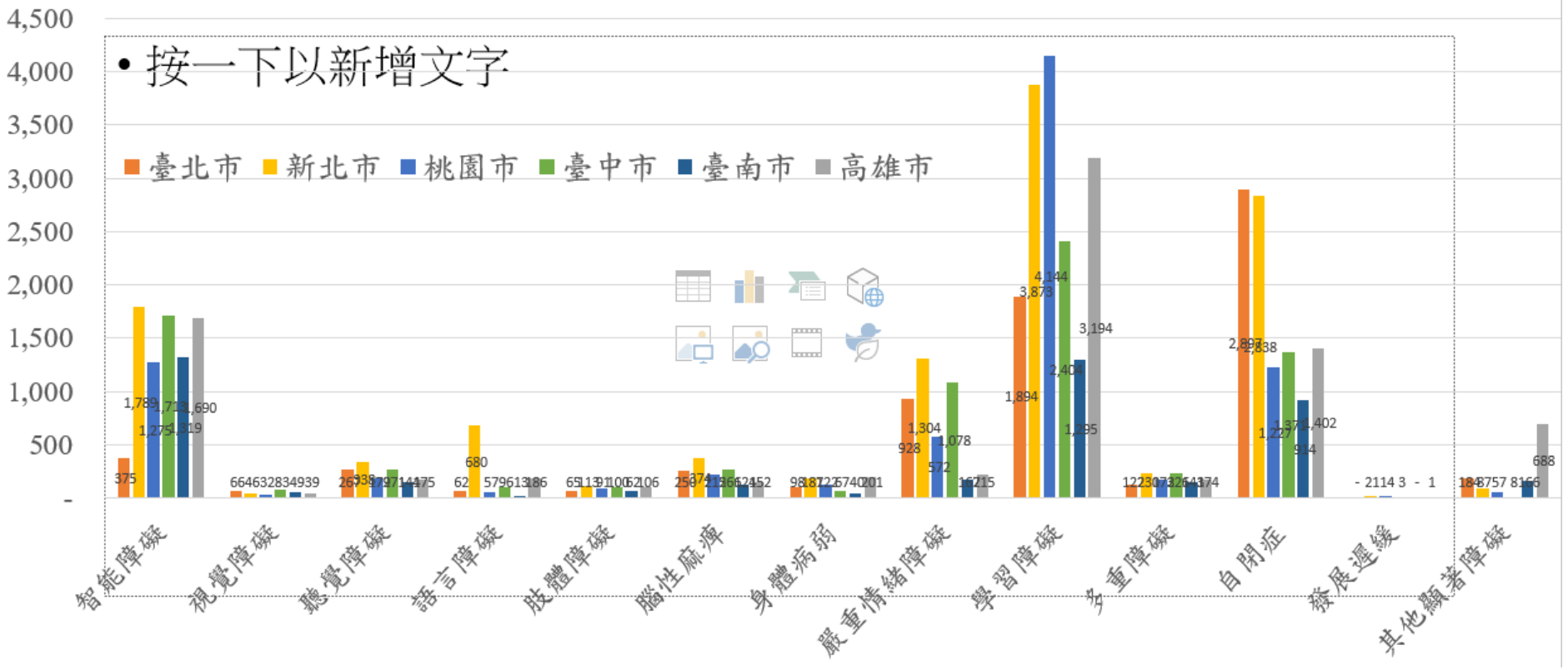
全國



高雄

From 教育部統計處

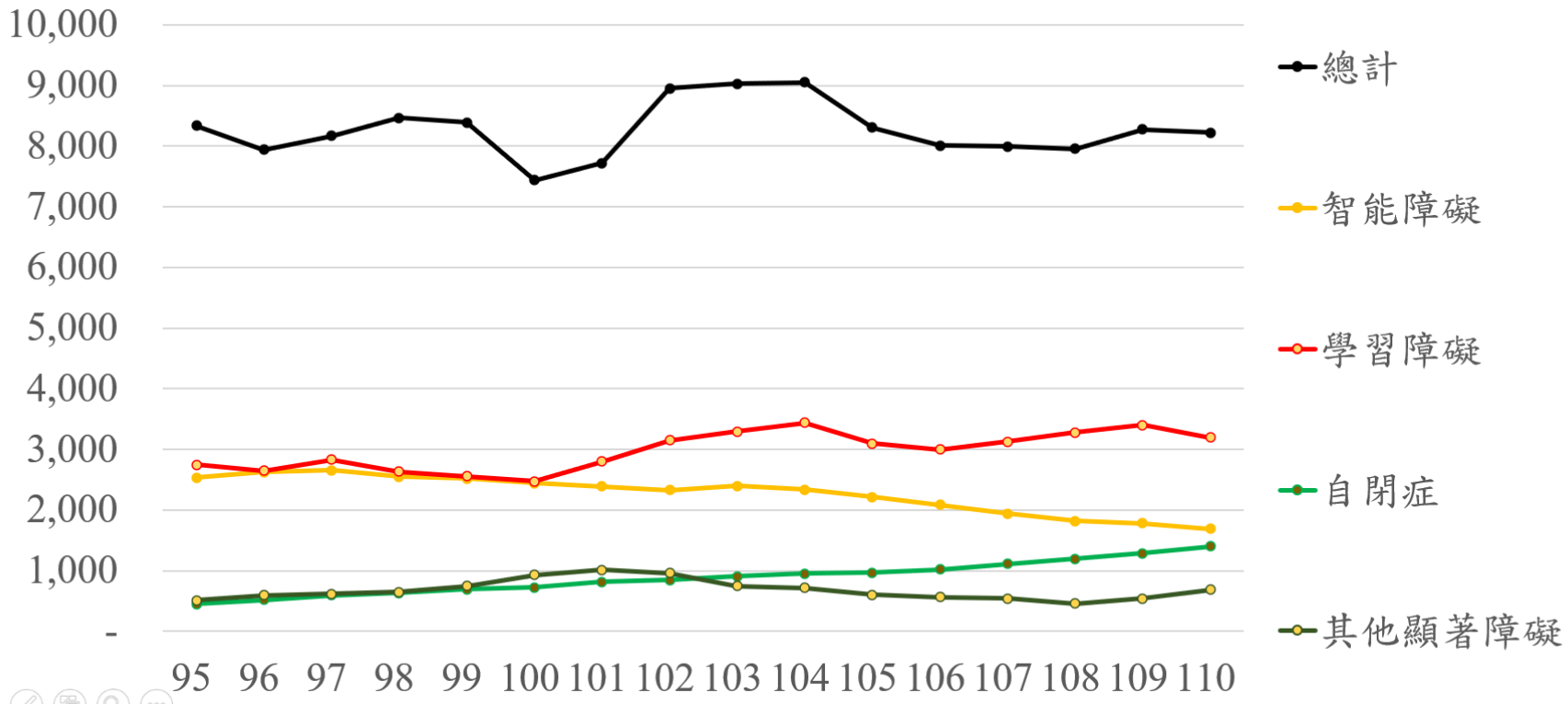
民國110年 國中小特殊教育身心障礙類學生人數依身障類型及六都比較表



From 教育部統計處

高雄市 國中小特殊教育學生身心障礙人數變化
民國95至民國110年期間－依障礙類別 (1)

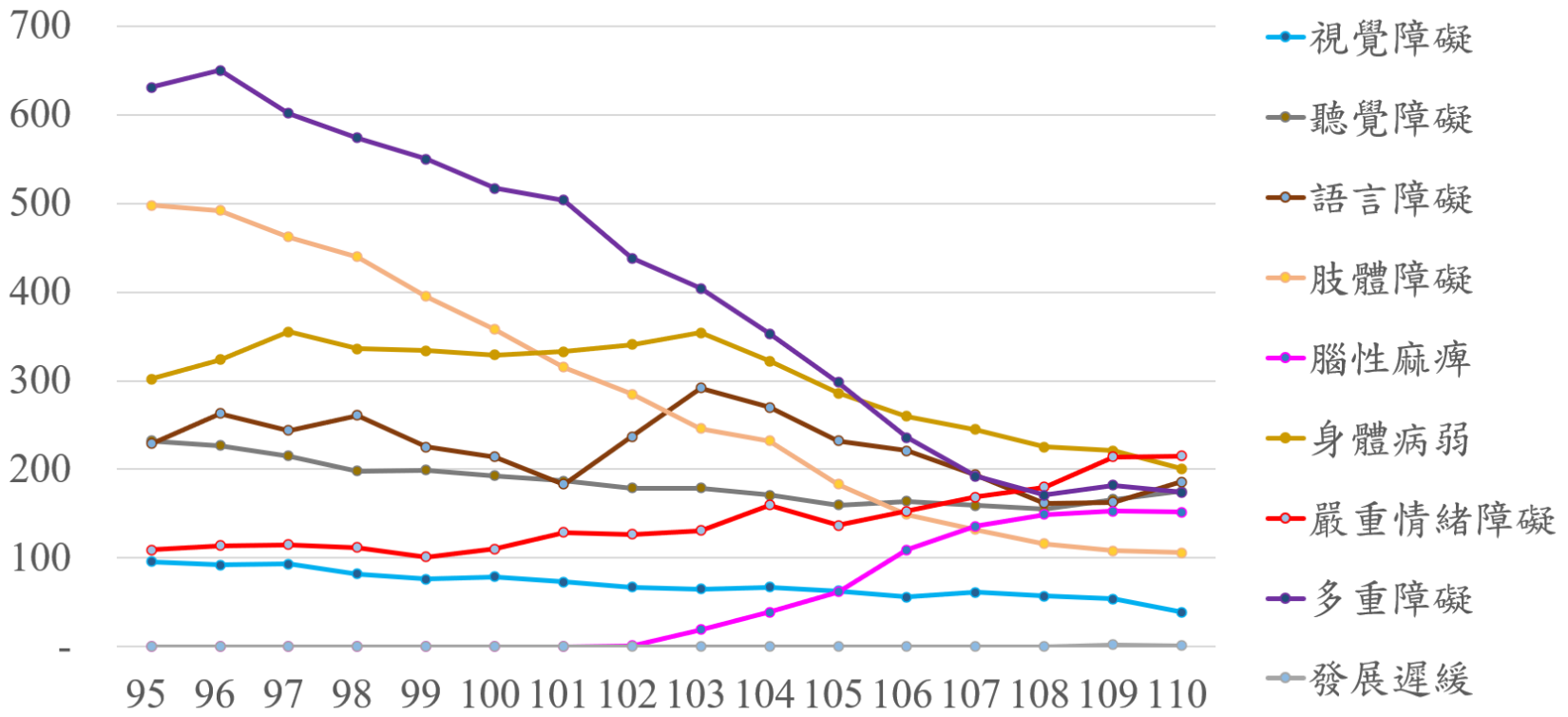
含合併前高雄縣



From 教育部統計處

高雄市 國中小特殊教育學生身心障礙人數變化
民國95至民國110年期間－依障礙類別 (2)

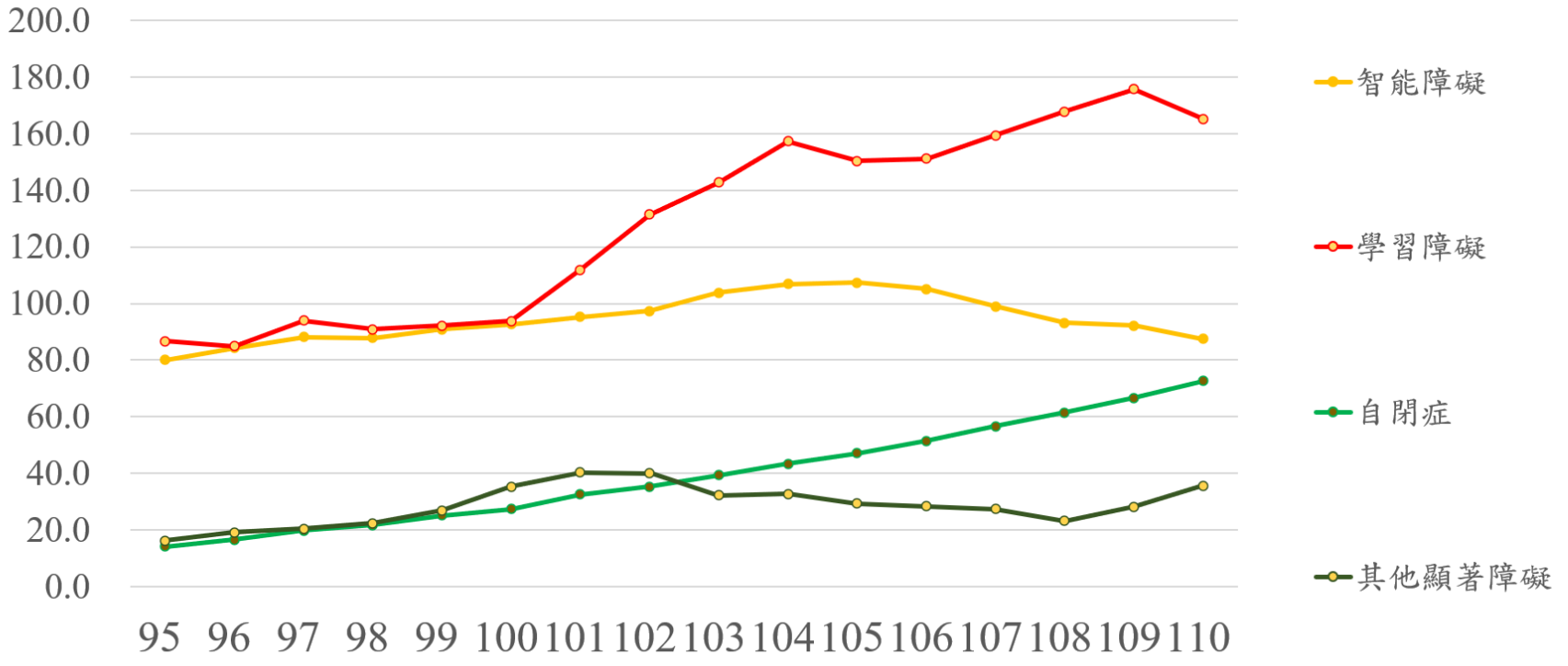
含合併前高雄縣



From 教育部統計處

高雄市 國中小特殊教育學生身心障礙盛行率變化
民國95至民國110年期間－依障礙類別 (1)

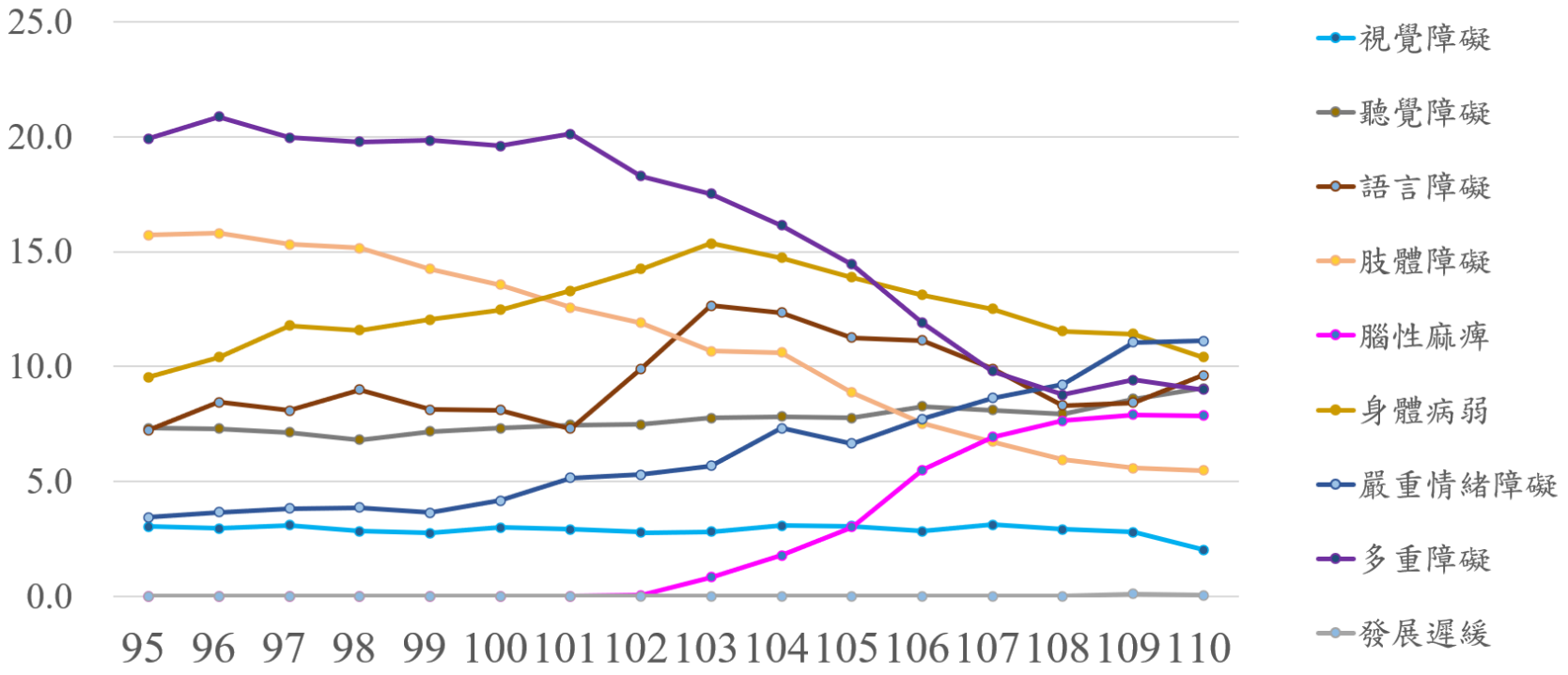
註[1] 含合併前高雄縣
註[2] 每萬人盛行人數



From 教育部統計處

高雄市 國中小特殊教育學生身心障礙盛行率變化
民國95至民國110年期間－依障礙類別 (2)

註[1] 含合併前高雄縣
註[2] 每萬人盛行人數



From 教育部統計處

情緒行為障礙

- 包括精神性疾患、情感性疾患、畏懼性疾患、焦慮性疾患、注意力缺陷過動症、或有其他持續性之情緒或行為問題者。

情緒行為障礙

- 包括精神性疾患、情感性疾患、畏懼性疾患、焦慮性疾患、注意力缺陷過動症、或有其他持續性之情緒或行為問題者。

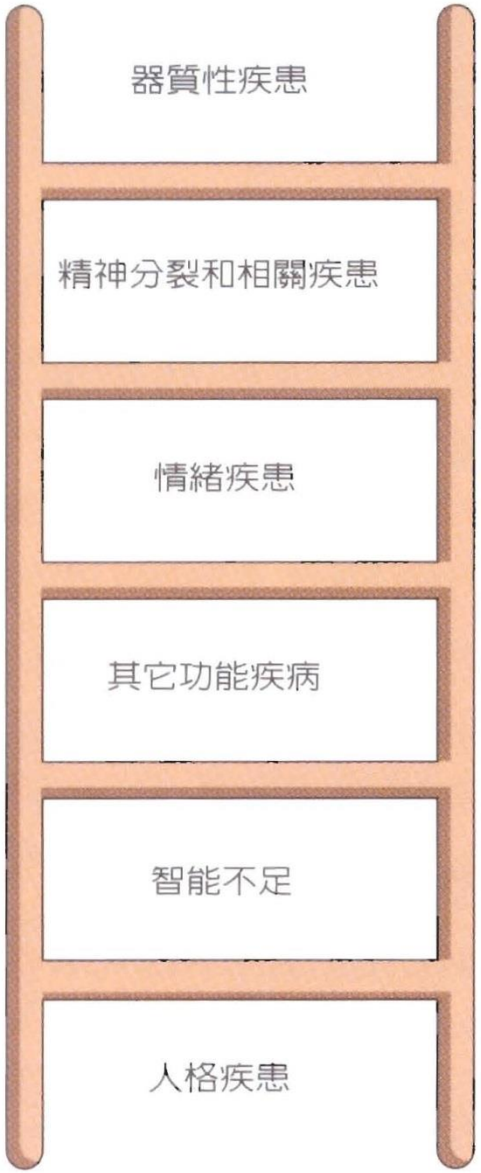
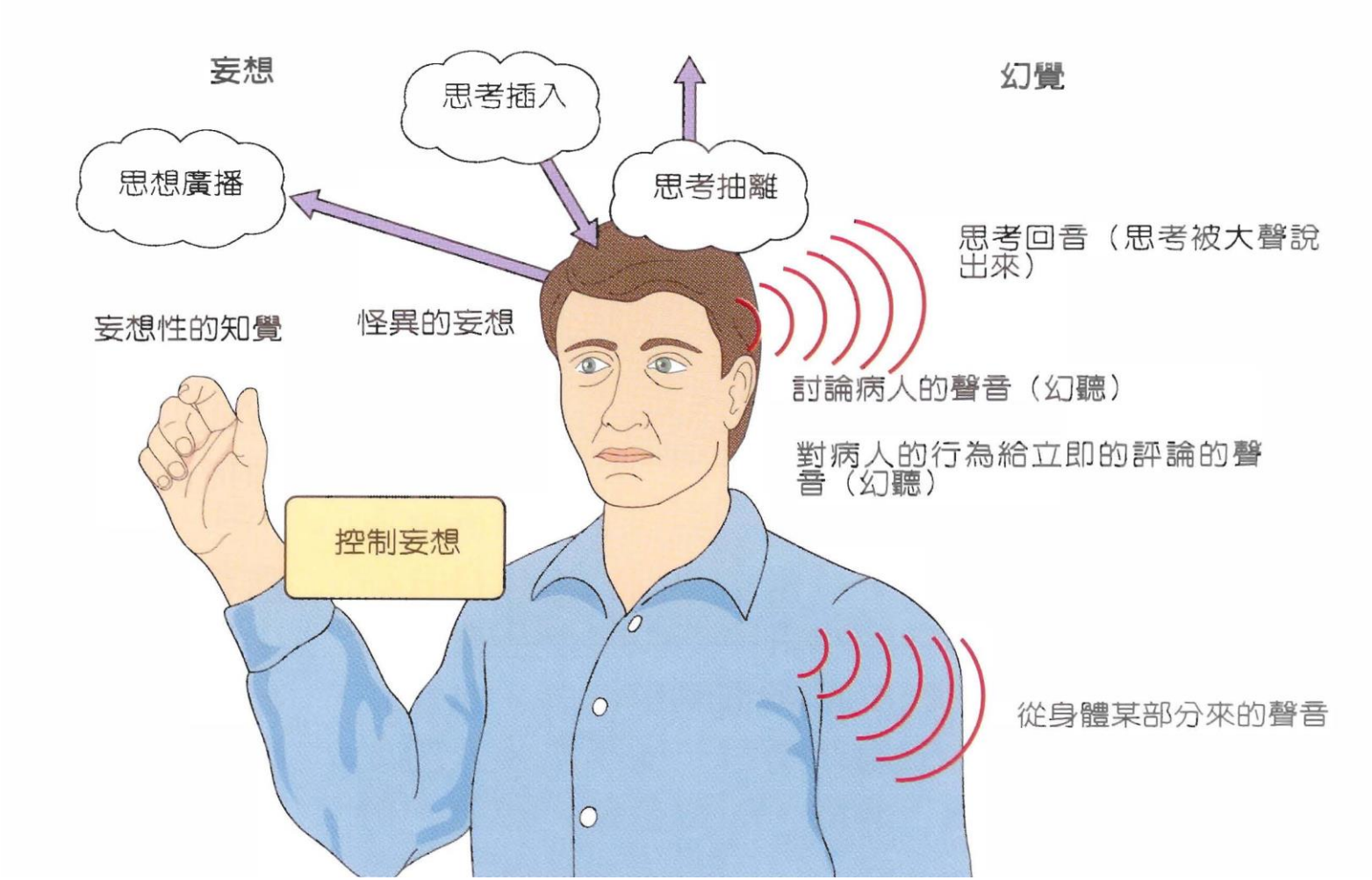


圖3 **精神科診斷等級**。階梯越上方優先考慮。

思覺失調症的典型症狀：
脫離現實的知覺與思考



思覺失調症的典型症狀：
思考流程出現問題

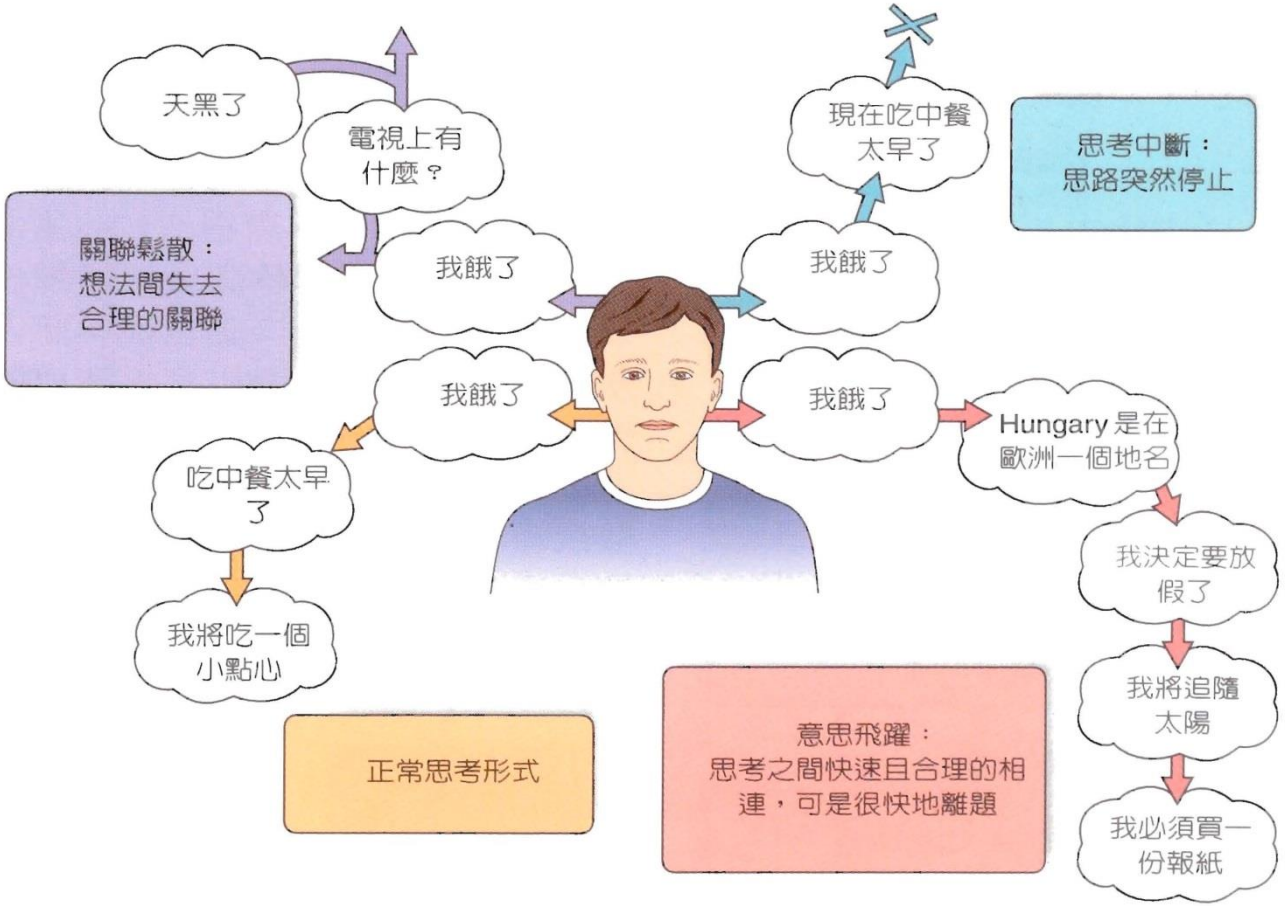


圖 2　不正常的思考形式

臨床表現

- 幻覺 (70.3%)和妄想 (77.5%)(被害妄想為主)常見。
  - 幻覺八成是聽幻覺。
  - 妄想以被害妄想為主。

- 五成會出現怪異行為和平淡表情/負性症狀

J Child Adolesc Psychopharmacol . 2016 Jun;26(5):410-27.

At risk mental states

- 最近的研究報告指出兒童和青少年出現**弱化的精神病性症狀**的盛行率不低，尤其是幻覺，而這些症狀似乎隨著年齡的增長而減少，約四分之三的個案會自動緩解。
  - Eur Psychiatry. 2015 Mar;30(3):405-16.

- 在七到八歲的孩童族群，有聽幻覺但功能只有些微受到影響的五年發生率為9％。
  - Br J Psychiatry 2011;199(4):296–302.

想像中的朋友 (imaginary friend)

- 28% 到 65% 的 5 到 12 歲的兒童經歷過想像中的朋友 (imaginary friend)，而這可能會被誤解為病態。
  - 事實上，想像中的朋友所採取的形式往往反映了孩子們的擔憂和焦慮，就像他們的遊戲一樣。
  - 一個想像中的朋友可以通過發揮神奇的力量，甚至代替孩子屈服於危險，為孩子提供心理上的保護，使其免於擔心。

- 入睡前的幻覺和清醒前的幻覺也常在兒童時期出現，隨著年齡增長而減少。

精神病性疾患盛行率

- 大約 10-15% 的精神病性疾患是早發型精神病 (EOP；early-onset psychoses)，在 18 歲之前出現。
- 大約 1-3% 是特早發性精神病 (VEOP； very-early-onset psychoses)，發病年齡在 13 歲之前。
  - Eur Psychiatry. 2015 Mar;30(3):405-16.

精神病性疾患盛行率

- 估計，5 至 18 歲兒童的精神病性疾患盛行率為 0.4%。
  - Leicester (UK): British Psychological Society; 2013.ISBN-13: 978-1-908020-60-4 (Psychosis and schizophrenia in children and young people: recognition and management (CG155))

Epidemiology and Psychiatric Sciences

cambridge.org/eps

Prevalence of DSM-5 mental disorders in a nationally representative sample of children in Taiwan: methodology and main findings

Yi-Lung Chen[1,2], Wei J. Chen[2,3], Kuan-Chia Lin[4], Lih-Jong Shen[5] and Susan Shur-Fen Gau[1,2,6]

[1]Department of Psychiatry, National Taiwan University Hospital and College of Medicine, Taiwan; [2]Institute of

Original Article

Cite this article: Chen Y-L, Chen W J, Lin K-C

The Kiddie-SADS or K-SADS (Puig-Antich & Chambers, 1978) is a semi-structured diagnostic interview schedule for children ages 6 to 17 years, designed to assess current psychopathology.

An epidemiological version of the K-SADS (K-SADS-E) is available for assessing lifetime psychopathology (Orvaschel, Puig-Antich, Chambers, Tabrizi, & Johnson, 1982). It parallels the K-SADS, but most questions are phrased as "Have you *ever* done or had X?"

orders (lifetime, 6-month) were anxiety disorders (15.2, 12.0%) and attention-deficit hyperactivity disorder (10.1, 8.7%), followed by sleep disorders, tic disorders, oppositional defiant disorder and autism spectrum disorder. The prevalence rates of new DSM-5 mental disorders, avoidant/restrictive food intake disorder and disruptive mood dysregulation disorder were low (<1%).

Conclusions. Our findings, similar to the DSM-IV prevalence rates reported in Western countries, indicate that DSM-5 mental disorders are common in the Taiwanese child population and suggest the need for public awareness, early detection and prevention.

Epidemiol Psychiatr Sci. 2019 Jan 30;29:e15.

Obsessive–compulsive disorder	47	1.4	0.2–2.6	26	0.8	0.0–1.6
Schizophrenia	4	0.1	0.0–0.3	4	0.1	0.0–0.3
Gender dysphoria	14	0.3	0.1–0.5	13	0.3	0.1–0.5
Reactive attachment disorder	4	0.1	0.0–0.2	4	0.1	0.0–0.2
Post-traumatic stress disorder	7	0.1	0.0–0.2	0	0.0	0.0–0.0
Dissociative identity disorder	3	0.4	0.0–0.8	1	0.2	0.0–0.4
Any sleep disorders	473	12.0	9.1–14.9	274	6.2	4.8–7.6
Insomnia disorder	105	2.2	1.3–3.0	92	1.8	0.9–2.7
Hypersomnolence disorder	3	0.1	0.0–0.3	3	0.1	0.0–0.3
Circadian rhythm sleep–wake disorders	2	0.1	0.0–0.2	2	0.1	0.0–0.2
Nightmare disorder	337	8.9	6.3–11.4	171	4.1	2.9–5.3
NREM sleep arousal disorders – sleepwalking	63	1.4	1.0–1.8	23	0.4	0.2–0.6
NREM sleep arousal disorders – sleep terror	27	0.4	0.2–0.6	13	0.1	0.0–0.2
Restless legs syndrome	8	0.3	0.0–0.7	8	0.3	0.0–0.7

Epidemiol Psychiatr Sci. 2019 Jan 30;29:e15.

治療

- 有證據顯示Omega-3 脂肪酸可預防往精神病的轉換，並改善精神病、憂鬱和心理社會功能症狀，但仍需更多的資料佐證。

THE NICE GUIDELINE ON RECOGNITION and MANAGEMENT
Clinical guideline [CG155] Published date: 23 January 2013
Last updated: 26 October 2016

治療

- 2013年英國治療指引
  - 強烈建議
    - 提供個人認知行為治療。
    - 針對當前的問題提供介入協助，即當前的個人需求（焦慮、憂鬱或物質濫用等）。
      - 40%有憂鬱狀況
  - 共病（包括物質使用疾患）的存在似乎不會增加轉變為精神病的風險，但共病疾患的治療可以緩解痛苦並改善功能。

Can J Psychiatry. 2017 Sep;62(9):656-661.

治療

- 2015年歐洲精神醫學會
  - 心理治療，特別是認知行為治療，如藥物治療，能夠預防或至少延宕成年患者的首次精神病發作。

Can J Psychiatry. 2017 Sep;62(9):656-661.

情緒行為障礙

- 包括精神性疾患、情感性疾患、畏懼性疾患、焦慮性疾患、注意力缺陷過動症、或有其他持續性之情緒或行為問題者。

Epidemiology and Psychiatric Sciences

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Original Article

Cite this article: Chen Y-L, Chen WJ, Lin K-C, Shen L-J, Gau SS-F (2020). Prevalence of DSM-5 mental disorders in a nationally representative sample of children in Taiwan: methodology and main findings. *Epidemiology and Psychiatric Sciences* **29**, e15, 1–9. https://doi.org/10.1017/S2045796018000793

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Key words:
Children; DSM-5; epidemiology; national survey; prevalence

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Prevalence of DSM-5 mental disorders in a nationally representative sample of children in Taiwan: methodology and main findings

Yi-Lung Chen[1,2], Wei J. Chen[2,3], Kuan-Chia Lin[4], Lih-Jong Shen[5] and Susan Shur-Fen Gau[1,2,6]

[1]Department of Psychiatry, National Taiwan University Hospital and College of Medicine, Taiwan; [2]Institute of Epidemiology and Preventive Medicine, College of Public Health, National Taiwan University, Taiwan; [3]Genetic Epidemiology Core, Center of Genomic Medicine, National Taiwan University, Taiwan; [4]Department of Health Care Management, National Taipei University of Nursing and Health Sciences, Taiwan; [5]Department of Mental and Oral Health, Ministry of Health and Welfare, Taiwan and [6]Graduate Institute of Brain and Mind Sciences and Institute of Clinical Medicine, College of Medicine, National Taiwan University, Taiwan

Abstract

Aims. There has been a lack of prevalence estimates of DSM-5 mental disorders in child populations at the national level worldwide. This study estimated the lifetime and 6-month prevalence of mental disorders according to the DSM-5 diagnostic criteria in Taiwanese children.

Methods. Taiwan's National Epidemiological Study of Child Mental Disorders used the stratified cluster sampling to select 69 schools in Taiwan resulting in a nationally representative sample of 4816 children in grades 3 ($n = 1352$), 5 ($n = 1297$) and 7 ($n = 2167$). All the participants underwent face-to-face psychiatric interviews using the Kiddie-Schedule for Affective Disorders and Schizophrenia-Epidemiological version, modified for the DSM-5, and they and their parents completed questionnaires. The inverse probability censoring weighting (IPCW)-adjusted prevalence was reported to minimise non-response bias.

Results. The IPCW-adjusted prevalence rates of mental disorders decreased by 0.1–0.5% than raw weighted prevalence. The IPCW-adjusted weighted lifetime and 6-month prevalence rates for overall mental disorders were 31.6 and 25.0%, respectively. The most prevalent mental disorders (lifetime, 6-month) were anxiety disorders (15.2, 12.0%) and attention-deficit hyperactivity disorder (10.1, 8.7%), followed by sleep disorders, tic disorders, oppositional defiant disorder and autism spectrum disorder. The prevalence rates of new DSM-5 mental disorders, avoidant/restrictive food intake disorder and disruptive mood dysregulation disorder were low (<1%).

Conclusions. Our findings, similar to the DSM-IV prevalence rates reported in Western countries, indicate that DSM-5 mental disorders are common in the Taiwanese child population and suggest the need for public awareness, early detection and prevention.

Epidemiol Psychiatr Sci. 2019 Jan 30;29:e15.

Table 2. The adjusted weighted and 6-month weight prevalence of diagnostic distribution of DSM-5 mental disorders in Taiwan's National Epidemiological Study of Child Mental Disorders

	IPCW-adjusted prevalence					
	Lifetime			six-month		
DSM-5 diagnoses	*N*	$_{wt}$%	95% CI	*N*	$_{wt}$%	95% CI
Neurodevelopmental disorders						
Autism spectrum disorder[a]	52	1.0	0.6–1.5	–	–	–
ADHD	487	10.1	8.9–11.3	412	8.7	7.3–10.1
Tic disorders	151	2.6	2.0–3.4	126	2.1	1.4–2.7
DICCD						
Oppositional defiant disorder	97	2.0	1.4–2.6	76	1.5	0.9–2.1
Conduct disorder	15	0.5	0.1–0.9	9	0.1	0.0–0.3
Intermittent explosive disorder	17	0.2	0.0–0.4	10	0.1	0.0–0.3
Depressive disorders						
Major depressive disorder	79	1.7	0.7–2.7	24	0.7	0.0–1.5
Persistent depressive disorder	28	0.8	0.0–1.6	15	0.2	0.0–0.4
DMDD	14	0.3	0.1–0.5	12	0.2	0.0–0.4

Epidemiol Psychiatr Sci. 2019 Jan 30;29:e15.

青少年情緒障礙

- 青少年常見的情緒障礙，以憂鬱症或低落性情感障礙症為主。
- 在臺灣，約 12.3%-37%的青少年有憂鬱症狀。
  - Lan, C.C., Liu, C.C., & Chen,Y.S. (2015). Depressive Disorders among Adolescents. Taiwanese Journal of Psychiatry (Taipei), 29(1), 10-19.
- 在臺灣，約 35.6%高中生和約 22%大學生有憂鬱症。
  - J Nurs Res. 2017 Feb;25(1):41-49.

青少年憂鬱症

- 定義成人和兒童青少年的憂鬱症的診斷標準是相同的。

- 唯一一個例外是 DSM-IV 和 5 (APA, 2000, 2013) 允許將煩躁(irritable)而不是抑鬱情緒(depressed mood)作為兒童青少年的核心診斷情緒症狀。

Journal of Affective Disorders Volume 243, 15 January 2019, Pages 175-181.

青少年憂鬱症

- 憂鬱症的常見症狀
  - 鬱悶心情、失去興趣、食慾減退、失眠、怠倦感、悲觀、過度罪惡感、猶豫不決、自殺意念及行為等。
- 不同於成年人的是，青少年反而用愛生氣、易怒或失去耐性來表達情緒。
  - Lee, H.J., Kim, S.H., & Lee, M.S. (2019). Understanding Mood Disorders in Children. In: Kim YK. (eds) Frontiers in Psychiatry. Advances in Experimental Medicine and Biology, vol 1192. Springer, Singapore
- 因而常被家長與老師誤認為是青少年發展中風暴期的影響。

青少年自殺（教科書）

- 據文獻研究，增加兒童青少年自殺風險的前三名分別依序為情緒疾患(重鬱症為主)、自殺企圖史與物質濫用疾患。
  - LEWIS'S CHILD AND ADOLESCENT PSYCHIATRY：A Comprehensive Textbook. 5th Edition. 2018 p 501-502.

表 5　110 年年齡別五大死因

單位：每十萬人口

	年齡總計		0歲		1-14歲		15-24歲		25-44歲		45-64歲		65歲以上	
順位	死亡原因	死亡率	死亡原因	死亡率(每十萬活產)	死亡原因	死亡率	死亡原因	死亡率	死亡原因	死亡率	死亡原因	死亡率	死亡原因	死亡率
	所有死亡原因	784.8	所有死亡原因	412.1	所有死亡原因	12.2	所有死亡原因	43.9	所有死亡原因	105.6	所有死亡原因	529.8	所有死亡原因	3,550.5
1	癌症	220.1	先天性畸形、變形及染色體異常	83.4	事故傷害	2.7	事故傷害	18.5	癌症	26.1	癌症	222.4	癌症	878.0
2	心臟疾病（高血壓性疾病除外）	93.1	源於周產期的呼吸性疾患	59.2	癌症	2.3	蓄意自我傷害（自殺）	9.6	蓄意自我傷害（自殺）	14.5	心臟疾病（高血壓性疾病除外）	58.2	心臟疾病（高血壓性疾病除外）	438.8
3	肺炎	57.7	與妊娠長短及胎兒生長有關的疾患	40.1	先天性畸形變形及染色體異常	0.9	癌症	4.0	事故傷害	14.4	腦血管疾病	28.5	肺炎	321.4
4	腦血管疾病	51.9	事故傷害	21.7	心臟疾病（高血壓性疾病除外）	0.7	心臟疾病（高血壓性疾病除外）	1.8	心臟疾病（高血壓性疾病除外）	10.0	事故傷害	27.0	腦血管疾病	254.6
5	糖尿病	48.8	嬰兒猝死症候群（SIDS）	17.8	加害（他殺）	0.7	加害（他殺）	0.7	慢性肝病及肝硬化	7.1	慢性肝病及肝硬化	26.1	糖尿病	243.8

https://www.mohw.gov.tw/cp-16-70314-1.html

國中學生過去 12 個月內，曾經認真地考慮過自殺者約四分之一（25.3%），曾計畫自殺的百分比超過一成（16.0%），曾嘗試過自殺的百分比占 10.4%。

107年「國中學生健康行為調查報告」 2019-10-14

104年「高中、高職、五專學生健康行為調查報告」 2018-05-15

- 從自殺意念到第一次開始計劃或企圖的轉變在意念開始的第一年內極度升高（OR=117.4-123.1），此後顯著降低（OR=1.5-4.4）。
  - Br J Psychiatry. 2008 Feb;192(2):98-105.

- 超過六成的個案從自殺意念到計劃和超過八成的個案從意念到企圖的轉變是發生在自殺意念出現的第一年。
  - LEWIS'S CHILD AND ADOLESCENT PSYCHIATRY：A Comprehensive Textbook. 5th Edition. 2018 p 501-502.

非自殺性自我傷害（NSSI）

- 非自殺式自傷疾患(nonsuicidal self-injury disorder, NSSID)是以非自殺式的自傷行為(nonsuicidal self-injury, NSSI)為主要臨床表現的新獨立疾患診斷。

- 非自殺性自我傷害（NSSI）被定義為沒有自殺意圖的故意、自我造成的身體表面損傷，而這種傷害沒有得到社會認可。
  - Non-suicidal self-injury (NSSI) is defined as the intentional, self-inflicted damage to the surface of the body without suicidal intent, which is not socially sanctioned.

好發年齡

- NSSI 通常在 12 至 16 歲的青春期開始。
  - 青春期是NSSI特別脆弱的時期，可能是因為青少年的衝動和與大腦發育相關的情緒反應關係。

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Prevalence of nonsuicidal self-injury and its risk and protective factors among adolescents in Taiwan

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使用橫斷面設計，使用分層和整群抽樣從臺灣各地的高中招募了 2170 名參與者。

NSSI 的一年患病率為 20.1%。

repetitive self-injurers reported higher levels of neuroticism, openness, avoidance/emotion-focused coping, and virtual social support, and lower levels of self-esteem and cognitive reconstruction/problem-focused coping. Compared to episodic self-injurers, repetitive self-injurers reported a higher level of avoidance/ emotion-focused coping. Additionally, compared to non-injurers, mild self-injurers reported higher levels of neuroticism and openness, while severe self-injurers reported higher levels of neuroticism, openness, avoidance/emotion-focused coping, and virtual social support, and lower levels of self-esteem and cognitive reconstruction/problem-focused coping. Our study found that NSSI is fairly prevalent among secondary school students in Taiwan. Psychosocial risk factors, especially maladaptive coping strategies, should be given special attention when examining adolescents with NSSI. Regarding protective factors, enhancing self-esteem should be the focus of formulating effective intervention strategies for NSSI.

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疫情下的NSSI

Current Psychology
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Prevalence and psychosocial risk factors of nonsuicidal self-injury among adolescents during the COVID-19 outbreak

Wen-Ching Tang[1] · Min-Pei Lin[1] · Jianing You[2] · Jo Yung-Wei Wu[3] · Kuan-Chu Chen[1]

在 2020年3月2日 至2020年3月27日 期間招募。
總共 1060 位平均年齡14.66歲的受試者。
NSSI 的盛行率為 40.9% 。
(臺灣的研究)

were independently predictive in the logistic regression analysis. The principal results of this study suggested that NSSI was extremely prevalent among adolescents during the COVID-19 outbreak, and in particularly, personality and virtual environment risk factors and enhancing self-esteem should be the focus of NSSI preventive strategies when targeting this age population. Our results provide a reference towards designing NSSI prevention programs geared toward the high school population during the COVID-19 pandemic.

Keywords COVID-19 · Nonsuicidal self-injury · Prevalence · Risk factors

Curr Psychol . 2021 Jun 1;1-10.

NSSI行為的心理意涵

- NSSI被認為於心理層面具有自動化 (automatic) 與社會/人際溝通(social & interpersonal)兩大功能
  - 自動化是個案期待NSSI釋放其情緒、減壓、自我療傷或自我懲罰的機制，下意識因應情緒困惱，每當困擾時就陷入以NSSI作為出口的惡性循環中，尤其看到血液滲出時，快感突然而生。
  - NSSI有時也是人際溝通的方式。

情緒失調

- NSSI者對壓力承受力特弱、過於敏感、缺乏因應之道且情緒復原能力。
- 情控的優劣部分需取決於個人對情境的理會、選擇性注意、評斷與反應的綜合能力。
- 而NSSI者整個情控過程皆呈現缺陷，包括對負面情緒過度注意、不當解讀與反應、經常沉溺於既往負面思緒中、也缺乏正念。
- 因此遇到挫敗情緒失調就會使用NSSI來解決問題。

心理治療與藥物治療

- 既然情緒失調是其核心，故改善情控能力的認知行為治療 (cognitive behavioral therapy)、辯證行為療法 (dialectical behavior therapy, DBT)、正念治療 (mindful therapy) 經常被使用。
  - 藉處理人際衝突、情緒反應的調整與轉念，來減少個案不當的衝動反應，及增強壓力承受力，期待可間接減少NSSI的發生。

情緒行為障礙

- 包括精神性疾患、情感性疾患、畏懼性疾患、焦慮性疾患、注意力缺陷過動症、或有其他持續性之情緒或行為問題者。

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Original Article

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Children; DSM-5; epidemiology; national survey; prevalence

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Prevalence of DSM-5 mental disorders in a nationally representative sample of children in Taiwan: methodology and main findings

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Abstract

Aims. There has been a lack of prevalence estimates of DSM-5 mental disorders in child populations at the national level worldwide. This study estimated the lifetime and 6-month prevalence of mental disorders according to the DSM-5 diagnostic criteria in Taiwanese children.

Methods. Taiwan's National Epidemiological Study of Child Mental Disorders used the stratified cluster sampling to select 69 schools in Taiwan resulting in a nationally representative sample of 4816 children in grades 3 ($n = 1352$), 5 ($n = 1297$) and 7 ($n = 2167$). All the participants underwent face-to-face psychiatric interviews using the Kiddie-Schedule for Affective Disorders and Schizophrenia-Epidemiological version, modified for the DSM-5, and they and their parents completed questionnaires. The inverse probability censoring weighting (IPCW)-adjusted prevalence was reported to minimise non-response bias.

Results. The IPCW-adjusted prevalence rates of mental disorders decreased by 0.1–0.5% than raw weighted prevalence. The IPCW-adjusted weighted lifetime and 6-month prevalence rates for overall mental disorders were 31.6 and 25.0%, respectively. The most prevalent mental disorders (lifetime, 6-month) were anxiety disorders (15.2, 12.0%) and attention-deficit hyperactivity disorder (10.1, 8.7%), followed by sleep disorders, tic disorders, oppositional defiant disorder and autism spectrum disorder. The prevalence rates of new DSM-5 mental disorders, avoidant/restrictive food intake disorder and disruptive mood dysregulation disorder were low (<1%).

Conclusions. Our findings, similar to the DSM-IV prevalence rates reported in Western countries, indicate that DSM-5 mental disorders are common in the Taiwanese child population and suggest the need for public awareness, early detection and prevention.

Epidemiol Psychiatr Sci. 2019 Jan 30;29:e15.

Table 2. The adjusted weighted and 6-month weight prevalence of diagnostic distribution of DSM-5 mental disorders in Taiwan's National Epidemiological Study of Child Mental Disorders

	IPCW-adjusted prevalence					
	Lifetime			six-month		
DSM-5 diagnoses	*N*	$_{wt}$%	95% CI	*N*	$_{wt}$%	95% CI
Neurodevelopmental disorders						
Autism spectrum disorder[a]	52	1.0	0.6–1.5	–	–	–
ADHD	487	10.1	8.9–11.3	412	8.7	7.3–10.1
Tic disorders	151	2.6	2.0–3.4	126	2.1	1.4–2.7
DICCD						
Oppositional defiant disorder	97	2.0	1.4–2.6	76	1.5	0.9–2.1
Conduct disorder	15	0.5	0.1–0.9	9	0.1	0.0–0.3
Intermittent explosive disorder	17	0.2	0.0–0.4	10	0.1	0.0–0.3
Depressive disorders						
Major depressive disorder	79	1.7	0.7–2.7	24	0.7	0.0–1.5
Persistent depressive disorder	28	0.8	0.0–1.6	15	0.2	0.0–0.4
DMDD	14	0.3	0.1–0.5	12	0.2	0.0–0.4
Anxiety disorders						
Any anxiety disorder	702	15.2	12.7–17.7	550	12.0	10.0–14.0
Generalised anxiety disorder	33	0.9	0.3–1.5	30	0.7	0.3–1.1
Social anxiety disorder	154	3.6	2.6–4.6	137	2.7	1.9–3.5
Specific phobia disorder	412	8.7	6.9–10.5	366	7.7	6.1–9.3
Separation anxiety disorder	178	4.4	3.2–5.6	59	2.2	0.8–3.6
Panic disorder	19	0.4	0.0–0.8	8	0.1	0.0–0.2
Agoraphobia	13	0.4	0.0–0.8	13	0.4	0.0–0.8

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兒童焦慮症

衛生福利部心理衛生專輯（4）

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畏懼症

- 一般在童年早期發生，通常是與令人不愉快的經驗有關，或是從家庭成員學習而得的負面感覺，這些記憶被儲存在腦部杏仁核與海馬迴之中，日後當某些特定情境發生，觸及了已被患者腦中杏仁核和海馬迴標記為致命或危險的事物，即觸發患者的恐懼反應。

分類

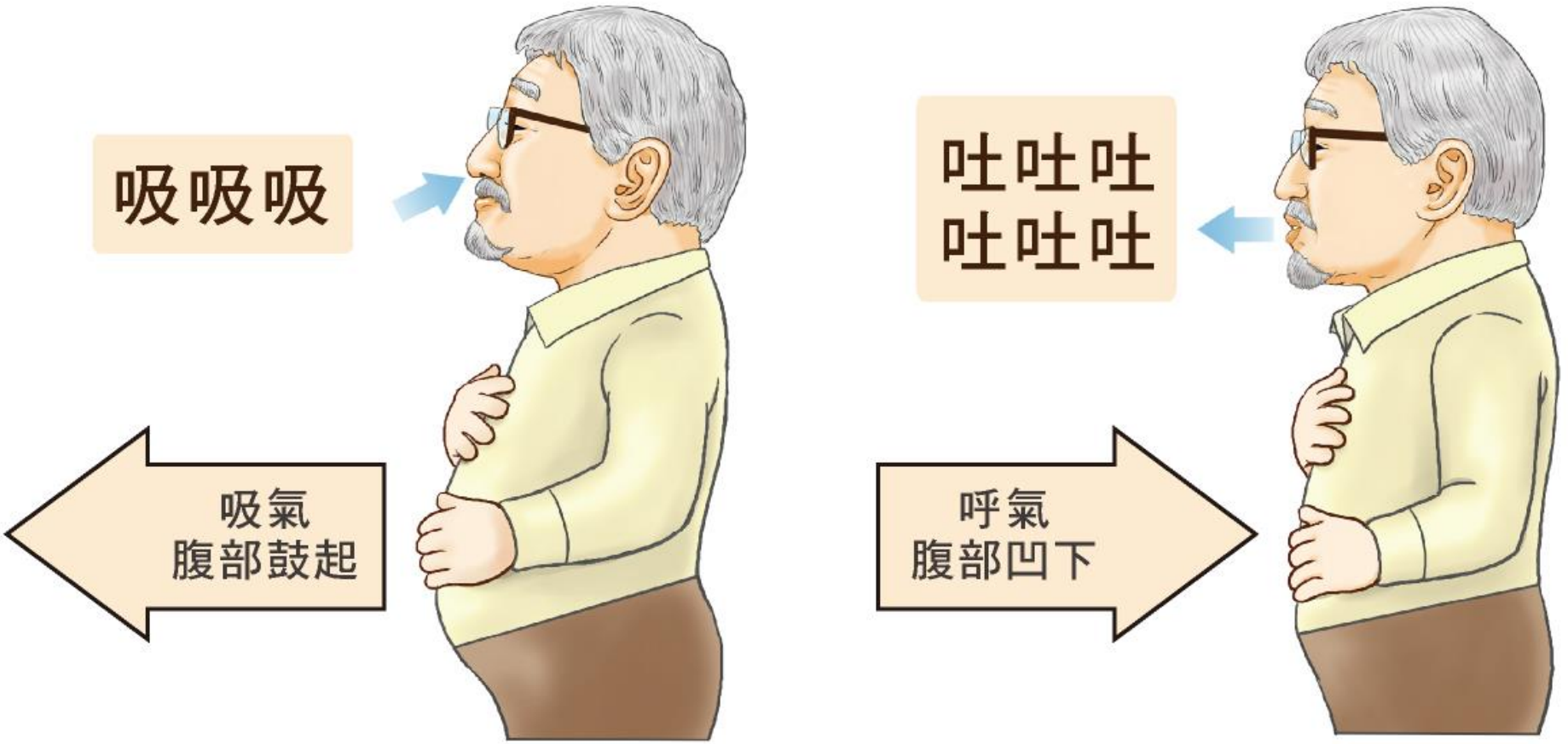
- 動物畏懼症：動物或昆蟲。
- 自然環境畏懼症：自然環境，如高度或水。
- 血液、針頭、傷口畏懼症：血或傷口，通常有高度家族傾向。
- 特殊情境畏懼症：某種特定情境，如飛機或電梯，初發年齡呈現雙峰分佈，分別是兒童期或成年早期。
- 其他類型：對於其他項目的畏懼害怕。

治療

- 藥物治療
  - 抗焦慮藥物可使患者的焦慮感減輕，但是在消除畏懼症的念頭方面，則效果不見得那麼理想。
- 認知行為治療
  - 系統性減敏感法
    - 要先學會放鬆技巧
  - 快速現場暴露療法（又名洪水療法）

家長及學校方面因應策略

- 傾聽並同理孩子的畏懼，而不只是說「這有什麼好怕的？」。
- 鼓勵孩子討論他的畏懼，有時將想法感覺化為文字可以減輕焦慮。
- 不要因為孩子害怕的主題，特意改變生活習慣。
  - 例如，若孩子畏懼狗，並不需要特別迴避會出現狗的地方，因為這種迴避行為，反而會鞏固孩子心中「狗很可怕，我要躲開」的想法。
- 陪孩子一起練習放鬆技巧，協助舒緩緊張情緒。



圖片來源http://www.e-quit.org/UpLoadFile/userfiles/images/copd-1024-3.jpg

分離焦慮症

- 分離焦慮症潛在的病因可能有下列三點：
  - 心理及環境因素：沒有與父母親建立安全的依附關係，或是父母親過度保護導致孩子無法獨立活動，均會提高孩子罹患分離焦慮症的機率。
  - 學習因素：父母親自己在面對與孩子分離時表現出焦慮行為，或是本身較常焦慮不安，均可能透過某種方式傳遞給孩子，讓孩子學習到焦慮行為模式。
  - 遺傳及個性因素：研究顯示，父母親本身有焦慮症狀者，孩子比較容易出現分離焦慮症狀。過度害羞或退縮氣質的孩子也較易罹患此症。
- 如果孩子具有上述潛在發作因素，再遭遇到生活上的突發壓力事件，例如受到驚嚇、搬新家、進入新學校，或是家人生病、離家等，即可能引發分離焦慮症狀。

診斷

- 以下症狀出現三項或三項以上，持續時間至少四周， 且造成功能顯著的障礙
  - 1. 當離開家或主要依附對象時，或只是預期將要分離，即有重複發生而過度的痛苦。
  - 2. 持續而過度地擔憂自己會失去主要依附對象，或擔心他們可能會受到傷害。
  - 3. 持續而過度地擔憂極不幸的事會使自己與主要依附對象分離（如自己會走失或被綁架）。
  - 4. 只因害怕分離而持續排斥或拒絕上學或去其他地 方。
  - 5. 持續而過度地害怕或排斥下述狀況：
    - 無主要依附對象陪伴下留在家中，或於其他場合而無熟識成人作陪。
  - 6. 持續排斥或拒絕下述狀況：
    - 沒有主要依附對象一旁作伴而上床睡覺，或離家在外過夜。
  - 7. 重複出現含有分離主題的夢魘。
  - 8. 當離開主要依附對象之時，或只是預期將要分離，會重複抱怨身體症狀。

治療

- 支持性心理治療：儘快幫助患童適應新環境。
- 行為治療：主要針對兒童的異常行為和內心矛盾衝突而進行。
  - 可採用系統性減敏感療法和情境再現等方法。
- 家族治療：可針對部分患童使用，因為家長的知識程度和教育方法，會影響孩子的心理發展(個案在覺得安全的環境之下，更容易分享內心的擔心和焦慮的情緒)，且父母的焦慮情緒和態度對孩子有暗示作用。
- 遊戲治療：透過遊戲為媒介，往往能有效降低個案的焦慮與防衛，並提升個案的自我效能。
- 藥物治療：當心理治療和行為治療效果未理想時，藥物治療可作為輔助之用。

家長及學校方面因應策略

- 若孩子容易出現分離焦慮，應儘量避免在孩子情緒不好時離開，像是當孩子感到身體不適、肚子餓的時候。
- 讓孩子逐漸熟悉環境與人，例如在正式開學前，先陪伴孩子到新環境走走，或是在家長陪伴下，跟原本無熟識的人進行互動。
- 家長練習短暫與孩子分離，讓孩子逐漸習慣家人不在身邊。若孩子出現強烈情緒反彈，家長可以溫柔堅定地向孩子解釋分離原因，清楚交代分離時間，並準時在承諾的時間回來。

社交焦慮症

- 此疾患與體質因素有密切關係，另外心理因素，例如個人特質、兒童早期的經驗、家庭環境等因素都有相關。
- 患者心理特質一般來說缺乏自信、害怕被別人拒絕，個性較壓抑退縮，若社交互動中經歷較多的挫折與打擊會使症狀加重。
- 患有社交焦慮症的孩子往往對批評過度敏感，他們也可能會沒有信心，而容易感到窘迫，在社交場合會非常害羞和退縮。

診斷

- 出現以下的狀況長達六個月時要考慮社交焦慮症：
  - 明顯而持續害怕必須與不熟識的人相處的情境，害怕自己可能將因行為失當而招致羞辱或困窘。
    - 兒童的焦慮不止在與成人互動時才出現，在同儕團體也會發生。
  - 暴露在使其畏懼的社會情境會引發著強烈焦慮或痛苦，兒童可能以哭泣、發脾氣、或退縮來表現。
  - 逃避所害怕的社會情境，產生的焦慮嚴重干擾兒童的正常生活、學業或社交功能。

治療

- 放鬆訓練：如腹式呼吸、生理回饋等，可以降低整體的焦慮程度。
- 認知治療：改變患者對社交情境的想法，進而能改變他對那個情境的反應。舉例來說，改變患者原來認為「所有的人都在注意他、挑剔他」的想法，進而一步步改變他的行為。
- 行為治療：在患者的日常生活、工作、學習中，協助其逐步培養對外界的適應能力。
- 藥物治療：最常使用的是血清素回收抑制劑，當心理治療和行為治療效果不理想時，藥物治療可作為輔助之用。可望減少社交環境中的過度焦慮反應，以及改善長期社交隔離下的憂鬱心情、缺乏自信。

家長及學校方面因應策略

- 家長與老師應協助孩子認識社交焦慮症，讓孩子知道其他人也跟他有一樣的擔心，避免孩子更加缺乏自信。
- 陪孩子練習放鬆技巧，挑戰負面想法。
- 陪伴孩子一同面對害怕的社會情境，先從容易的開始，像是鼓勵孩子主動與人打招呼，等到不那麼害怕了，再挑戰其他較困難的。
- 社交技巧對這類的孩子十分重要，老師可以鼓勵孩子加入團體活動，與孩子討論如何與同儕互動，並及時給予讚美與回饋。

選擇性緘默症

- 孩子通常和直系家人說話沒有問題，但仍有少數孩子在家裡也會緘默；他們可能也可以和經常見面的親戚或朋友說話；新認識的成人若經常且固定的接觸，孩子也較容易和他說話
- 許多孩子**較容易和女性說話，性別的因素似乎比階級重要**。例如：他們對女性校長說話，比對男性導師要容易。
- 在場的人數較少時，孩子較容易放鬆。他們經常被吵雜的聲音和活動影響，而且不善於爭取別人的注意。如果已經建立了互信，在一對一的情況下，孩子較容易主動發言。

選擇性緘默症

- 在家裡或是和家人在車上、海邊角落等隱蔽的地方，選緘的孩子最能放鬆。他們往往可以在空無一人的校園，和爸媽高興的聊天。因此，**地點的隱密性比外觀更重要**。
- 有些孩子在家裡放鬆到可以和訪客說話，特別是隨和、好玩而且不會對他們施加說話壓力的訪客。然而一旦對於某些人說話的恐懼已經較為固著，則無論這些人在哪裡出現，孩子都很難開口說話。有時候孩子會懷疑訪客可能來自學校，如果他已意識到學校是焦慮的主要來源，那麼任何和學校相關的事物都會引起焦慮，使孩子無法說話。不過一般說來，如果孩子突破障礙和某位成人成功說過一次話，那麼只要情境相同，他就可以在任何地點再度和那個人說話。

選擇性緘默症

- 被別人聽見的風險通常比地點更容易影響選緘的孩子，例如：孩子在路上和爸媽說話，一到校門口立即停止說話；但如果學校的遊戲區空無一人，或是每個人都放學回家以後，孩子就可以在學校和爸媽說話。**引導孩子第一次開口說話時，必須確定完全隱密，因為有任何被別人聽見的風險都會讓孩子更焦慮**。
- 除非是詳加計畫的輔導策略，直接問孩子問題遠比隨意分享更容易引起焦慮。分享和提問不同，因為分享可能引導回應但並不要求回應。當孩子察覺到自己必須回應，而且是立刻回應，他便可能感到壓力，因而更加焦慮。年紀幼小的孩子常常和大人一起玩得興高采烈，但大人一問他問題，他就忽然僵住。同樣的，參與小團體比一對一輔導壓力小，因為有別人可以分擔回應的責任，可以自願而不一定要回應。

選擇性緘默症

- **賄賂、奉承、挑釁、威脅或溫和勸說，都很難對說話焦慮的孩子有效**，因為這些都隱含要求孩子說話的預期，都會增加壓力。
- 大人不直接注視時，孩子較容易回應。被注視似乎會增加必須回應的壓力。
- 孩子通常非常厭惡被測試，一旦察覺到別人有此意圖就會更加焦慮。如果他的回應是用來指揮電腦遊戲中的角色，他可能可以表達，但一旦大人偏離遊戲，試圖引導他說話，他就會沉默以對。同樣的，當爸媽的朋友來訪，孩子可能可以說話，但一旦孩子懷疑訪客其實是來觀察他的，便會僵硬不語。

選擇性緘默症

- 許多選緘的孩子不喜歡或不善於做決定，例如：他們可能連以非口語方式點菜都相當困難。即便是隨口提問也可能嚇到他們，例如：「你自己選位子坐」、「選一個隊友」、「選一個顏色」，或「想一個數字」，因為並沒有固定的答案，也不確定怎樣做才正確。建議**設計活動時少讓孩子做決定，清楚的告訴他有哪些選項，慢慢才讓孩子做開放式選擇**。
- **當孩子覺得問題的答案模擬兩可，沒有絕對的預期回應**(可能是詢問意見而非事實，或必須做選擇)，結果**孩子就保持沉默，以迴避說錯的風險**。因為不敢冒險，孩子和大人或同儕相處時，便無法提出主張或採取主動。一般來說，選緘的孩子較無法應對出乎意料的問題或情況，而在經過計畫、結構化、熟悉的日常例行說話中表現最好。

選擇性緘默症

- 大多數選緘的孩子剛開始可以說話時，音量非常小，有些或先耳語或唇語，後來才以正常音量說話。對於嘗試發出聲音，但尚未真正開始說話的孩子，發出無聲的氣音比有聲字容易得多。
- 一旦緘默已成為固著的行為模式，通常孩子面對陌生人比面對熟悉的老師或同學更容易克服焦慮。不知道孩子情況的新老師、鄰居或學校，都可能提供機會，讓孩子重新開始，脫離過去形象的束縛。
- 讓孩子知道，你了解他說話的困難和感覺，你了解他想說話，而且努力的嘗試，可是他太焦慮，以至於聲音好像卡在喉嚨裡發不出來。大人可能出於善意傳達出說話很簡單的訊息，加上孩子發覺無論學校裡或街道上，似乎都沒有其他人有任何說話的問題，於是孩子不會承認自己「害怕說話」，而是告訴別人(甚至自己也相信)自己「不想說話」。幫助孩子去除這個迷思，可以讓他大大的鬆了一口氣。

選擇性緘默症

- 當孩子說自己「不想說話」，他的意思是他「不想要說話所帶來的焦慮」，向孩子表達，你了解他無法說出需求、無法交朋友的辛苦，以及無法發出聲音有多窘，告訴孩子，你知道他有多害怕，而且你知道如何幫助他進步，不要專注於「說話」這件事，要盡量「好玩」。
- 向孩子解釋你將如何幫助他，克服說話焦慮的方法就是去除任何說話的壓力，不要讓孩子形成避免說話的習慣。設法讓孩子體驗，說話能夠帶來好玩、有趣的聯想，引導孩子一次進步一小步，直到孩子能夠輕鬆應付之前帶來焦慮的情境。

攻擊性行為

攻擊性行為

- 攻擊性行為是最常見讓兒童接受精神醫療的原因之一。
- 成年人對孩子如何看待和表達他們的侵略性思想有相當大的影響。
- 造成兒童攻擊性行為的因素，包括對挫折的基本容忍度(可能部分取決於遺傳稟賦和/或早期經驗)，特別是從父母和教師對其行為的反應所學到的經驗而塑造的。

J Am Acad Child Adolesc Psychiatry 2021;60(2):236–251.

攻擊性行為

- 與兒童攻擊性行為同時發生的最普遍的精神疾病是注意力不足過動症(ADHD)。
  - 通常共病對立反抗症、行為規範障礙症或侵擾性情緒失調症。

J Am Acad Child Adolesc Psychiatry 2021;60(2):236–251.

Epidemiology and Psychiatric Sciences

cambridge.org/eps

Original Article

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Prevalence of DSM-5 mental disorders in a nationally representative sample of children in Taiwan: methodology and main findings

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Abstract

Aims. There has been a lack of prevalence estimates of DSM-5 mental disorders in child populations at the national level worldwide. This study estimated the lifetime and 6-month prevalence of mental disorders according to the DSM-5 diagnostic criteria in Taiwanese children.

Methods. Taiwan's National Epidemiological Study of Child Mental Disorders used the stratified cluster sampling to select 69 schools in Taiwan resulting in a nationally representative sample of 4816 children in grades 3 ($n = 1352$), 5 ($n = 1297$) and 7 ($n = 2167$). All the participants underwent face-to-face psychiatric interviews using the Kiddie-Schedule for Affective Disorders and Schizophrenia-Epidemiological version, modified for the DSM-5, and they and their parents completed questionnaires. The inverse probability censoring weighting (IPCW)-adjusted prevalence was reported to minimise non-response bias.

Results. The IPCW-adjusted prevalence rates of mental disorders decreased by 0.1–0.5% than raw weighted prevalence. The IPCW-adjusted weighted lifetime and 6-month prevalence rates for overall mental disorders were 31.6 and 25.0%, respectively. The most prevalent mental disorders (lifetime, 6-month) were anxiety disorders (15.2, 12.0%) and attention-deficit hyperactivity disorder (10.1, 8.7%), followed by sleep disorders, tic disorders, oppositional defiant disorder and autism spectrum disorder. The prevalence rates of new DSM-5 mental disorders, avoidant/restrictive food intake disorder and disruptive mood dysregulation disorder were low (<1%).

Conclusions. Our findings, similar to the DSM-IV prevalence rates reported in Western countries, indicate that DSM-5 mental disorders are common in the Taiwanese child population and suggest the need for public awareness, early detection and prevention.

Epidemiol Psychiatr Sci. 2019 Jan 30;29:e15.

Table 2. The adjusted weighted and 6-month weight prevalence of diagnostic distribution of DSM-5 mental disorders in Taiwan's National Epidemiological Study of Child Mental Disorders

	IPCW-adjusted prevalence					
	Lifetime			six-month		
DSM-5 diagnoses	*N*	$_{wt}$%	95% CI	*N*	$_{wt}$%	95% CI
Neurodevelopmental disorders						
Autism spectrum disorder[a]	52	1.0	0.6–1.5	–	–	–
ADHD	487	10.1	8.9–11.3	412	8.7	7.3–10.1
Tic disorders	151	2.6	2.0–3.4	126	2.1	1.4–2.7
DICCD						
Oppositional defiant disorder	97	2.0	1.4–2.6	76	1.5	0.9–2.1
Conduct disorder	15	0.5	0.1–0.9	9	0.1	0.0–0.3
Intermittent explosive disorder	17	0.2	0.0–0.4	10	0.1	0.0–0.3
Depressive disorders						
Major depressive disorder	79	1.7	0.7–2.7	24	0.7	0.0–1.5
Persistent depressive disorder	28	0.8	0.0–1.6	15	0.2	0.0–0.4
DMDD	14	0.3	0.1–0.5	12	0.2	0.0–0.4

Epidemiol Psychiatr Sci. 2019 Jan 30;29:e15.

ADHD beneath the surface

- Problems in
  - Attention management (注意力管理)
    - Sustaining attention and Shifting attention
  - Task management (任務管理): starting, planning and maintaining activities
  - Effort and motivation (動機與努力)
  - Emotional regulation (情緒調節)
    - Decreased activity in the part of the brain responsible for filtering emotions – children react on a hair trigger
  - Working memory (工作記憶)
    - Refer to a broad group of abilities responsible for handling information
  - Self-monitoring (自我監控)

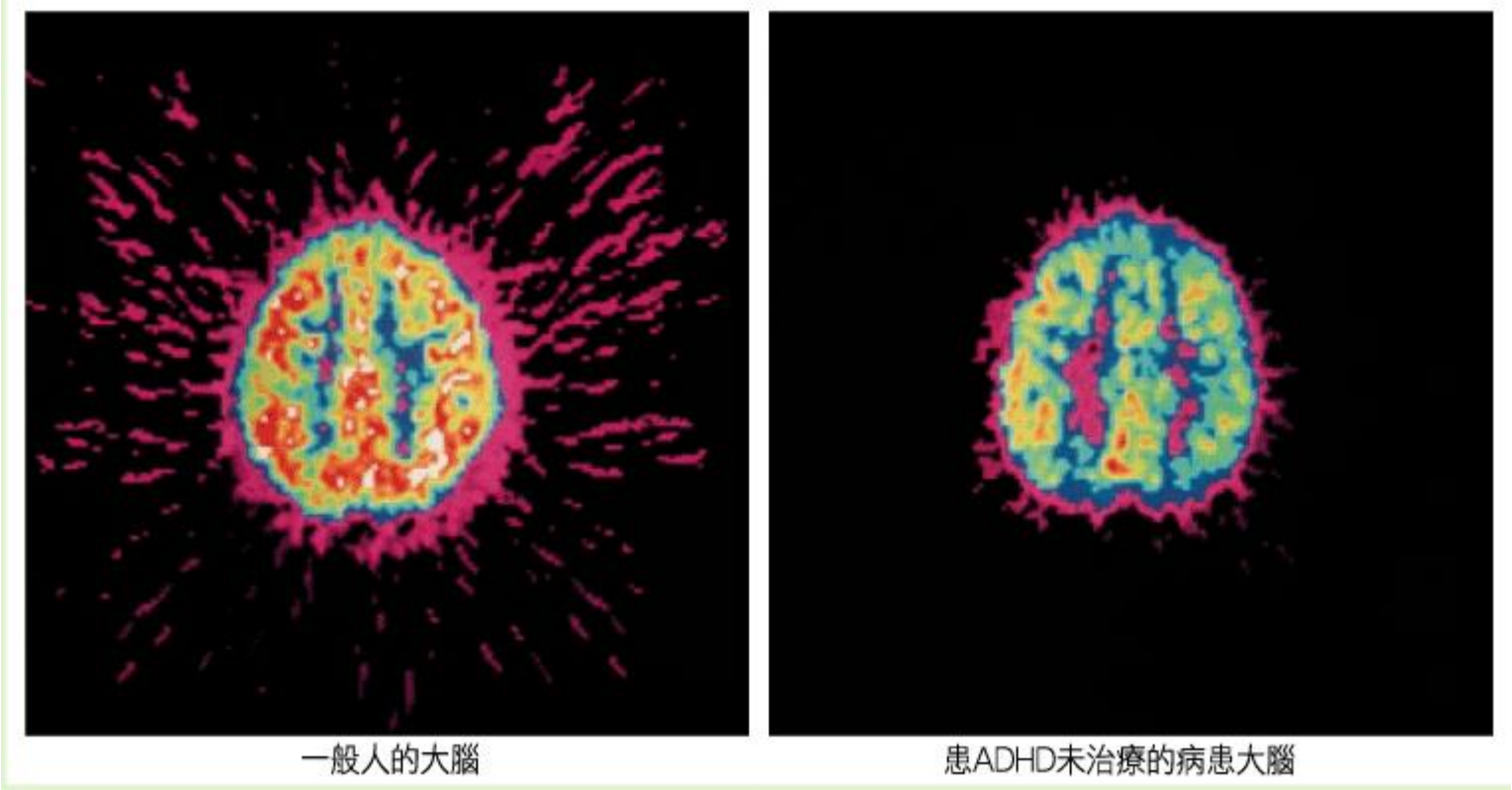
摘錄自 The Family ADHD Solution, MARK BERTIN, MD

- 「工作記憶」是指個體在進行如語言理解、閱讀、邏輯推理、數學運算.....等複雜性認知作業時，同時對訊息進行「短暫貯存」及「運作處理」的能力
  - Baddeley，1986 ; 1992 ; Gathercole & Baddeley ，1993 ; Daneman & Carpenter， 1980

注意力不足過動症的病理

ADHD是一種腦生理功能異常的疾病

ADHD病患的葡萄糖代謝活性明顯降低(右)



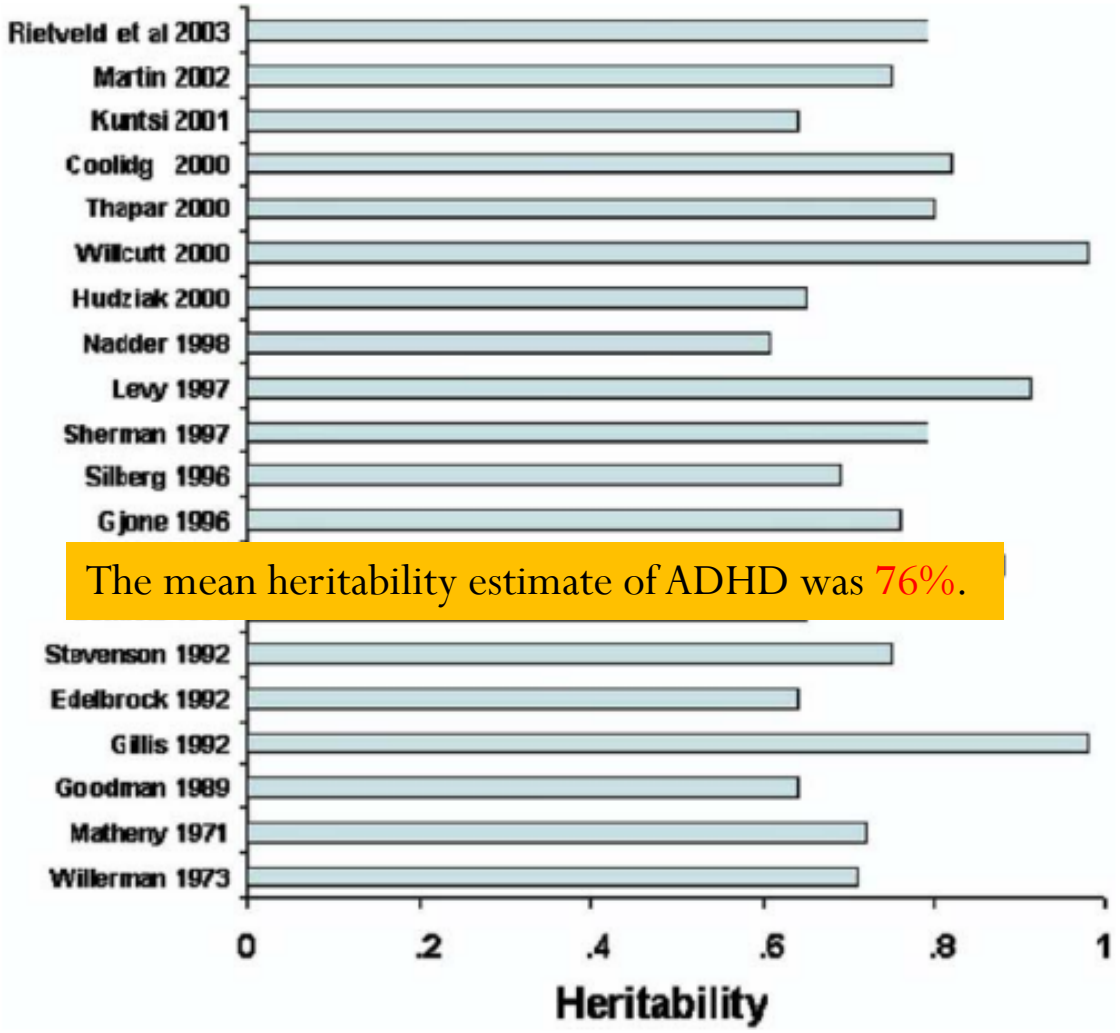
ADVANCING THE NEUROSCIENCE OF ADHD

Molecular Genetics of Attention-Deficit/Hyperactivity Disorder

Stephen V. Faraone, Roy H. Perlis, Alysa E. Doyle, Jordan W. Smoller, Jennifer J. Goralnick, Meredith A. Holmgren, and Pamela Sklar

Results of behavioral genetic and molecular genetic studies have converged to suggest that both genetic and nongenetic factors contribute to the development of attention-deficit/hyperactivity disorder (ADHD). We review this literature, with a particular emphasis on molecular genetic studies. Family, twin, and adoption studies provide compelling evidence that genes play a strong role in mediating susceptibility to ADHD. This fact is most clearly seen in the 20 extant twin studies, which estimate the heritability of ADHD to be .76. Molecular genetic studies suggest that the genetic architecture of ADHD is complex. The few genome-wide scans conducted thus far are not conclusive. In contrast, the many candidate gene studies of ADHD have produced substantial evidence implicating several genes in the etiology of the disorder. For the eight genes for which the same variant has been studied in three or more case–control or family-based studies, seven show statistically significant evidence of association with ADHD on the basis of the pooled odds ratio across studies: DRD4, DRD5, DAT, DBH, 5-HTT, HTR1B, and SNAP-25.

Biol Psychiatry. 2005 Jun 1;57(11):1313-23.

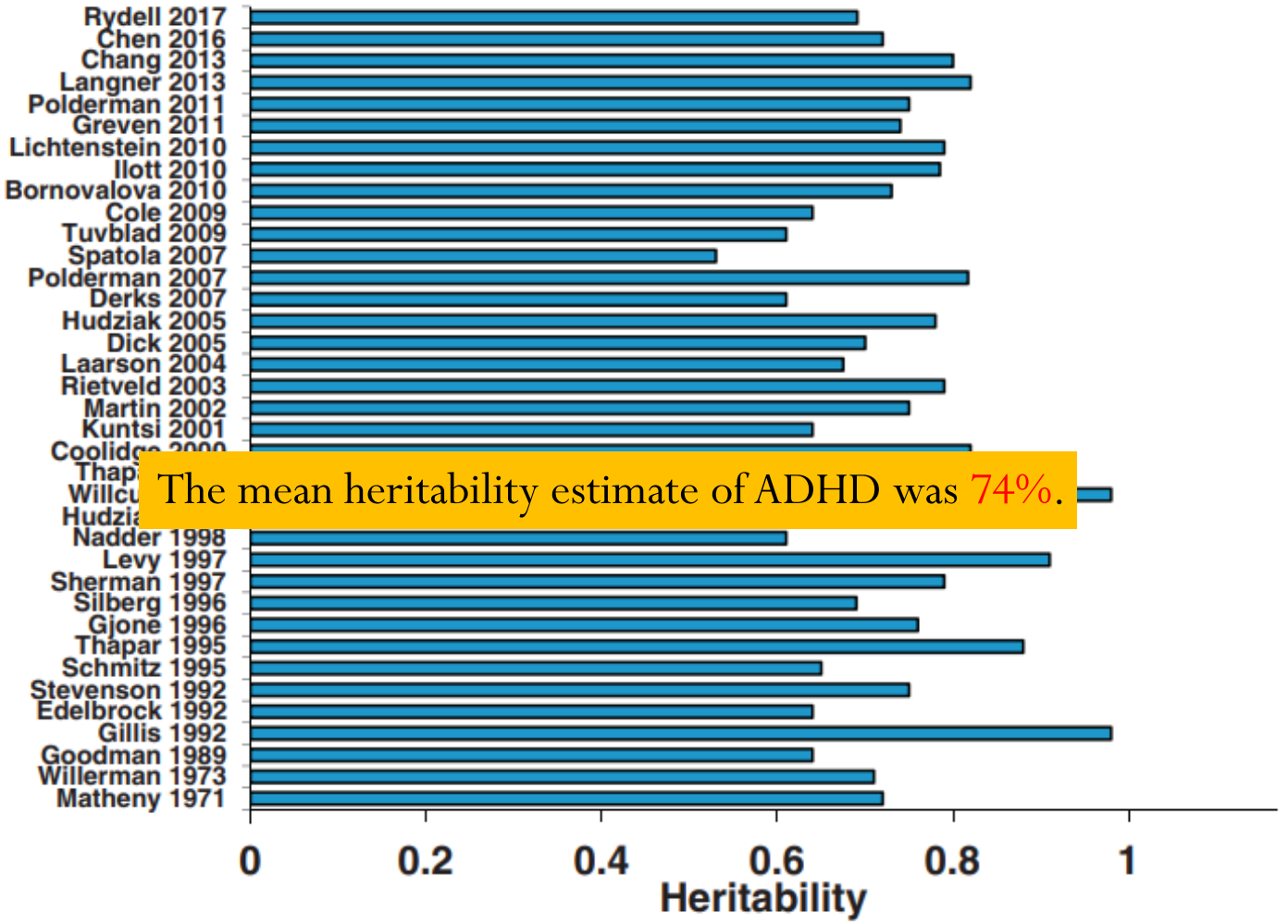


The mean heritability estimate of ADHD was 76%.

Figure 1. Estimated heritability of attention-deficit/hyperactivity disorder, based on pooled results from 20 twin studies.

Biol Psychiatry. 2005 Jun 1;57(11):1313-23.

37 twin studies of ADHD or measures of inattentiveness and hyperactivity



The mean heritability estimate of ADHD was 74%.

Fig. 1 Heritability of ADHD from twin studies of ADHD diagnoses or symptom counts [153–173]

Mol Psychiatry . 2019 Apr;24(4):562-575.

Environmental risk factors, protective factors, and peripheral biomarkers for ADHD: an umbrella review

Jae Han Kim, Jong Yeob Kim*, Jinhee Lee, Gwang Hun Jeong, Eun Lee, San Lee, Keum Hwa Lee, Andreas Kronbichler, Brendon Stubbs, Marco Solmi, Ai Koyanagi, Sung Hwi Hong, Elena Dragioti, Louis Jacob, Andre R Brunoni, Andre F Carvalho, Joaquim Radua, Trevor Thompson, Lee Smith, Hans Oh, Lin Yang, Igor Grabovac, Felipe Schuch, Michele Fornaro, Andrew Stickley, Theodor B Rais, Gonzalo Salazar de Pablo, Jae Il Shin, Paolo Fusar-Poli*

Summary

Background Many potential environmental risk factors, environmental protective factors, and peripheral biomarkers for ADHD have been investigated, but the consistency and magnitude of their effects are unclear. We aimed to systematically appraise the published evidence of association between potential risk factors, protective factors, or peripheral biomarkers, and ADHD.

Methods In this umbrella review of meta-analyses, we searched PubMed including MEDLINE, Embase, and the Cochrane Database of Systematic Reviews, from database inception to Oct 31, 2019, and screened the references of relevant articles. We included systematic reviews that provided meta-analyses of observational studies that examined associations of potential environmental risk factors, environmental protective factors, or peripheral biomarkers with diagnosis of ADHD. We included meta-analyses that used categorical ADHD diagnosis criteria according to DSM, hyperkinetic disorder according to ICD, or criteria that were less rigorous than DSM or ICD, such as self-report. We excluded articles that did not examine environmental risk factors, environmental protective factors, or peripheral biomarkers of ADHD; articles that did not include a meta-analysis; and articles that did not present enough data for re-analysis. We excluded non-human studies, primary studies, genetic studies, and conference abstracts. We calculated summary effect estimates (odds ratio [OR], relative risk [RR], weighted mean difference [WMD], Cohen's d, and Hedges' g), 95% CI, heterogeneity I^2 statistic, 95% prediction interval, small study effects, and excess significance biases. We did analyses under credibility ceilings, and assessed the quality of the meta-analyses with AMSTAR 2 (A Measurement Tool to Assess Systematic Reviews 2). This study is registered with PROSPERO, number CRD42019145032.

Findings We identified 1839 articles, of which 35 were eligible for inclusion. These 35 articles yielded 63 meta-analyses encompassing 40 environmental risk factors and environmental protective factors (median cases 16 850, median population 91 954) and 23 peripheral biomarkers (median cases 175, median controls 187). Evidence of association was convincing (class I) for maternal pre-pregnancy obesity (OR 1·63, 95% CI 1·49 to 1·77), childhood eczema (1·31, 1·20 to 1·44), hypertensive disorders during pregnancy (1·29, 1·22 to 1·36), pre-eclampsia (1·28, 1·21 to 1·35), and maternal acetaminophen exposure during pregnancy (RR 1·25, 95% CI 1·17 to 1·34). Evidence of association was highly suggestive (class II) for maternal smoking during pregnancy (OR 1·6, 95% CI 1·45 to 1·76), childhood asthma (1·51, 1·4 to 1·63), maternal pre-pregnancy overweight (1·28, 1·21 to 1·35), and serum vitamin D (WMD −6·93, 95% CI −9·34 to −4·51).

Lancet Psychiatry 2020; 7: 955–70

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Lancet Psychiatry. 2020 Nov;7(11):955-970.

結果

- 五項環境危險因子被評為具有明顯的證據等級(Class I):
  - 孕前肥胖 (以BMI定義，BMI ≥30 kg/m²)
  - 兒童期濕疹
  - 懷孕期間高血壓性疾患 (包含慢性高血壓、孕期高血壓和子癲前症)
  - 子癲前症
  - 懷孕期間普拿疼的使用

Lancet Psychiatry 2020; 7: 955–70.

結果

- 三項環境危險因子被評為高度暗示性的證據(Class II):
  - 懷孕期間抽菸
  - 兒童期氣喘
  - 孕前過重 (以BMI定義，BMI 25·0–29·9 kg/m²)

Lancet Psychiatry 2020; 7: 955–70.

Fig. 1 Maternal immune activation, triggered by acute and systemic chronic inflammation, is proposed to affect fetal neurodevelopment, through inflammatory and epigenetic mechanisms. Common maternal disease and environmental factors including obesity, gestational diabetes, pre-eclampsia, smoking, pollution, low socioeconomic status, depression, psychosocial stress, autoimmune diseases and asthma are implicated in systemic chronic inflammation. In addition, infection is involved in acute inflammation. These maternal inflammatory states play a key role in immune activation during pregnancy through the placenta and immature blood-brain barrier to cause dysfunction in the developing fetal brain and prime the child to be susceptible to future hits through microglia activation and epigenetic alterations, manifesting a spectrum of diverse neurodevelopmental outcomes with varied expression and progression.

Transl Psychiatry. 2021 Jan 21;11(1):71.

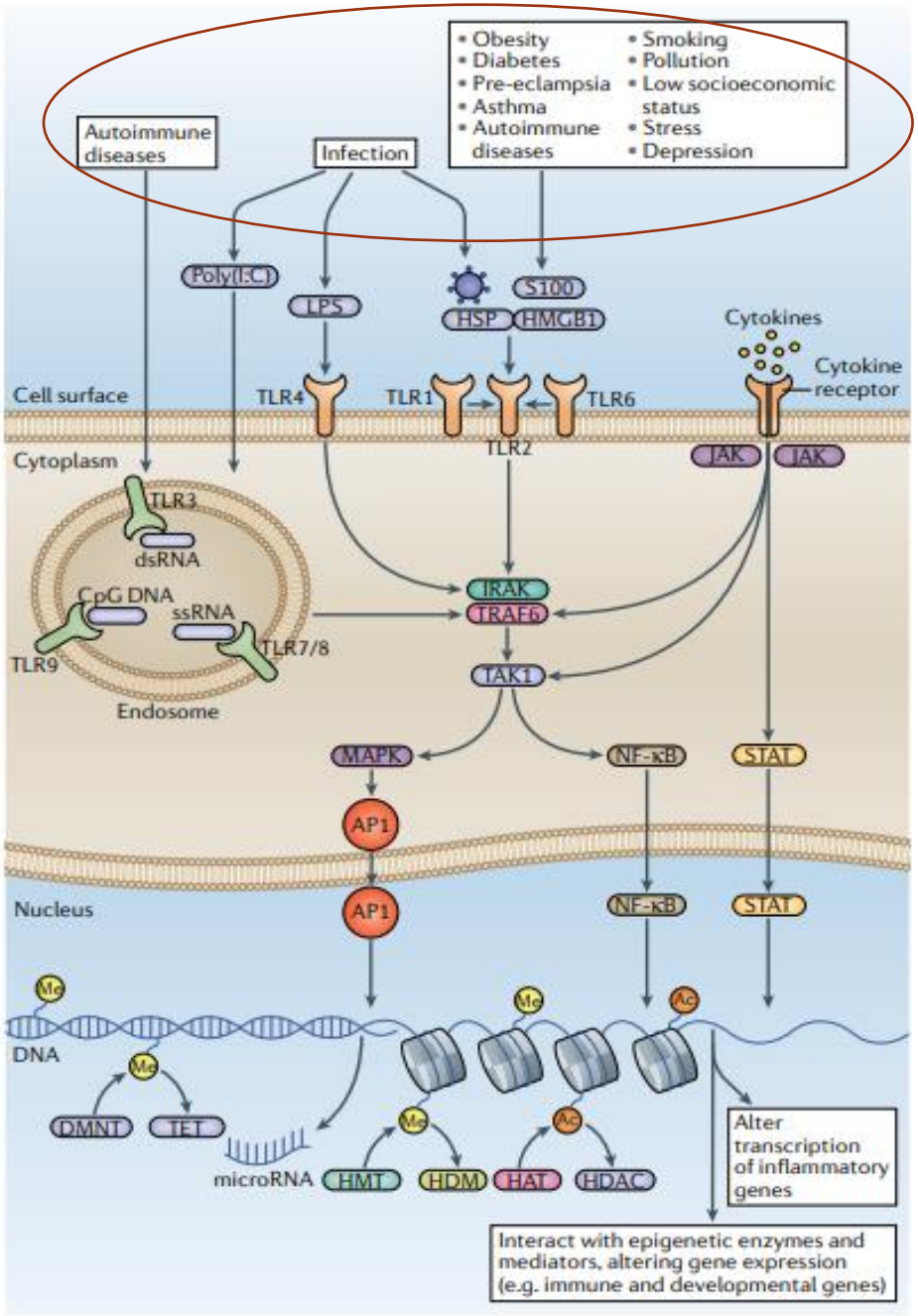

Fig. 3 | **Cell signalling pathways linking diverse environmental factors to inflammation and epigenetic programming of DNA.** Inflammation is increasingly recognized at the gene–environment interface[41]. Microbial pathogens release pathogen-associated molecular patterns[41,68]. Heterogeneous environmental factors and disease states implicated in chronic inflammation, including obesity, diabetes, pre-eclampsia, asthma, autoimmune disease, smoking, pollution, low socioeconomic status, stress and depression, stimulate the release of damage-associated molecular patterns[41,68]. Pathogen-associated molecular patterns and damage-associated molecular patterns trigger cell-surface and intracellular Toll-like receptors (TLRs) to activate an inflammatory cascade involving phosphorylated adaptor proteins such as NF-κB, MAPK and activator protein (AP1)[68]. Translocation of NF-κB and AP1 to the nucleus activates the transcription of genes encoding pro-inflammatory cytokines and other immune mediators[68]. The activation of cytokine receptors through the JAK–STAT pathway by cytokines also contributes to NF-κB signalling. NF-κB and JAK–STAT signalling upregulates and interacts with epigenetic enzymes and transcription factors to induce epigenetic modifications[134]. Epigenetic modifying factors include DNA methylation, histone modifications, chromatin modelling and microRNA. DNA methylation activity is catalysed by DNA methyltransferases (DNMTs) and ten-eleven translocation (TET) proteins. Histone acetylation is regulated by histone acetyltransferase (HAT) and histone deacetylase (HDAC), and histone methylation is controlled by histone methyltransferase (HMT) and histone demethylase (HDM)[20]. Environmental and biological factors drive epigenetic alterations, which modify the cellular expression of immune as well as developmental genes[134]. Ac, acetylation; dsRNA, double-stranded RNA; HMGB1, high mobility group protein B1; HSP, heat shock protein; LPS, lipopolysaccharide; Me, methylation; poly(I:C), polyinosinic:polycytidylic acid; ssRNA, single-stranded RNA.

Nat Rev Neurol . 2021 Sep;17(9):564-579.

ADHD要如何診斷？

- 臨床診斷

並無一個特別的實驗室的檢查可以來確立診斷或排除診斷

診斷

- 晤談

  -從孩童的雙親與老師得到資訊

  -此行為是否過度與持續，是否已影響孩童個人的生活 ？

  ––學習表現、人際關係

  –是否此行為在多個情境下皆有出現 ？

- 心測工具
  - 認知功能測驗
  - 神經心理學測驗 (continuous performance test, CPT)

SNAP量表

James M. Swanson, PhD.

Translated by Susan Shur-Fen Gau (高淑芬), M.D., PhD.

填表人姓名：_____ 填表時間：___年___月___日

與受試者的關係(請圈選)：父/母親　老師　其他照護人，請說明_____

請選擇一個代表，最能表達在過去的一個星期中，您孩子的狀況...

	完全沒有	有一點點	還算不少	非常的多
1. 無法專注於細節的部分，或在做學校作業或其他活動時，出現粗心的錯誤	0	1	2	3
2. 很難持續專注於工作或遊戲活動	0	1	2	3
3. 看起來好像沒有在聽別人對他(她)說話的內容	0	1	2	3
4. 沒有辦法遵循指示，也無法完成學校作業或家事(並不是由於對立性行為或無法了解指示的內容)	0	1	2	3
5. 組織規劃工作及活動有困難	0	1	2	3
6. 逃避，或很不願意，或有困難於需要持續性動腦的工作(例如學校作業或家庭作業)	0	1	2	3
7. 會弄丟工作上或活動所必須的東西(例如學校作業、鉛筆、書、工具或玩具)	0	1	2	3
8. 很容易受外在刺激影響而分心	0	1	2	3
9. 在日常生活中忘東忘西的	0	1	2	3
10. 在座位上玩弄手腳或不好好坐著	0	1	2	3
11. 在教室或其他必須持續坐著的場合，會任意離開座位	0	1	2	3
12. 在不適當的場合，亂跑或爬高爬低	0	1	2	3
13. 很難安靜地玩或參與休閒活動	0	1	2	3
14. 總是一直在動或是像被馬達所驅動	0	1	2	3
15. 話很多	0	1	2	3
16. 在問題還沒問完前就急著回答	0	1	2	3
17. 在遊戲中或團體活動中，無法排隊或等待輪流	0	1	2	3
18. 打斷或干擾別人(例如：插嘴或打斷別人的遊戲)	0	1	2	3
19. 發脾氣	0	1	2	3
20. 與大人爭論	0	1	2	3
21. 主動地反抗或拒絕大人的要求與規定	0	1	2	3
22. 故意地做一些事去干擾別人	0	1	2	3
23. 因自己犯的錯或不適當的行為而怪罪別人	0	1	2	3
24. 易怒的或很容易被別人激怒	0	1	2	3
25. 生氣的及怨恨的	0	1	2	3
26. 惡意的或有報復心的	0	1	2	3

注意力缺陷過動症中文版 Swanson, Nolan, and Pelham, Version IV (SNAP -IV) 量表之常模及信效度

劉昱志[1] 劉士愷[2] 商志雍[3] 林健禾[4] 杜長齡[5] 高淑芬[5,6,7]

若以DSM-IV診斷準則為標準，分別以P95與T70二種方法進行敏感度及特異性分析，可見父母版的敏感度及特異性均非常好，可作為良好篩選工具，而老師版的P95及T70敏感度稍差(67-70%)，特異性則極佳，估一般臨床診斷建議可以P95或T70作為切截點。

0.60-0.84)。父母版與老師版 SNAP-IV 各分量表之內在一致性高（所有 Cronbach's α ≧0.88）。中文版 SNAP-IV 三分量表和 CBCL 的相似行為分量表之相關係數高 (r =

中文版SNAP-IV量表示一個有足夠信效度的量表，將可有效地應用於臨床及社區，目前建議以P95法來切分正常兒童及過動症兒童。

關鍵詞：注意力缺陷過動症，SNAP-IV 量表，信、效度，常模
（台灣精神醫學 2006;20:290-304）

Table 4. Norms of the Chinese SNAP-IV, Parent's form (Inattention/Hyperactivity-impulsivity subscales)

		T60	T70	P20	P30	P40	P50	P55	P60	P65	P70	P75	P80	P85	P90	P95	P99
Grade 1	Male	12.6/12.2	17.3/17.5	4/3	6/4	6/5	7/6	8/7	8/7	9/8	9/9	10/9	12/10	13/12	14/14	17/18	23/24
	Female	10.3/8.6	14.1/12.4	3/1	4/2	5/3	6/4	6/4	7/5	8/6	8/7	9/7	10/8	11/9	11/10	13/11	16/16
Grade 2	Male	12.5/11.9	17.1/17.7	4/2	5/3	6/5	7/6	8/6	8/7	9/8	10/9	10/9	11/11	12/12	14/13	16/15	22/27
	Female	11.1/8.5	15.5/12.5	3/1	4/2	5/3	6/3	7/4	7/4	8/5	8/6	9/7	10/7	11/8	12/10	16/12	19/18
Grade 3	Male	12.9/10.5	17.9/15.2	4/2	5/2	6/4	7/5	7/5	8/6	8/7	9/7	10/9	12/9	13/10	15/12	19/15	23/21
	Female	10.8/8.0	15.1/12.0	3/1	4/1	5/2	6/3	6/4	7/4	8/5	8/5	9/6	9/6	10/7	12/8	14/10	20/19
Grade 4	Male	13.2/10.8	18.3/15.6	4/2	5/3	6/4	7/5	7/5	8/6	9/7	10/7	11/8	12/10	14/11	17/13	18/17	23/19
	Female	10.8/6.9	15.4/10.3	3/1	4/1	5/2	5/3	5/3	6/3	7/4	7/4	8/5	9/5	11/6	12/8	16/11	23/16
Grade 5	Male	12.9/10.9	18.0/16.2	3/1	4/2	5/3	7/4	7/5	8/5	9/6	10/7	11/8	11/10	12/11	14/13	18/16	24/22
	Female	10.8/7.0	15.3/10.6	3/1	4/1	5/2	6/3	6/3	6/3	7/4	8/5	9/5	10/6	11/7	12/8	14/9	24/15
Grade 6	Male	12.3/8.9	17.1/13.2	4/1	5/2	5/3	7/4	8/4	8/5	9/5	10/6	11/7	12/8	12/9	15/11	16/14	21/17
	Female	10.4/7.5	14.8/11.5	3/0	4/1	4/2	5/2	5/3	6/3	7/4	7/4	8/5	8/6	10/7	11/8	15/12	21/20
Grade 7	Male	13.1/9.2	18.4/13.8	4/1	5/2	6/2	7/3	8/4	8/4	9/5	9/6	10/6	12/7	14/9	16/11	18/15	23/20
	Female	10.0/6.0	14.4/9.3	2/0	3/1	4/2	5/2	6/2	6/3	7/3	7/3	8/4	9/4	11/5	12/6	15/9	18/13
Grade 8	Male	12.7/9.2	17.7/13.9	3/1	5/1	6/2	7/3	8/4	8/4	9/5	10/5	10/7	11/8	13/9	14/11	18/14	22/20
	Female	10.2/6.0	14.5/9.2	2/0	3/1	5/1	6/2	6/2	7/3	7/3	8/3	9/4	9/5	10/6	11/8	13/10	20/12
Total		11.8/9.1	16.5/13.6	3/1	4/2	5/3	6/3	7/4	7/4	8/5	9/6	9/7	10/8	12/9	13/11	16/14	21/20

Table 5. Norms of the Chinese SNAP-IV, Teacher's form (Inattention/Hyperactivity-impulsivity subscales)

		T60	T70	P20	P30	P40	P50	P55	P60	P65	P70	P75	P80	P85	P90	P95	P99
Grade 1	Male	16.1/14.3	23.4/21.7	2/0	4/1	5/3	7/4	8/5	10/6	10/8	12/10	14/11	16/12	18/16	20/19	22/23	26/26
	Female	10.4/6.5	16.1/10.8	0/0	1/0	2/0	3/0	4/1	4/1	5/1	5/2	7/2	8/3	9/5	10/8	19/13	27/18
Grade 2	Male	12.0/10.3	17.5/15.7	2/0	3/1	4/2	6/3	6/4	7/4	7/5	8/6	9/8	10/9	11/10	14/14	18/16	24/22
	Female	8.3/4.3	12.9/7.1	0/0	1/0	1/0	2/0	2/1	3/1	4/1	5/1	6/2	7/3	8/4	9/5	14/9	20/11
Grade 3	Male	15.6/13.1	22.1/19.5	3/0	5/1	6/3	8/5	9/6	10/8	11/9	12/9	12/10	14/11	16/13	18/17	23/21	26/25
	Female	9.9/4.5	14.8/7.3	1/0	1/0	3/0	4/0	4/1	5/1	6/1	7/1	8/2	9/3	10/5	12/6	15/7	19/11
Grade 4	Male	14.7/11.4	21.6/17.7	2/0	3/1	4/1	6/2	7/3	8/4	10/5	10/6	11/8	15/9	16/11	17/15	22/19	27/25
	Female	9.3/4.3	14.6/7.3	0/0	0/0	1/0	2/0	2/0	3/0	4/1	5/1	6/1	6/2	8/3	12/4	16/7	24/17
Grade 5	Male	14.9/11.4	21.8/17.6	2/0	3/1	5/1	6/3	8/3	8/4	9/5	10/6	12/7	16/10	18/12	18/15	21/19	27/25
	Female	9.4/3.2	14.6/5.3	0/0	0/0	1/0	2/0	3/0	4/0	5/1	6/1	7/1	8/2	9/2	10/3	17/5	19/8
Grade 6	Male	14.8/9.1	21.9/14.0	1/0	2/0	4/1	6/2	7/3	8/3	9/4	10/5	12/6	14/8	16/9	18/11	22/15	27/19
	Female	9.4/5.1	14.7/8.6	0/0	0/0	1/0	2/0	2/0	3/0	4/1	6/1	8/1	9/2	10/3	12/5	15/10	19/17
Grade 7	Male	15.4/11.3	22.5/17.8	2/0	3/0	5/1	7/2	8/3	9/4	10/5	11/7	12/8	14/9	15/11	19/13	23/21	27/26
	Female	15.4/11.3	22.5/17.8	0/0	1/0	2/0	2/0	3/0	3/0	4/1	5/1	6/2	7/2	9/2	10/3	14/6	19/14
Grade 8	Male	15.4/9.9	22.3/15.8	2/0	4/0	6/1	7/1	8/2	9/2	10/3	11/4	12/5	14/7	16/9	19/11	24/18	27/27
	Female	9.3/4.1	13.9/6.8	1/0	1/0	2/0	3/0	4/0	5/1	5/1	6/1	7/2	8/2	9/3	11/4	13/7	23/14
Total		12.6/8.7	18.9/13.9	1/0	2/0	3/0	5/1	5/1	6/2	7/2	8/3	9/5	11/6	13/8	16/10	19/15	26/24

CPT注意力測驗

Measure	Value	T-Score	Percentile	Guideline
Omissions	34	60.43	85.13	MILDLY ATYPICAL
%	10.53			
Commissions	34	62.37	89.17	MILDLY ATYPICAL
%	94.44			
Hit RT	526.24	58.12	79.15	A LITTLE SLOW
Hit RT Std. Error	22.21	64.04	91.97	MILDLY ATYPICAL
Variability	50.01	62.73	91.49	MILDLY ATYPICAL
Detectability (d')	-0.36	68.77	97.58	MARKEDLY ATYPICAL
Response Style (ß)	1.66	64.74	94.21	mildly atypical
Perseverations	35	80.43	99.00	MARKEDLY ATYPICAL
%	10.84			
Hit RT Block Change	0.07	63.84	93.09	MILDLY ATYPICAL
Hit SE Block Change	0.22	62.67	91.40	MILDLY ATYPICAL
Hit RT ISI Change	0.13	57.86	81.19	within average range
Hit SE ISI Change	0.25	58.81	83.65	MILDLY ATYPICAL

CPT注意力測驗

Summary of Inattention Measures

Measure	Value	T-Score	Percentile	Guideline
Omissions	34	60.43	85.13	Inattention
%	10.53			
Commissions	34	62.37	89.17	Inattention
%	94.44			
Hit RT	526.24	58.12	79.15	Inattention
Hit RT Std. Error	22.21	64.04	91.97	Inattention
Variability	50.01	62.73	91.49	Inattention
Detectability (d')	-0.36	68.77	97.58	Inattention
Hit RT ISI Change	0.13	57.86	81.19	OK
Hit SE ISI Change	0.25	58.81	83.65	Inattention

CPT注意力測驗

Summary of Impulsivity Measures
(general population norms used)

Measure	Value	T-Score	Percentile	Guideline
Commissions	34	62.37	89.17	Impulsive
%	94.44			
Hit RT	526.24	58.12	79.15	OK
Perseverations	35	80.43	99.00	Impulsive
%	10.84			

CPT注意力測驗

Summary of Vigilance Measures

Measure	Value	T-Score	Percentile	Guideline
Hit RT Block Change	0.07	63.84	93.09	Poor Vigilance
Hit SE Block Change	0.22	62.67	91.40	Poor Vigilance

CPT注意力測驗

C :CPT 注意力測驗

練習時可配合指令，約一分鐘半時，即用手掌做反應。且不時動來動去，或回頭跟心理師說話，約五分鐘時即離開位置，並不時玩電腦鍵盤，未做反應。但可在提醒下繼續施測，過程反覆出現類似狀況。

共病是注意力不足過動症的常態

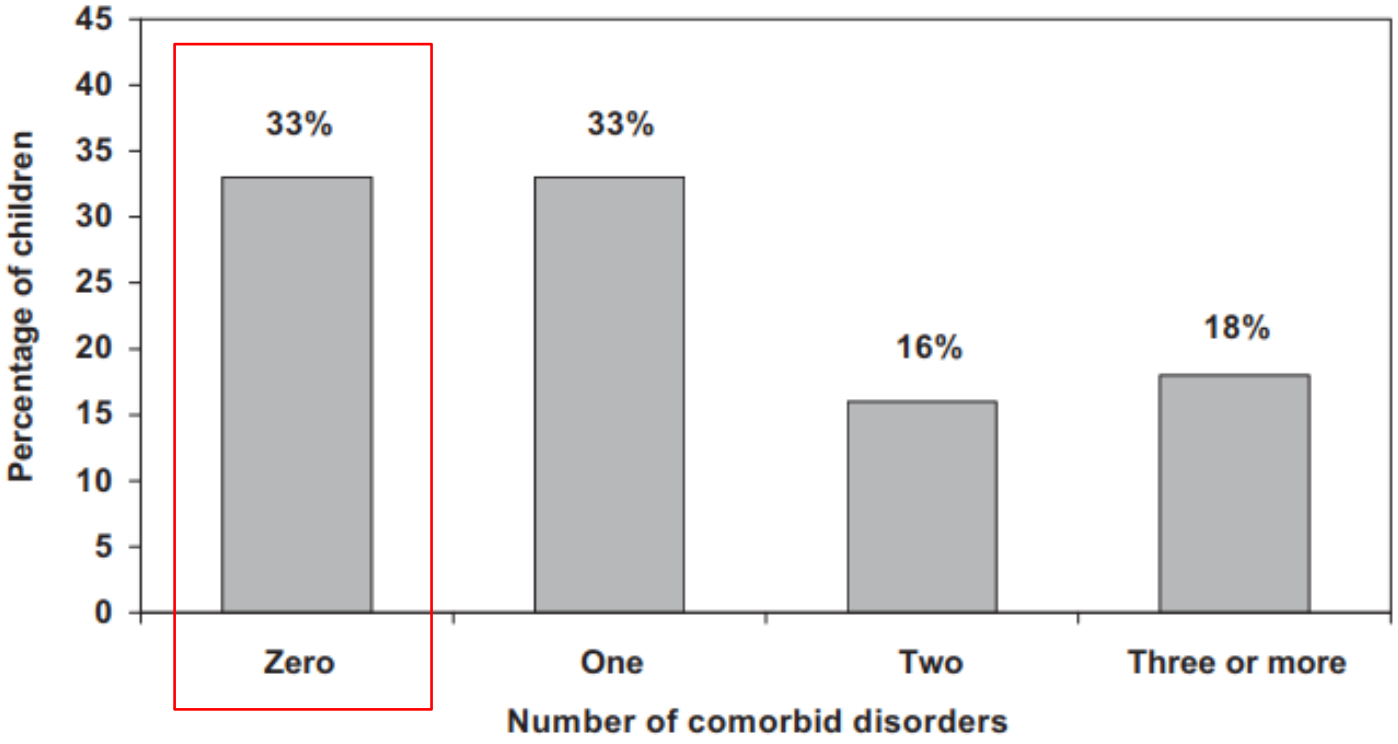

FIGURE 1
Percentage of children with ADHD who have comorbid disorders ($N = 5\,028$).

Larson K, Russ SA, Kahn RS, Halfon N. Patterns of comorbidity, functioning, and service use for US children with ADHD, 2007. Pediatrics. 2011 Mar;127(3):462-70.
data from the 2007 National Survey of Children's Health on 61 779 children ages 6 to 17 years, including 5028 with ADHD
cross-sectional analyses

共病（from MTA study)

對立反抗症	40%
焦慮性疾患	34%
行為規範障礙症	14%
抽動性疾患	11%
情感性疾患	4%

MTA Cooperative Group. A 14-month randomized clinical trial of treatment strategies for attention-deficit/hyperactivity disorder. Arch Gen Psychiatry. 1999 Dec;56(12):1073–86.

Table 2.1 Prevalence of Comorbidities

Psychiatric comorbidities prevalence: + 1-10% ++ 11-30% +++ >31% ? controversial/unknown

	CHILD (6-12)	ADOLESCENT (13-17)	ADULTS (18+)
ANXIETY	++	++	+++
DEPRESSION	+	++	+++
LEARNING DISABILITIES	+++	+++	+++
OPPOSITIONAL DEFIANT DISORDER	+++	++	+
CONDUCT DISORDER	++	++	++ (Antisocial PD)
BIPOLAR	+ (?)	+	++
SUBSTANCE USE	+	++	+++
AUTISM SPECTRUM DISORDER	++	++	++ (?)
TIC DISORDERS	++	++	+
DMDD	?	?	?
BORDERLINE PERSONALITY DISORDER		?	+++
OBSESSIVE COMPULSIVE DISORDER	+	+	++

CADDRA (2020). Canadian ADHD Resource Alliance (CADDRA): Canadian ADHD Practice Guidelines. 4.1 ed. Toronto ON: CADDRA. Accessed 9 Jul 2021

Table 1. Studies Including Data on the Comorbidity of ADHD and LD from 2001 to 2011

Study	LD Dx	ADHD Dx	*N*	% LD	% ADHD
Barry et al. (2002)	Parent report	Previous Dx, current Tx, and parent ratings	66	24	N/A
Capano et al. (2008)	1 *SD*/1.5 *SD* cutoff	Semistructured interview, parent/teacher ratings	476	66	N/A
Decker et al. (2001)	*DSM-IV*, ICD-9	*DSM-IV*, ICD-9	577	50	N/A
Del'Homme et al. (2007)	> 7th percentile cutoff/1.5 *SD*	Semistructured interview,	507	24–31	N/A
Mayes & Calhoun (2007b)	Predicted achievement sig. lower than FSIQ ($p < .05$)	*DSM-IV*, independent Dx parent and teacher report	678	76–77	N/A
Miranda et al. (2008)	Teacher information and two cutoff scores (< 25th percentile/2 *SD* below *M*)	*DSM-IV-TR*, CPRS-RL	72	50	N/A
	calculation 16 points below FSIQ; (c) WASI Verbal IQ ≥ 85; (d) 1 *SD* below average on VMI; and (e) left hand below average relative to right hand on *Purdue Pegboard*				
Smith & Adams (2006)	Parent report	Parent report	9,583	51	44
Wisniewska et al. (2007)	Parent report	Parent report	28	18	N/A

Note: ADHD = attention-deficit/hyperactivity disorder; BASC = *Behavior Assessment System for Children*; CBCL = *Child Behavior Checklist*; CPRS = *Conners' Parent Rating Scale*; CTRS = *Conners' Teacher Rating Scale*; DISC = *Diagnostic Interview Schedule for Children; DSM = Diagnostic and Statistical Manual of Mental Disorders*; Dx = diagnosis; FSIQ = full-scale IQ; ICD = International Classification of Diseases; K-SADS-E = Schedule for Affective Disorders and Schizophrenia for School-Age Children: Epidemiologic; LD = learning disability; NVLD = nonverbal learning disability; PRS = Parent Rating Scale; RL = Revised Long; SIDAC = *Structured Interview for Diagnostic Assessment of Children*; SSRS = *Social Skills Rating System*; TRS = Teacher Rating Scale; VARS = *Vanderbilt ADHD Rating Scale*; VMI = Test of Visual-Motor Integration; WASI = *Wechsler Abbreviated Scale of Intelligence*; WIAT = *Wechsler Individual Achievement Test*; WJ-Ach III = *Woodcock–Johnson–III Tests of Achievement*.

A total of 17 studies (2001–2011) examining ADHD-LD comorbidity were reviewed.

reading disorder, reading disability, dyslexia, math disability, math disorder, dyscalculia, writing disorder, written expression, dysgraphia, nonverbal learning disorder, nonverbal learning disability, NVLD, mathematical learning disorder, mathematical learning disability, math learning disability, reading learning disability, and reading learning disorder

Rates of LD in students with ADHD ranged from 8% to 76% of students (M = 45.1%).

J Learn Disabil . Jan-Feb 2013;46(1):43-51.

學習疾患

- 閱讀障礙和注意力不足過動症之共病率：25～48％
- 書寫表達障礙和注意力不足過動症之共病率：55～64％
- 數學障礙和注意力不足過動症之共病率：11～30％
- 整體而言，學習疾患和注意力不足過動症的共病率：31～45％

Curr Psychiatry Rep. 2015 Jun;17(6):38.

對立反抗症

- 持續至少六個月有生氣/易怒情緒、爭辯/反抗行為，或報復行為模式，期間出現以下準則中至少四項症狀，且其症狀必須在與手足以外至少一人的互動中被觀察到。
- 生氣/易怒情緒
  - 1. 發脾氣
  - 2. 難以取悅或易受激惹
  - 3. 易憤怒和憎恨

對立反抗症

- 反抗/任性行為
  - 4. 與成人發生爭執
  - 5. 主動反抗或拒絕聽從成人的要求或規則
  - 6. 故意激惹他人
  - 7. 因自己的過錯或不當舉止而責怪他人
- 報復性
  - 8. 在過去六個月中至少有兩次懷恨或報復行為

SNAP量表

James M. Swanson, PhD.

Translated by Susan Shur-Fen Gau (高淑芬), M.D., PhD.

填表人姓名：_____ 填表時間：___年___月___日

與受試者的關係(請圈選)：父/母親　老師　其他照護人，請說明_____

請選擇一個代碼，最能表達在過去的一個星期中，您孩子的狀況...

	完全沒有	有一點點	還算不少	非常的多
1. 無法專注於細節的部分，或在做學校作業或其他活動時，出現粗心的錯誤	0	1	2	3
2. 很難持續專注於工作或遊戲活動	0	1	2	3
3. 看起來好像沒有在聽別人對他(她)說話的內容	0	1	2	3
4. 沒有辦法遵循指示，也無法完成學校作業或家事(並不是由於對立性行為或無法了解指示的內容)	0	1	2	3
5. 組織規劃工作及活動有困難	0	1	2	3
6. 逃避，或很不願意，或有困難於需要持續性動腦的工作(例如學校作業或家庭作業)	0	1	2	3
7. 會弄丟工作上或活動所必須的東西(例如學校作業、鉛筆、書、工具或玩具)	0	1	2	3
8. 很容易受外在刺激影響而分心	0	1	2	3
9. 在日常生活中忘東忘西的	0	1	2	3
10. 在座位上玩弄手腳或不好好坐著	0	1	2	3
11. 在教室或其他必須持續坐著的場合，會任意離開座位	0	1	2	3
12. 在不適當的場合，亂跑或爬高爬低	0	1	2	3
13. 很難安靜地玩或參與休閒活動	0	1	2	3
14. 總是一直在動或是像被馬達所驅動	0	1	2	3
15. 話很多	0	1	2	3
16. 在問題還沒問完前就急著回答	0	1	2	3
17. 在遊戲中或團體活動中，無法排隊或等待輪流	0	1	2	3
18. 打斷或干擾別人(例如：插嘴或打斷別人的遊戲)	0	1	2	3
19. 發脾氣	0	1	2	3
20. 與大人爭論	0	1	2	3
21. 主動地反抗或拒絕大人的要求與規定	0	1	2	3
22. 故意地做一些事去干擾別人	0	1	2	3
23. 因自己犯的錯或不適當的行為而怪罪別人	0	1	2	3
24. 易怒的或很容易被別人激怒	0	1	2	3
25. 生氣的及怨恨的	0	1	2	3
26. 惡意的或有報復心的	0	1	2	3

行為規範障礙症

- 違反他人基本權利或年齡相稱的主要社會常規或規定，成為重複而持續的行為模式，於過去十二個月中，至少出現下列類別中十五項準則中的三項，而於出現的準則項目中，在過去六個月裡至少有一項是存在的：

行為規範障礙症

- 攻擊人及動物
  - 1. 經常霸凌、威脅或恐嚇他人
  - 2. 經常引發打架
  - 3. 曾使用可嚴重傷人的武器〈如：棍子、磚塊、破瓶子、刀、槍〉
  - 4. 曾對他人施加冷酷的身體凌虐
  - 5. 曾對動物施加冷酷的身體凌虐
  - 6. 曾直接對受害者進行竊取〈如：街頭搶劫、搶錢包、勒索、持械搶劫〉
  - 7. 曾逼迫他人進行性行為

行為規範障礙症

- 毀壞所有物
  - 8.故意縱火，意圖造成嚴重破壞
  - 9.故意毀壞他人所有物〈縱火除外〉
- 欺騙或偷竊
  - 10.闖入別人的房子、建物或汽車
  - 11.經常說謊以取得財物或好處，或者逃避義務〈即指欺瞞別人〉
  - 12.曾在未直接面對受害者的情境下，竊取值錢的物件〈如：未破壞門窗或闖入的順手牽羊；偽造〉

行為規範障礙症

- 重大違規
  - 13.不顧父母的禁止，經常深夜在外；十三歲之前就有此行為
  - 14.在與父母或父母代理人同住時，曾離家至少二次，或是曾有一次長期逃家不歸
  - 15.十三歲之前開始經常逃學

行為規範障礙症

- 此行為困擾引起臨床上顯著社交、學業、或職業功能減損。
- 若滿十八歲，應未達反社會型人格障礙的診斷準則。

侵擾性情緒失調症

- 舊時名為severe mood dysregulation (SMD)。

- A.反覆出現語言〈如罵人〉和/或行為上〈如攻擊人或物〉嚴重的脾氣爆發，和當時情境的強度或時間長短不成比例。
- B.發脾氣強烈程度和發展階段不一致。
- C.每周平均脾氣爆發三次或三次以上。
- D.幾乎每天脾氣皆爆發和情緒持續易怒或憤怒一整天，且可被別人觀察到〈如家長、教師、同儕〉。

侵擾性情緒失調症

- E.準則症狀A-D出現十二個月或以上。在這期間，沒有連續三個月以上不出現上述這些A-D準則症狀。
- F.準則A和D症狀至少出現在兩種場景〈指家裡、學校、同儕間〉，其中一種非常嚴重。
- G.6歲以下或18歲以上初診不適用此診斷。
- H.根據病史和觀察，準則A-E症狀適用10歲以前。

侵擾性情緒失調症

- I.從未出現完全符合躁症或輕躁症準則之相關症狀超過一天。
- J.行為不只在鬱症發作出現，且無法以另一精神疾病〈如自閉症類群障礙症、創傷後壓力症、分離焦慮症、持續性憂鬱症〔輕鬱症〕〉做更好的解釋。
- K.症狀非因物質、另一身體病況或神經狀況影響產生之生理效應。

共病ASD (autism spectrum disorder)

- 30–65% 的ADHD孩童有明顯的自閉症類群障礙症之特質表現。
  - J Child Psychol Psychiatry. 2012;53(9):954–63.
- 在丹麥一項大型共納入 14,825 名ADHD患者的流行病學研究，顯示12.4%的患者有自閉症類群障礙症。
  - Atten Defic Hyperact Disord. 2015 Mar;7(1):27-38.
- 2014 年美國全國性調查顯示 ADHD 孩童中，13%有自閉症類群障礙症。
  - J Atten Disord. 2020 Jan;24(1):94-103.

診斷困擾

- 在ADHD患者中，21%施測ADOS是達到ASD診斷的切截分數，30%施測ADI-R是達到ASD診斷的切截分數。
  - Mol Autism. 2016;7:7.

ASD篩檢工具

- 目前關於ASD的篩檢工具，可以分為兩個層次（Filipek et al., 2000; Ozonoff, Goodlin-Jones, & Solomon, 2005）。
  - 層次一篩檢工具的主要用途，是運用在一般社區樣本的篩檢，找出可能高風險或是異常發展的患者；因為這是大樣本的篩檢，通常是家長自填式的量表。

ASD篩檢工具

- 目前關於ASD的篩檢工具，可以分為兩個層次（Filipek et al., 2000; Ozonoff, Goodlin-Jones, & Solomon, 2005）。
  - 層次二篩檢工具的主要用途，是針對在一般社區樣本已經篩檢出來疑似ASD患者，或疑似發展相關問題的臨床樣本，進行比較特定ASD相關症狀的評估，以便有效的區辨ASD與其它發展性疾患；層次二評估工作，通常由具備相當經驗的臨床工作者執行。
  - 一般而言，層次二的篩檢工具，通常會被當作是診斷性的工具來使用。

ASD標準化診斷工具

- 目前學界公認有兩項標準化診斷工具（Ozonoff et al., 2005; Stone, Mcmahon, & Henderson, 2008），分別是：家長晤談的「自閉症診斷會談問卷修訂版（Autism Diagnostic Interview-Revised, ADI-R）（Rutter, Le Couteur, & Lord, 2003）」和直接測試行為表現的「自閉症診斷觀察量表（Autism Diagnostic Observation Schedule, ADOS）（Lord, Rutter, DiLavore, & Risi, 1999）」與「自閉症診斷觀察量表第二版（Autism Diagnostic Observation Schedule 2nd ed., ADOS-2）（Lord et al., 2012）」。
  - ADOS-2針對ASD嬰幼兒多了學步期模組

Prevalence of co-occurring mental health diagnoses in the autism population: a systematic review and meta-analysis

Meng-Chuan Lai, Caroline Kassee*, Richard Besney, Sarah Bonato, Laura Hull, William Mandy, Peter Szatmari, Stephanie H Ameis*

Summary

Background Co-occurring mental health or psychiatric conditions are common in autism, impairing quality of life. Reported prevalences of co-occurring mental health or psychiatric conditions in people with autism range widely. Improved prevalence estimates and identification of moderators are needed to enhance recognition and care, and to guide future research.

Methods In this systematic review and meta-analysis, we searched MEDLINE, Embase, PsycINFO, Scopus, Web of Science, and grey literature for publications between Jan 1, 1993, and Feb 1, 2019, in English or French, that reported original research using an observational design on the prevalence of co-occurring mental health conditions in people with autism and reported confirmed clinical diagnoses of the co-occurring conditions and autism using DSM or ICD criteria. For co-occurring mental health conditions reported with at least 15 datapoints (studies), we assessed risk of bias and we determined pooled estimates of prevalence for different co-occurring conditions in autism using random-effects models, and descriptively compared these with prevalence estimates for the general population from the literature (post hoc). We investigated heterogeneity in prevalence estimates using random-effects meta-regression models. This systematic review is registered with PROSPERO, CRD42018103176.

Findings Of 9746 unique studies identified, 432 were selected for full-text review. 100 studies were eligible for inclusion in our qualitative synthesis, of which 96 were included in our meta-analyses. 11 categories of co-occurring conditions were investigated, of which eight conditions were included in the meta-analyses and three were descriptively synthesised (ie, trauma and stressor-related disorders, substance-related and addictive disorders, and gender dysphoria). From our meta-analyses, we found overall pooled prevalence estimates of 28% (95% CI 25–32) for attention-deficit hyperactivity disorder; 20% (17–23) for anxiety disorders; 13% (9–17) for sleep–wake disorders; 12% (10–15) for disruptive, impulse-control, and conduct disorders; 11% (9–13) for depressive disorders; 9% (7–10) for obsessive-compulsive disorder; 5% (3–6) for bipolar disorders; and 4% (3–5) for schizophrenia spectrum disorders. Estimates in clinical sample-based studies were higher than in population-based and registry-based studies, and these estimates were mostly higher than those in the general population (post hoc). Age, gender, intellectual functioning, and country of study were associated with heterogeneity in prevalence estimates, yet remaining heterogeneity not explained was still substantial (all I^2 >95%).

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See Comment page 794

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	Number of datapoints in meta-analysis*	Autism population sample size (n)	Autism population		General population prevalence (95% CI or SE)	Subgroup moderator analysis				
			Pooled prevalence (95% CI; 95% PI)	I^2 (95% CI; p value†)		Prevalence in population or registry-based studies (95% CI; 95% PI)	Prevalence in clinical sample-based studies (95% CI; 95% PI)	R^2 (QE p value)	I^2 (95% CI)	QM p value
Attention-deficit hyperactivity disorder	89	210 249	28% (25–32; 4–63)	99·65% (99·55–99·85; <0·0001)	7·2% (6·7–7·8; point prevalence, aged ≤18 years)[46]	22% (17–26; 1–55)	34% (29–39; 7–69)	2·05% (<0·0001)	99·64% (99·60–99·84)	0·0004
Anxiety disorders	68	169 829	20% (17–23; 2–48)	99·53% (99·42–99·87; <0·0001)	7·3% (4·8–10·9; current prevalence, across ages)[47]	15% (11–19; 0·5–42)	26% (22–31; 1–56)	0% (<0·0001)	99·54% (99·20–99·85)	0·0002
Depressive disorders	65	162 671	11% (9–13; 0–33)	99·41% (99·39–99·81; <0·0001)	4·7% (4·4–5·0; point prevalence of MDD, across ages)[48]	8% (5–11; 0·01–28)	14% (11–18; 1–38)	0·23% (<0·0001)	99·40% (99·37–99·80)	0·0003
Bipolar and related disorders	38	153 192	5% (3–6; 0–19)	99·50% (99·40–99·82; <0·0001)	0·71% (0·56–0·86) for bipolar I; and 0·50% (0·35–0·64) for bipolar II (1-year prevalence, across ages)[49]	3% (2–5; 0–16)	7% (4–10; 0–24)	0·35% (<0·0001)	99·50% (99·48–99·81)	0·018
Schizophrenia spectrum and psychotic disorders	42	166 627	4% (3–5; 0–14)	99·18% (99·00–99·87; <0·0001)	0·46% (0·41–0·50; 1-year prevalence, across ages)[50]	2% (1–4; 0–11)	7% (4–9; 0–19)	0% (<0·0001)	99·18% (99·01–99·84)	0·0004
Obsessive-compulsive and related disorders	47	53 243	9% (7–10; 1–21)	96·85% (96·75–99·87; <0·0001)	0·7% (0·4–1·1; 1-year prevalence, aged ≥18 years)[51]	4% (2–6; 0–13)	12% (10–15; 3–26)	12·51% (<0·0001)	96·20% (96·17–99·37)	<0·0001
Disruptive, impulse-control, and conduct disorders	50	140 946	12% (10–15; 0–36)	99·52% (99·47–99·90; <0·0001)	8·9% (SE 0·5; 1-year prevalence, aged ≥18 years)[52]	7% (4–10; 0–28)	22% (17–27; 3–50)	0% (<0·0001)	99·53% (99·42–99·88)	<0·0001
Sleep–wake disorders	26	190 963	13% (9–17; 0–43)	99·87% (99·78–99·93; <0·0001)	3·7% (NA; 1-year prevalence, aged ≤18 years)[53]	11% (7–17; 0–39)	16% (8–25; 0–47)	8·52% (<0·0001)	99·85% (99·77–99·91)	0·356

General population prevalence estimates were selected from latest meta-analyses or large-scale population-based studies, as cited. R^2 is the proportion of true heterogeneity that can be explained by the moderator, the QE statistic and its p value show the significance of residual heterogeneity that is unaccounted for by the moderator, and the QM statistic and its p value show whether the moderator is statistically significant in explaining heterogeneity. PI=prediction interval. MDD=major depressive disorder. NA=not available. *Number of datapoints extracted from studies reporting the co-occurring condition. †Cochran's Q test p value.

Table 1: **Pooled estimates of prevalence of co-occurring mental health and psychiatric conditions in autism and general population and moderator analysis by study design**

Lancet Psychiatry 2019; 6: 819–29.

自閉症類群障礙症(Autism spectrum disorder, ASD)

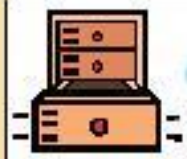
- ASD是僅基於行為所定義的症候群。
- 症狀須於兒童早期出現，但「有可能在社會互動上的挑戰超過其有限的能力時才完全呈現」。

固著行為

固著行為之改善建議

- 一週行程計畫表

  孩子對於臨時變動所導致的無所適從進而大哭大鬧，部分原因是孩子對於日常活動的行程安排不夠瞭解，故可利用白板製作一週行程表，將上下午的活動計畫紀錄在上面，一方面讓孩子「預視」一整天的計畫，另一方面也讓孩子瞭解如果當天計畫有變動時，還有其他機會可達成計畫。對於口語表達或識字能力不佳的孩子，可利用手機拍照或製作圖案卡替代，提供孩子「視覺化」提示往往是最佳理解途徑！

時間 / 星期	星期一	星期二	星期三	星期四	星期五
4點 - 4點9		 換衫		 沖涼	
4點9- 5點半	 睇電視	 聽音樂	 睇電視	 畫畫	 睇電視
5點半- 6點3	 玩電腦	 做功課	 做功課	 做功課	 玩電腦
6點3- 7點	 做功課	 畫畫	 聽音樂	 聽音樂	 做功課
7點 - 8點	 晚飯				
8點 - 8點半	 洗碗	 洗碗	 洗碗	 掃地	 掃地
8點半- 9點3	 睇電視	 玩電腦	 睇電視	 玩電腦	 睇電視

固著行為之改善建議

- 增加問題解決活動

  平常在家與孩子相處時，爸媽可以將日常生活中的事件解構化，以去醫院的這個生活事件做為舉例，把沿路可以使用的各種交通工具製作成小卡，讓孩子理解有許多搭配選項的可能性，並鼓勵孩子搭配不同的交通工具，如星期一三五可以捷運卡配合公車卡，二四六可以計程車卡加上捷運卡等，拓展孩子在日常活動中問題解決的彈性度。

固著行為之改善建議

- 角色扮演

  對於因為固著行為產生的情緒起伏或者行為上的問題，平時在家可利用繪本來說故事，並配合指偶戲或玩偶扮演角色的方式，幫助孩子模擬類似情境，然後以繪本內適合的處理方式來呈現。

Autism spectrum disorder

Pharmacological interventions

Efficacy: inappropriate speech (mixed-rated)	Aripiprazole	**SMD=–0.30 (–0.50 to –0.09)**	PBO/Sham	3/400	L
Efficacy: stereotypic (mixed-rated)	Aripiprazole	**SMD=–0.32 (–0.53 to–0.12)**	PBO/Sham	3/400	M
	Methylphenidate	SMD=–0.18 (–0.46 to 0.11)	PBO/Sham	5/127	M
	Atomoxetine	SMD=–0.16 (–0.50 to 0.18)	PBO/Sham	4/281	L
Efficacy: overall (teacher-rated)	Methylphenidate	SMD=–0.53 (–1.26 to 0.19)	PBO/Sham	2/37	L
Efficacy: social interaction (parent-rated)	Methylphenidate	SMD=–0.21 (–0.6 to 0.18)	PBO/Sham	2/90	L
Efficacy: social interaction (teacher-rated)	Methylphenidate	SMD=–0.51 (–1.07 to 0.05)	PBO/Sham	3/103	L
Efficacy: stereotypic (parent-rated)	Methylphenidate	SMD=–0.34 (–0.84 to 0.17)	PBO/Sham	3/NR	L
Efficacy: social withdrawal (mixed-rated)	Aripiprazole	SMD=–0.13 (–0.33 to 0.08)	PBO/Sham	3/400	M
Response	Risperidone	**OR=2.57 (1.35-4.86)**	PBO/Sham	3/241	L
	Aripiprazole	**RR=2.08 (1.24-3.46)**	PBO/Sham	3/400	L
Aggressive behavior	Risperidone	**SMD=–0.29 (–0.48 to –0.11)**	PBO/Sham	8/878	L
	Aripiprazole	**SMD=–0.24 (–0.40 to –0.08)**	PBO/Sham	8/878	L
	Valproate	SMD=–0.18 (–0.71 to 0.35)	PBO/Sham	2/57	M
	Lurasidone	SMD=–0.05 (–0.27 to 0.18)	PBO/Sham	8/878	L
Acceptability	Risperidone	**RR=0.52 (0.32-0.86)**	PBO/sham	6/379	M
	Antipsychotics	**RR=0.61 (0.48-0.78)**	PBO/Sham	15/1,124	M
	Aripiprazole	**RR=0.67 (0.49-0.90)**	PBO/Sham	5/526	M
	Haloperidol	RR=0.80 (0.24-2.62)	PBO/Sham	2/60	M
	Mood stabilizers	RR=1.27 (0.53-3.06)	PBO/Sham	5/125	M
Tolerability	Risperidone	RR=0.71 (0.17-2.92)	PBO/Sham	5/339	M
	Antipsychotics	RR=0.99 (0.55-1.79)	PBO/Sham	12/1,010	M
	Mood stabilizers	RR=1.13 (0.36-3.53)	PBO/Sham	4/112	M
	Aripiprazole	RR=1.24 (0.57-2.71)	PBO/Sham	4/493	M
Discontinuation due to inefficacy	Mood stabilizers	RR=2.11 (0.36-12.42)	PBO/Sham	3/60	M
Global illness severity	Aripiprazole	**SMD=–0.54 (–0.77 to –0.32)**	PBO/Sham	3/400	M
	Risperidone	**OR=10.5 (4.80-22.60)**	PBO/Sham	6/446	L
	Mood stabilizers	RR=1.55 (0.39-6.21)	PBO/Sham	3/77	L
Relapse	Risperidone	**RR=0.30 (0.13-0.68)**	PBO/Sham	2/56	M

World Psychiatry. 2021 Jun;20(2):244-275.

妥瑞氏症的病程

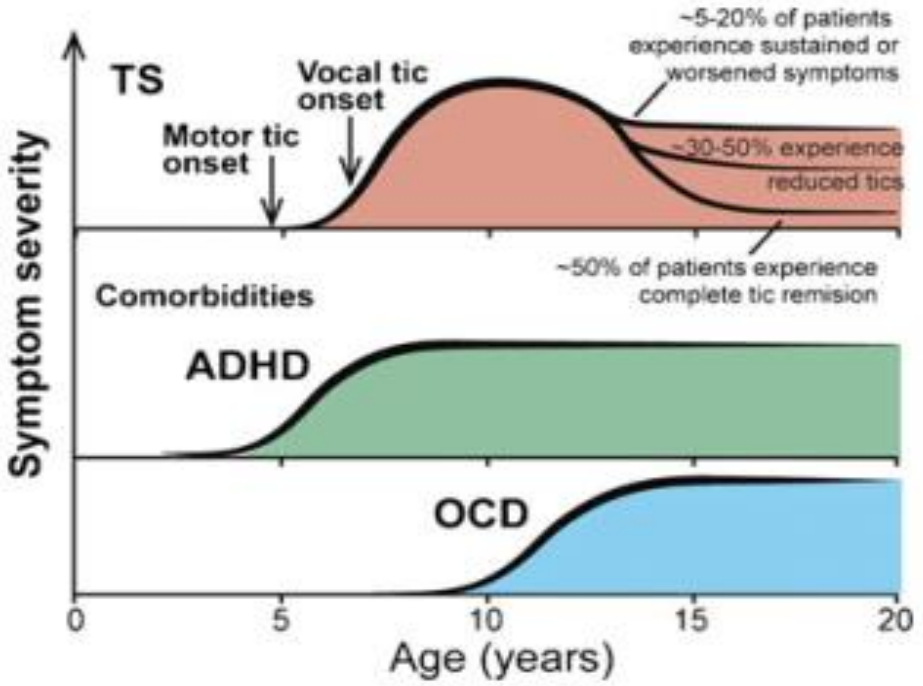
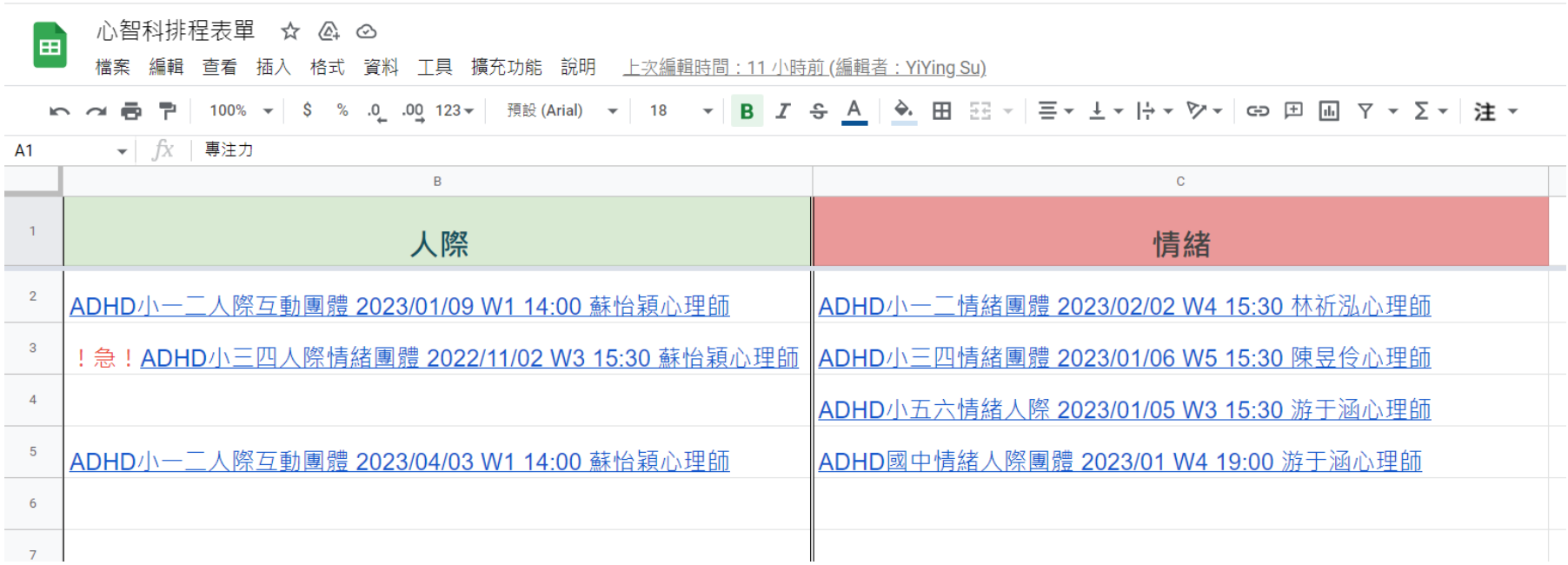


Fig. 1 The clinical course of TS and coexisting disorders. The *vertical axis* represents the approximate "amount" the disorder affects a TS patient. TS symptom severity peaks around age 11 years, and ~50 % of patients experience complete or near to complete tic remission. Thirty to 50 % experience significantly reduced symptom severity, whereas 5–10 % of patients will experience sustained or worsened symptoms

Curr Neurol Neurosci Rep. 2016 Apr;16(4):37.

同時患有 ADHD、行為規範障礙症和攻擊行為

- 2018加拿大治療指引
  - 雖然藥物通常可有效改善ADHD症狀和衝動性攻擊行為，但個案可從多模式的治療(multimodal treatment)獲得更大的幫助。
  - 藥物為多模式治療中的一部分。
  - 通常還需要包括個人和家庭介入模式的心理社會治療。



心智科排程表單

檔案 編輯 查看 插入 格式 資料 工具 擴充功能 說明 上次編輯時間：11 小時前 (編輯者：YiYing Su)

100% $ % .0 .00 123 預設 (Arial) 18

A1 專注力

	B	C
1	人際	情緒
2	ADHD小一二人際互動團體 2023/01/09 W1 14:00 蘇怡穎心理師	ADHD小一二情緒團體 2023/02/02 W4 15:30 林祈泓心理師
3	！急！ADHD小三四人際情緒團體 2022/11/02 W3 15:30 蘇怡穎心理師	ADHD小三四情緒團體 2023/01/06 W5 15:30 陳昱伶心理師
4		ADHD小五六情緒人際 2023/01/05 W3 15:30 游于涵心理師
5	ADHD小一二人際互動團體 2023/04/03 W1 14:00 蘇怡穎心理師	ADHD國中情緒人際團體 2023/01 W4 19:00 游于涵心理師
6		
7		

同時患有 ADHD、行為規範障礙症和攻擊行為

- 加拿大治療指引
  - 建議以中樞神經活化劑作為治療ADHD共病破壞性行為疾患之第一線用藥。

Gorman DA, Gardner DM, Murphy AL, Feldman M, Bélanger, SA, Steele MM, et al. (2015). Canadian guidelines on pharmacotherapy for disruptive and aggressive behaviour in children and adolescents with attention-deficit hyperactivity disorder, oppositional defiant disorder, or conduct disorder. Can J Psychiatry 60:62–76.

Table 3 Summary of recommendations: pharmacotherapy for oppositional behaviour, conduct problems, and aggression in children and adolescents with ADHD, ODD, or CD

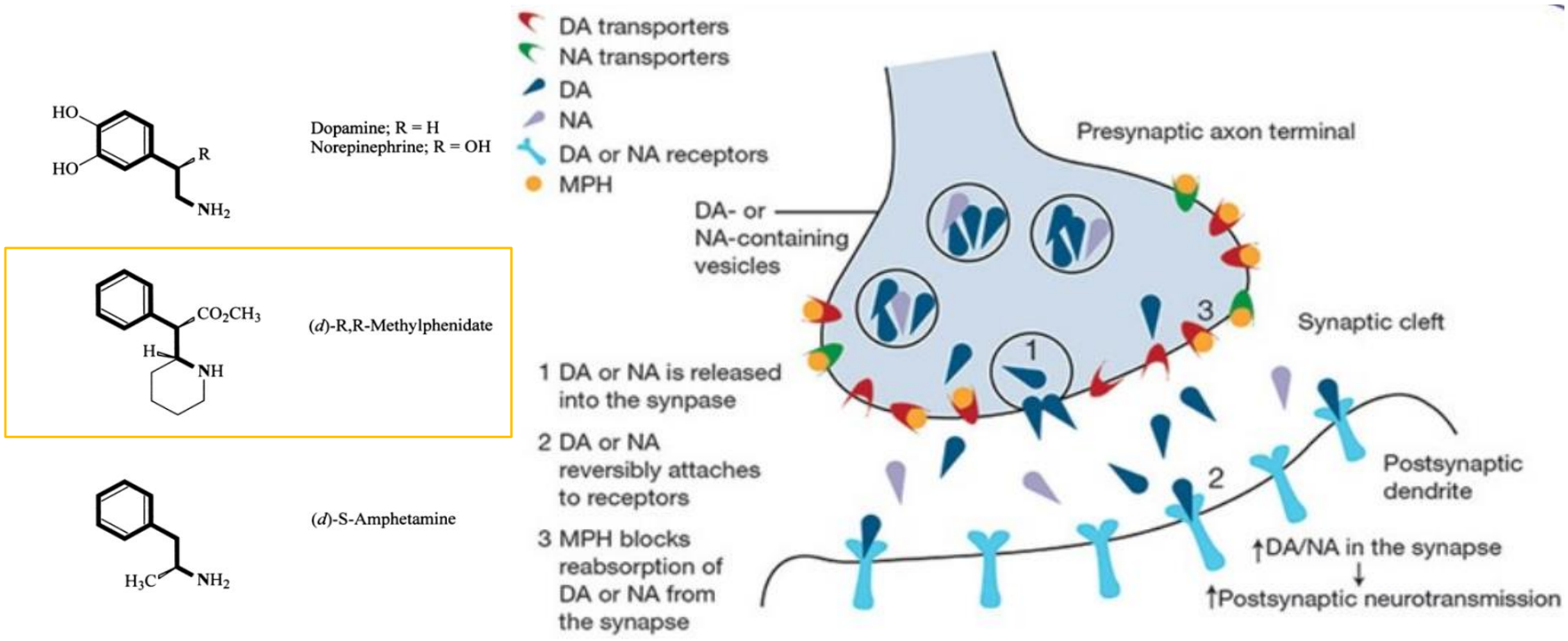
Medication	Population	Outcome	Magnitude of benefit and side effect burden	Recommendation (strength, direction)	Dosing information
Psychostimulants	Children and adolescents with ADHD, with or without ODD or CD	Oppositional behaviour, conduct problems, and aggression	Benefit: moderate to large Adverse effects: minor Quality of evidence: high	Strong, in favour (↑↑)	Dosing varies by psychostimulant formulation; consult individual product monographs for dosing recommendations
Atomoxetine	Children and adolescents with ADHD, with or without ODD or CD	Oppositional behaviour	Benefit: small Adverse effects: minor Quality of evidence: high	Conditional, in favour (↑?)	Doses used in included studies: 0.5 to 2.0 mg/kg/day (up to a maximum of 90.0 mg/day) Canadian product monograph[57] recommended dosing for the treatment of ADHD: titrate in 3 steps up to a target dose of 1.2 mg/kg/day, not to exceed 80.0 mg/day; maximum dose is 1.4 mg/kg/day, not to exceed 100.0 mg/day
Guanfacine	Children and adolescents with ADHD, with or without ODD	Oppositional behaviour	Benefit: small to moderate Adverse effects: moderate Quality of evidence: moderate	Conditional, in favour (↑?)	Doses (extended-release formulation) used in included studies: 1.0 to 4.0 mg/day (monotherapy or adjunct to a psychostimulant) Canadian product monograph (extended-release formulation)[34] recommended dosing for the treatment of ADHD: in children 6 to 12 years and ≥25 kg, start 1 mg/day and increase in increments of no more than 1 mg/week up to a maximum of 4 mg/day (monotherapy or adjunctive therapy)
Clonidine	Children and adolescents with ADHD, with or without ODD or CD	Oppositional behaviour and conduct problems	Benefit: small Adverse effects: moderate Quality of evidence: very low	Conditional, in favour (↑?)	Doses (immediate- or extended-release formulation) used in included studies: 0.1 to 0.6 mg/day (monotherapy or adjunct to a psychostimulant) Canadian product monograph (immediate-release formulation)[58] recommended dosing: safety and efficacy in children not established
Risperidone	Children and adolescents with average IQ and ODD or CD, with or without ADHD	Disruptive and aggressive behaviour	Benefit: moderate Adverse effects: major Quality of evidence: high	Conditional, in favour (↑?)	Doses used in included studies: Monotherapy: 0.5 to 1.5 mg/day Adjunct to a psychostimulant: 1.0 to 2.5 mg/day Canadian product monograph[59] recommended dosing: safety and efficacy in children <18 years not established and use is not recommended
Risperidone	Children and adolescents with low IQ and ODD or CD, with or without ADHD	Conduct problems and aggression	Benefit: moderate to large Adverse effects: major Quality of evidence: moderate	Conditional, in favour (↑?)	Doses used in included studies: 0.5 to 4.0 mg/day Canadian product monograph[59] recommended dosing: safety and efficacy in children <18 years not established and use is not recommended
Quetiapine	Adolescents with CD, with or without ADHD	Conduct problems	Benefit: large Adverse effects: major Quality of evidence: very low	Conditional, against (↓?)	Doses (immediate-release formulation) used in included study: 200 to 600 mg/day Canadian product monograph[60] recommended dosing: not recommended for use in patients under 18 years

Canadian guidelines on pharmacotherapy for disruptive and aggressive behaviour in children and adolescents with attention-deficit hyperactivity disorder, oppositional defiant disorder, or conduct disorder. Can J Psychiatry 60:62–76.

Medication	Population	Outcome	Magnitude of benefit and side effect burden	Recommendation (strength, direction)
Psychostimulants	Children and adolescents with ADHD, with or without ODD or CD	Oppositional behaviour, conduct problems, and aggression	Benefit: moderate to large Adverse effects: minor Quality of evidence: high	Strong, in favour (↑↑)

Methylphenidate (MPH) 作用機轉

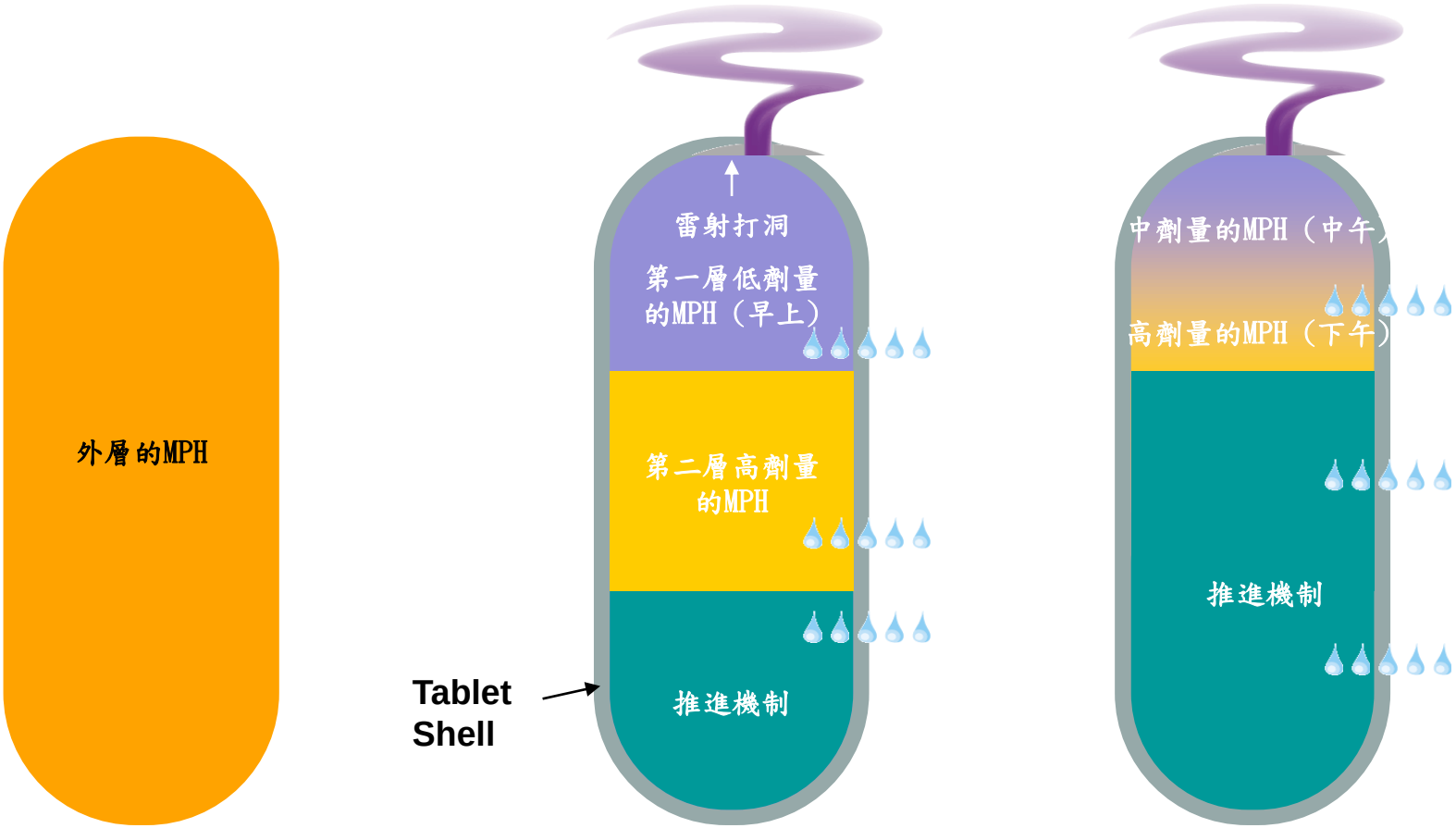
- Methylphenidate HCl (MPH)是中樞神經系統興奮劑，可阻斷正腎上腺素和多巴胺的再吸收進入突觸前神經元，增加單胺類於神經元外空間的釋出。



專思達

- (Osmotic Release Oral System；**OROS**)
- 外層包覆22%MPH，服用30分鐘後發生作用，膠囊內層分三部分，吸水膨脹推進器、高濃度MPH、低濃度MPH。外層溶解後，水分透過可控制滲透速度的半透膜，推進器吸水膨脹，穩定釋出MPH形成上升行血中濃度曲線。

OROS ®獨特設計劑型 - CONCERTA®



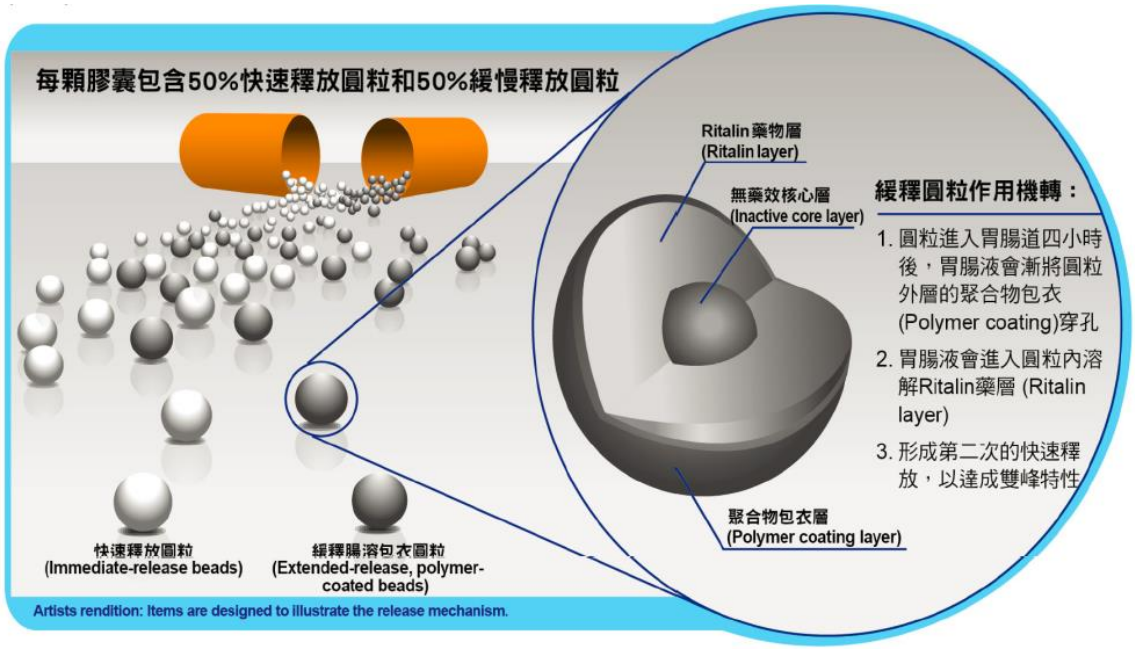
利長能

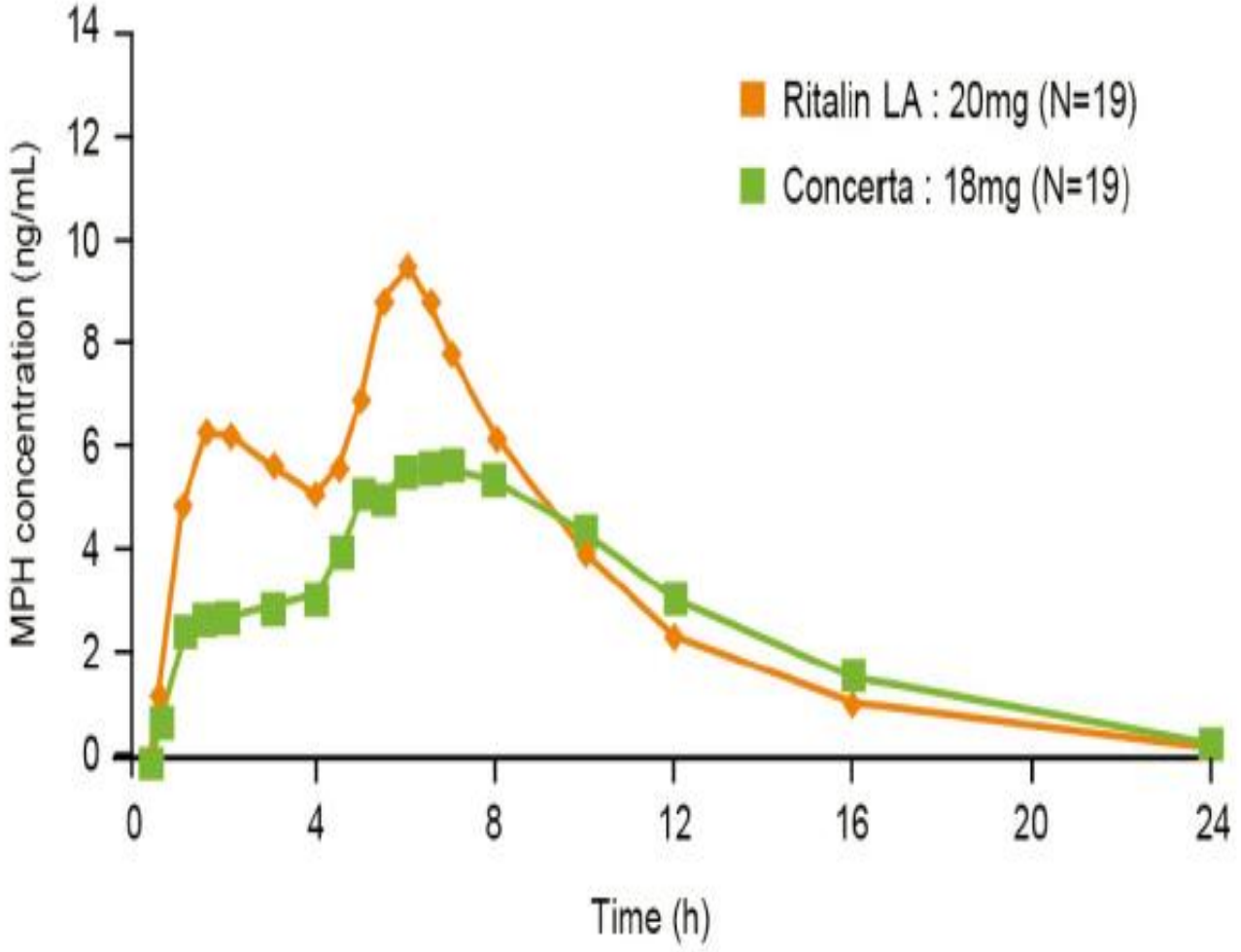
- (Spheroidal Oral Drug Absorption System；**SODAS**)
- 每個膠囊所充填的圓粒中，一半的劑量為快速釋放的圓粒，另一半劑量為腸溶包衣的延遲釋放圓粒，因此能在快速釋放methylphenidate後，接著緩慢釋出methylphenidate。

SODAS™專利藥物吸收系統

雙峰特性

- 口服圓粒藥物吸收系統 (SODAS: Spheroidal Oral Drug Absorption System)
  - 快速作用: 膠囊包含50%快速釋放圓粒，確保服藥後1小時內發揮療效
  - 持續釋放: 另外50%緩慢釋放圓粒會在服藥後4小時開始作用





1. Markowits JS et al. *Clin Pharmacokinet*, 2003; 42(4): 393-401
2. Brams M, et al. *Postgraduate Medicine*, 2008;120(3):69-88.

Quality By Design 思有得

ORADUR™ Technology of Methydur®SR

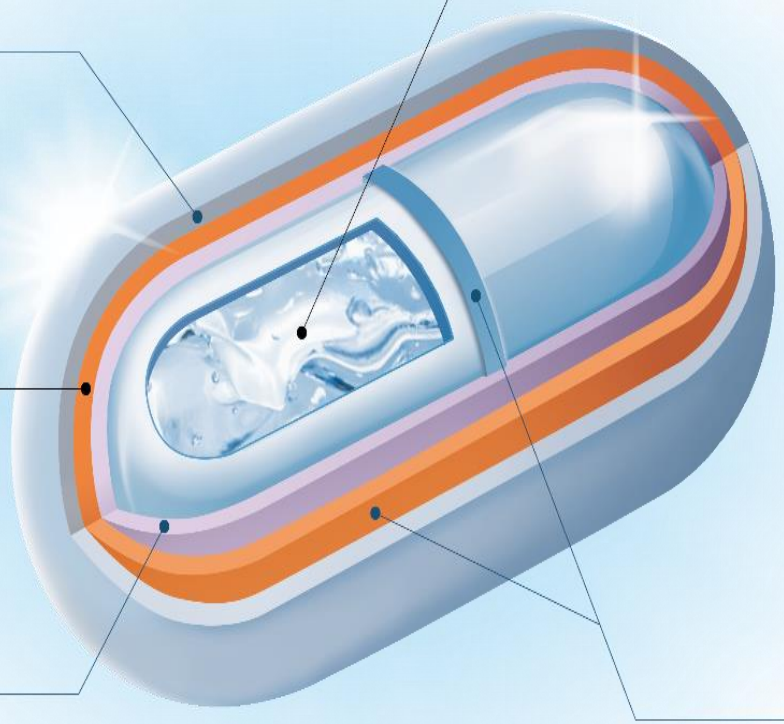
長效 MPH (82%)

賦型劑 SAIB 為高黏稠度控釋基質，
可提供 MPH 持續釋放長達 12 小時

第三層：外層

不同顏色以區分劑量

- 44 毫克 – 白色
- 33 毫克 – 灰色
- 22 毫克 – 黃色



第二層：速效 MPH (18%)

速效 MPH 可被立即釋放進入
血液以迅速緩解症狀

第一層：保護塗層

延緩長效 MPH 的釋放

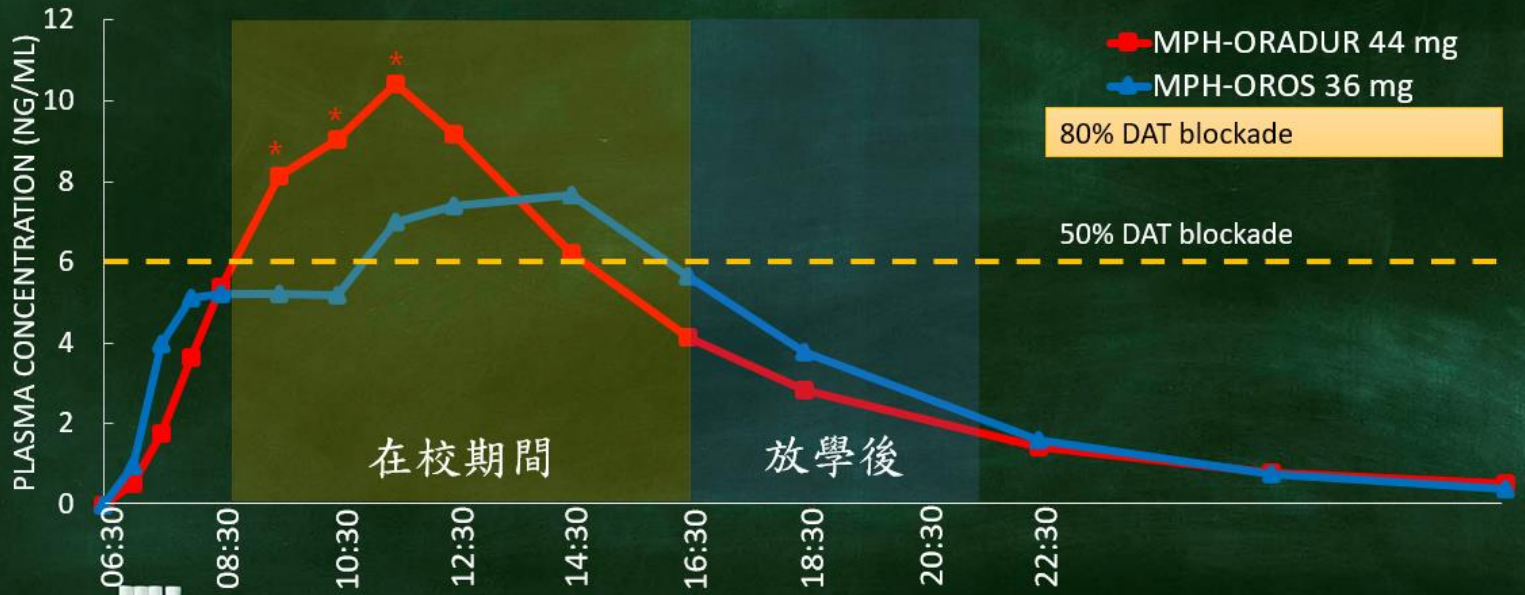
HPMC

以 HPMC 黏合膠囊防止溢漏並
作為速效 MPH 塗層的黏合劑

ER：extended-release，長效；HPMC，羥丙基甲基纖維素；IR：immediate-release，速效；MPH，哌甲酯；SAIB，蔗糖乙酸酯異丁酸酯。

Methydur® SR Phase I Study:
主要療效指標：藥物動力學比較

Methydur® SR 44毫克相較MPH-OROS® 36毫克，呈現**更快的吸收速率**及**較大程度的吸收**。



*: Significant difference presents between MPH-ORADUR 44 mg and MPH-OROS 36 mg. ($p<0.05$); Orient Pharma. Clinical Study Report (Protocol No. PK NDA-T375-1206).

JAMA Pediatrics
View Article

JAMA Pediatr. 2019 Jul; 173(7): 630–639.
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PMCID: PMC6547117
PMID: 31135892

Evaluation of Methylphenidate Safety and Maximum-Dose Titration Rationale in Attention-Deficit/Hyperactivity Disorder

A Meta-analysis

Cellina Ching, MBBS,[1] Guy D. Eslick, DrPH, PhD,[2] and Alison S. Poulton, MD, MB, BChir[3]

Results

A total of 11 randomized clinical trials and 38 cohort studies were analyzed. The randomized clinical trials involved 1304 participants treated with methylphenidate and 887 controls; the 38 cohort studies included 5524 participants. Maximum doses of methylphenidate ranged from 0.8 to 1.8 mg/kg/d. Some studies detailed their method of titration, including starting dose, titration interval, increment dose, and maximum dose. Not all of these studies reported justification for the chosen dose range. Common adverse effects of methylphenidate included insomnia (odds ratio, 4.66; 95% CI, 1.99-10.92; $P < .001$), anorexia (5.11 higher than for those who took placebo; 95% CI, 1.99-13.14; $P < .001$), abdominal pain (1.9 times more likely; 95% CI, 0.77-4.77; $P = .16$), and headache (14% of participants; 95% CI, 10%-20%; $P < .001$).

Conclusions and Relevance

A range of maximum doses for methylphenidate was recommended in clinical studies; no discernable scientific justification for any particular dose was given. Reports of life-threatening adverse events were absent; further studies of the efficacy, tolerability, and safety of methylphenidate titrated purely on clinical grounds, without reference to any set maximum dose, are needed.

失眠　食慾不振　腹痛　頭痛

Neuroscience and Biobehavioral Reviews 120 (2021) 509–525

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Neuroscience and Biobehavioral Reviews

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Review article

Long term methylphenidate exposure and growth in children and adolescents with ADHD. A systematic review and meta-analysis

Sara Carucci [a,b,*], Carla Balia [a,b], Antonella Gagliano [a,b], Angelico Lampis [c], Jan K. Buitelaar [d], Marina Danckaerts [e,f], Ralf W. Dittmann [g], Peter Garas [h], Chris Hollis [i,y,z], Sarah Inglis [j], Kerstin Konrad [k,l], Hanna Kovshoff [m], Elizabeth B. Liddle [i], Suzanne McCarthy [n], Peter Nagy [o], Pietro Panei [p], Roberta Romaniello [a], Tatiana Usala [q], Ian C.K. Wong [r,s], Tobias Banaschewski [g], Edmund Sonuga-Barke [t,u], David Coghill [v,w,x], Alessandro Zuddas [a,b], the ADDUCE Consortium

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[r] Centre for Paediatric Pharmacy Research, Research Department of Practice and Policy, UCL School of Pharmacy, London, UK

Eighteen studies (ADHD n = 4868) were included in the meta-analysis.

Neurosci Biobehav Rev . 2021 Jan;120:509-525.

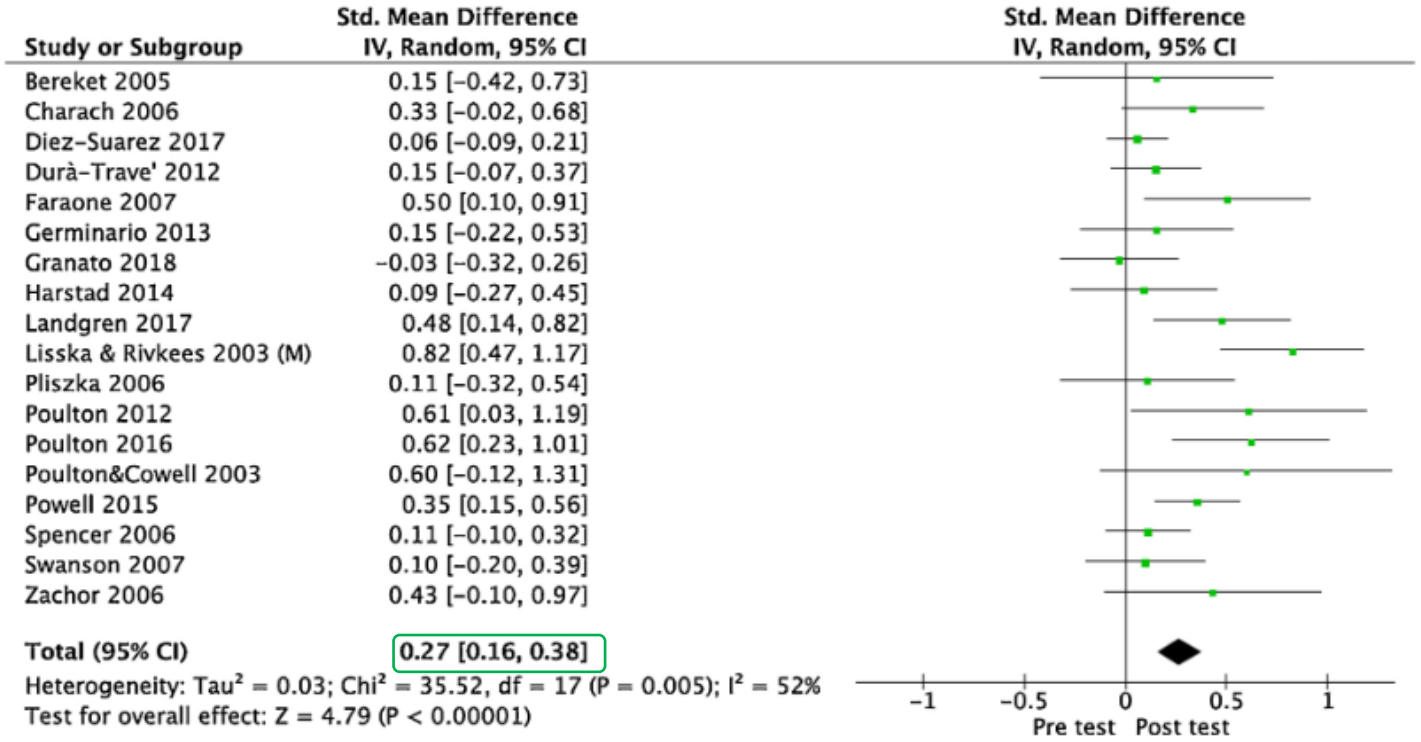


Fig. 1. Forest plot with pre-post SMD (=ES) and homogeneity statistics for meta-analysis of height (MPH and AMP).
Pre–post within-group design analyses for height with stimulant therapy (methylphenidate and amphetamine, when it was not possible to distinguish between the two) at the last follow up assessment.

在開始治療後的12個月，甚至24個月會對身高造成影響；
成長會在30-42 個月內正常。

Neurosci Biobehav Rev . 2021 Jan;120:509-525.

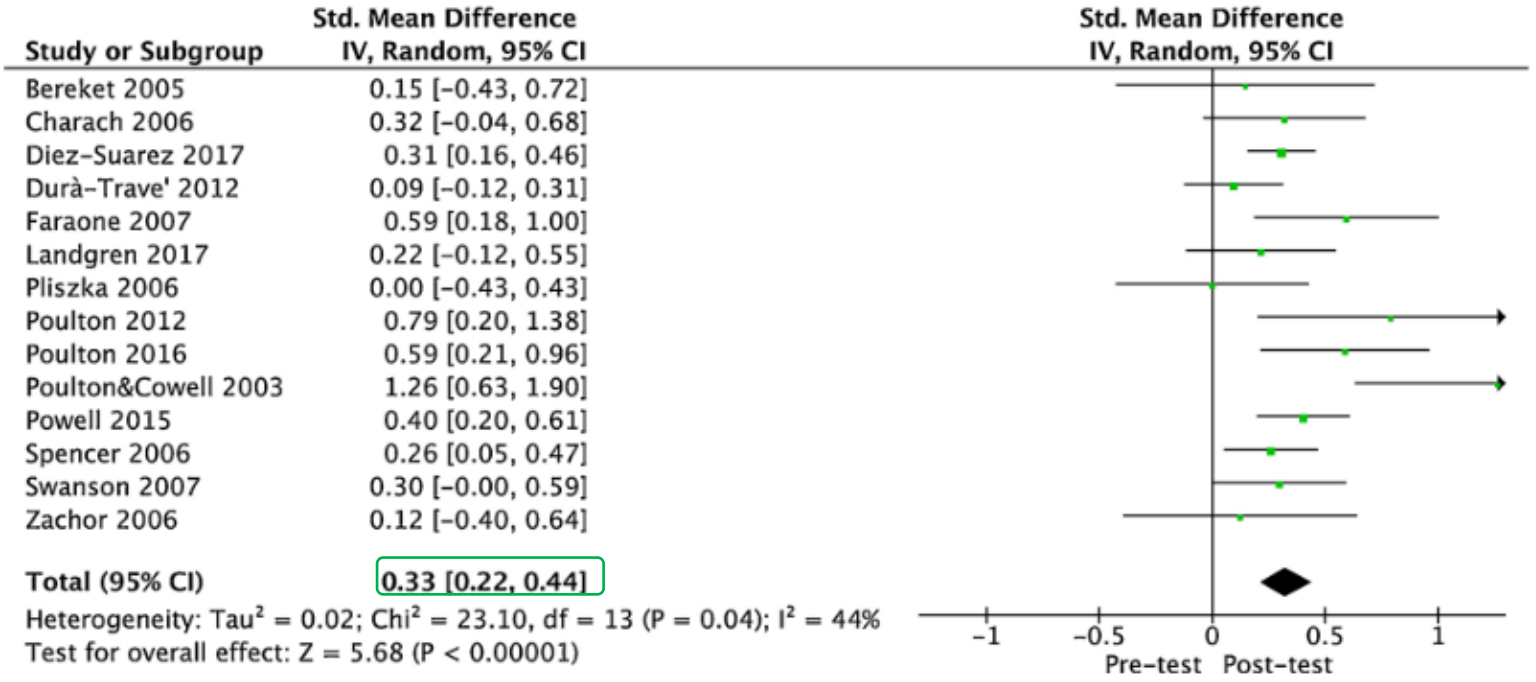


Fig. 2. Forest plot with pre-post SMD (=ES) and homogeneity statistics for meta-analysis of weight (MPH and AMP).
Pre–post within-group design analyses for weight with stimulant therapy (methylphenidate and amphetamine, when it was not possible to distinguish between the two) at the last follow up assessment.

MPH 對體重的最大影響通常在開始治療的 6 個月後，通常在 18-24 個月內緩解。

Neurosci Biobehav Rev . 2021 Jan;120:509-525.

藥物副作用

- 認知毒性
- 反彈現象
- 心血管作用
  - 在中樞神經活化劑的藥物治療下，平均升高(≤5 mmHg)和心跳(≤ 10 次/分鐘)。
  - 5-15%的個案其血壓或心跳的增加超過預期。
    - 至少一次超過絕對閾值（例如，SBP ≥120 mmHg、DBP ≥80 mmHg）和/或從基線變化（例如，SBP 增加 ≥20 mmHg、DBP ≥10 mmHg、HR > 25 次/分鐘）

融合教育中之實作

摘錄自

【ADHD校園親師手冊】

出版日期:2017年09月

總策畫:陳錦宏(長庚大學醫學系教授/嘉義長庚醫院精神科主治醫師)

作者群:王心怡、李翊溱、林阿英、洪金瓶、陳茉莉、陳錦宏、張婉貞、黃圓媛、黑薩、潘秀偵、謝依璇、鄧媽(依筆畫序)

審定:王雅甄(草屯療養院兒童精神科主治醫師)

設置情緒冷靜區

- 位置設置
  - 教室內不靠走道的後方角落。
  - 鋪上地墊、放上數個填充性海綿玩具。
  - 一開學就須對全班宣導當負向情緒來時，教室內有個冷靜區可以讓其抒發情緒。
  - 幫冷靜區取名。
  - 說明後，可以點名其他學生回答此區域的功用何在，並將ADHD的學生排在第二或第三順位抽問，以避免針對性與標籤化，並確認是否ADHD學生明確瞭解此區之功用。

平靜後再處理

- 突然發脾氣，請先帶離現場，再安撫情緒。
- 正確辨識、反映、同理孩子的情緒狀態。
- 平時可多與其討論情緒抒發的方式。
  - 如：捏球、撕紙、搥打軟枕、聽音樂、運動、深呼吸、默數。

- **怎樣做讓自己心情好一點**
  - 這個需要平常就先想好「做什麼事情是讓自己舒服平靜的」，放在心裡的角落，變成個人的情緒急救箱。可以是：收集鼓勵自己的小卡片、自己喜歡的貓狗照片、自己喜歡的味道手帕、小熊熊娃娃、心愛的摺紙、喜歡的小車車…等。
  - 當覺察到自己負面情緒出來時，除了試著以不同角度想，不好的心情需要被轉移一下。此時可以試著做些讓自己心情舒坦愉快的事，例如，聽聽音樂、唱歌、找人抱怨一下、離開現場、吃吃東西…等。

- **發生了什麼事**
  - 靜下來聽孩子慢慢說。先不要急著否定或是下判斷。
  - 這時孩子說出的想法通常是負面、不堪入耳的、從未知道的，可以藉由這個機會了解他們的內在想法，因此請耐著性子聽完，不要急著回應或打斷他，並注意自己的臉上表情（最怕不屑的表情）。

  - 現在的目標是：讓孩子覺察到「腦袋裡的想法」是什麼。

- **想法轉個彎**
  - 這需要在氣氛好、心情佳、沒有威脅的時候練習喔！因為很生氣的孩子通常會抗拒去思考，他們會認為自己沒有錯，錯的都是別人，這時不用硬碰硬去想要他們「馬上」轉變，因為冷卻心情需要時間。等待好時機再引導他們思考下一次可以怎麼想更好。

- 從不同的事件角度多提問，例如：
  - 每個同學喜歡的人都不一樣，他不喜歡你，不代表你不好，是不是？
  - 你有聽過生氣是拿別人的錯誤懲罰自己嗎？
  - 你有想過先去做自己喜歡的事情嗎？

- 「提問題引導孩子去思考」是重要的解決方式之一。因為孩子容易卡在自己負面的思考、或是會以自己片面的看法而錯誤地去解讀別人的行為和做法。


老師問我，每個同學都排擠我嗎？
老師說怎麼想可以安慰自己不那麼生氣？
老師說我自己有要改的地方嗎？
他們不跟我做朋友沒關係，我去做我的事情！
不是每個同學都排擠我呀！25號沒有排擠我！
我常常會生氣，口氣不好。

告訴他(她)該怎麼做

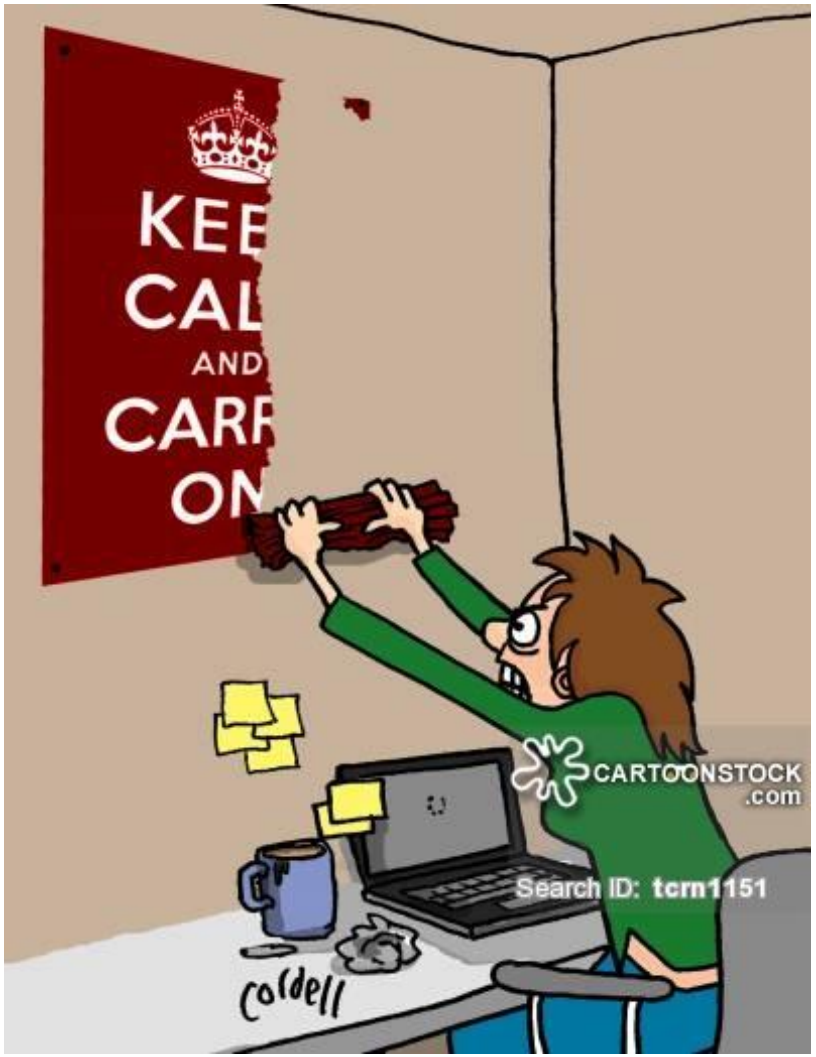
- ADHD學生處理事情的策略通常不多，如果家庭功能不強，學生容易用不當的方式處理事情。
- 待學生情緒平穩後，正是老師教導解決衝突策略的最佳時機。
- 大聲斥責往往造成學生學習的反效果，並導致師生關係緊張。
- 針對學生問題解決能力不足之處加以教導，讓學生學習其他較佳的解決策略，提升思考問題解決的面向。
- 情境模擬。

我們常這樣想……

- 你又怎麼了!
- 你現在到底是怎樣!
- 你想怎樣!
- 怎麼又是你!
- 這什麼態度!

- **這些，都會影響接下來的互動**

務必冷靜!!!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以情緒為基礎的介入

- 幫助孩子讓情緒腦冷靜
- 透視行為
- 停止說教
- 避免威脅
- 避免肢體碰觸
- 減少情緒化的反應
- 給予安全的空間、足夠的時間
- 數數、呼吸、轉移注意力的活動：需平日解釋、練習

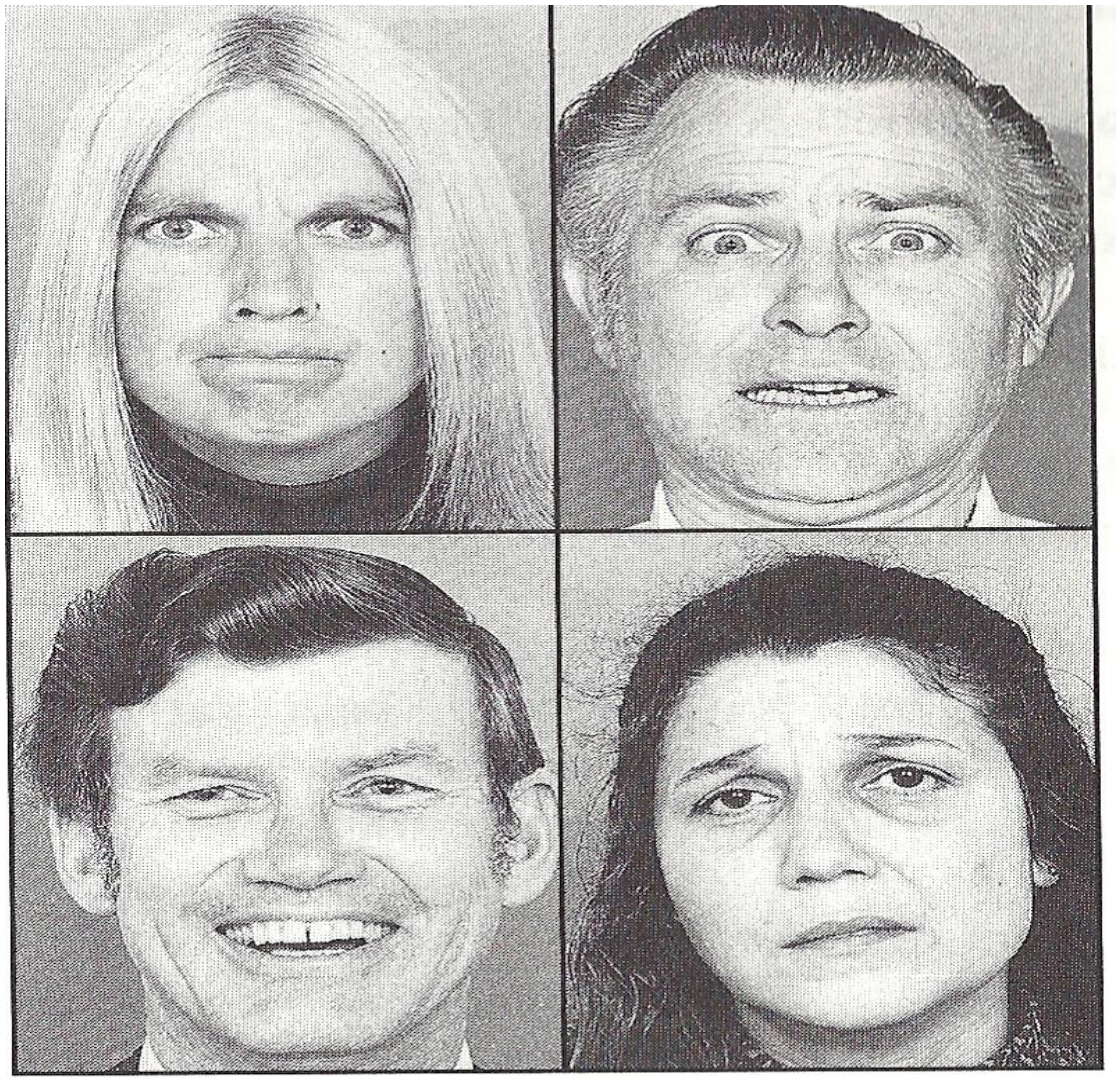
平常相處其實更重要

- 開放的態度
- 彼此尊重、不要有意無意的提及
- 給予適度的情緒空間
- 就事論事
- 多關注正向行為
- **鼓勵要在人前、責罰要在人後**
- 培養彼此的正向關係、團體任務
- 事先告知、做紀錄、找出地雷點

教導情緒辨識

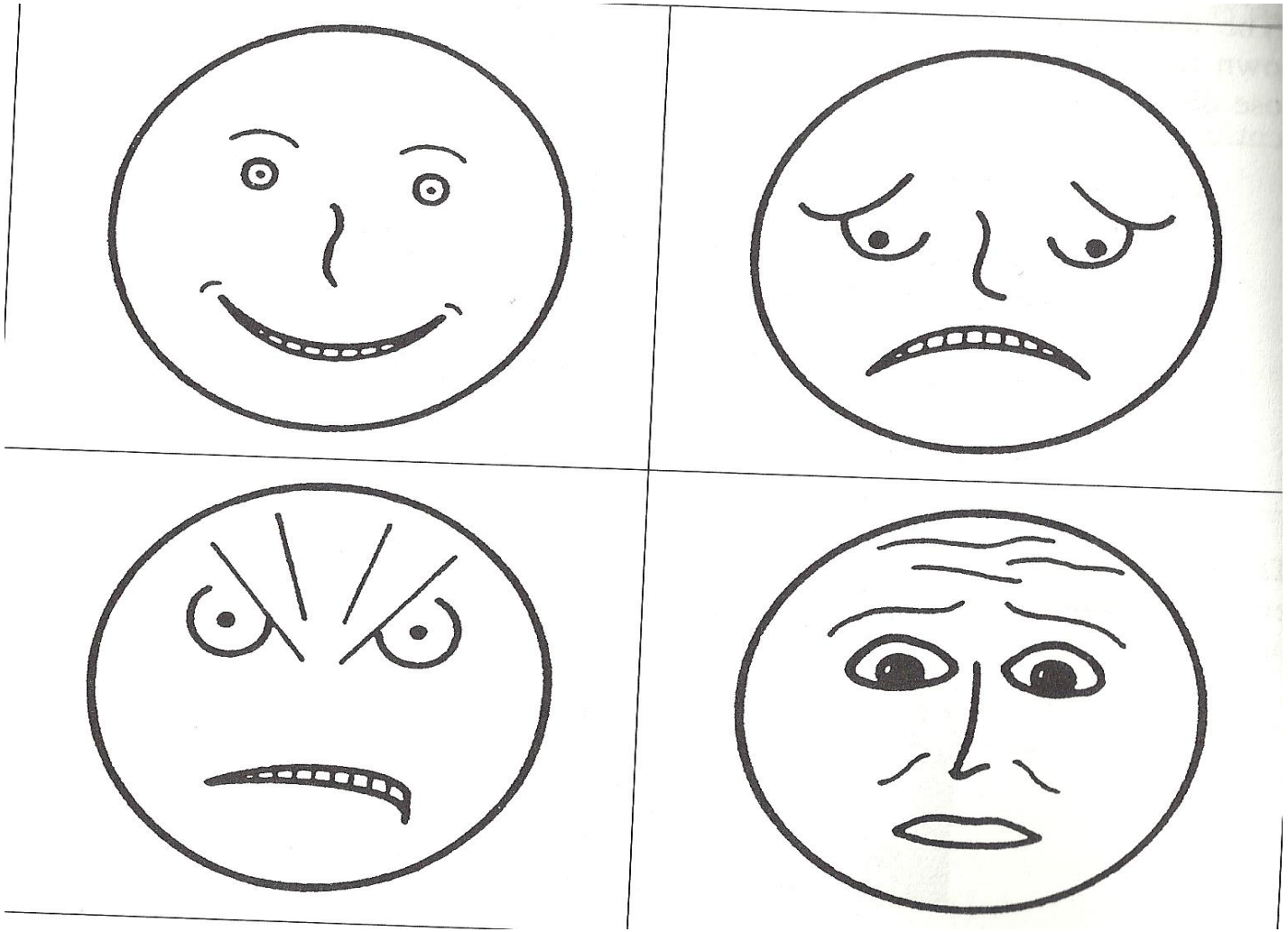
- 情緒理解的五個階段
  - 階段一　運用照片識別臉部表情
  - 階段二　運用圖片識別情緒
  - 階段三　辨識以情境為基礎的情緒
  - 階段四　辨識以欲望為基礎的情緒
  - 階段五　辨識以想法為基礎的情緒

階段一 運用照片識別臉部表情



喜、怒、哀、懼

階段二 運用圖片識別臉部表情



階段三 辨識以情境為基礎的情緒

害怕的情境

教師：向孩童描述圖片內容，並詢問孩童故事主角人物的感受，讓孩童說出或指出下列的臉部表情圖片來回答。

圖片 1：一隻大狗沿路追著 Dan。

情緒問題：當大狗追著 Dan 時，他感覺怎麼樣？

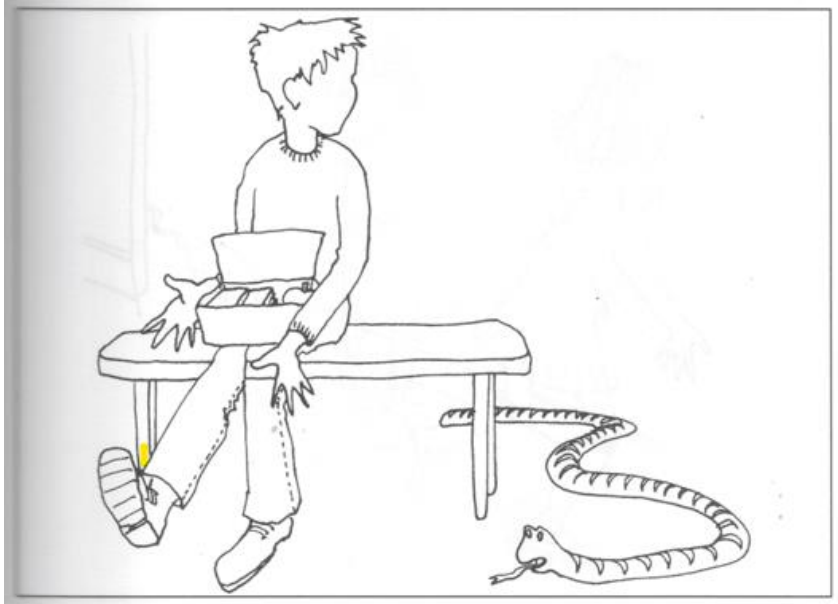
提示：他會覺得高興／難過／生氣／害怕？

判斷問題：他為什麼會覺得高興／難過／生氣／害怕？

階段三 辨識以情境為基礎的情緒

教師：向孩童描述圖片內容，並詢問孩童故事主角人物的感受，讓孩童說出或指出下列的臉部表情圖片來回答。

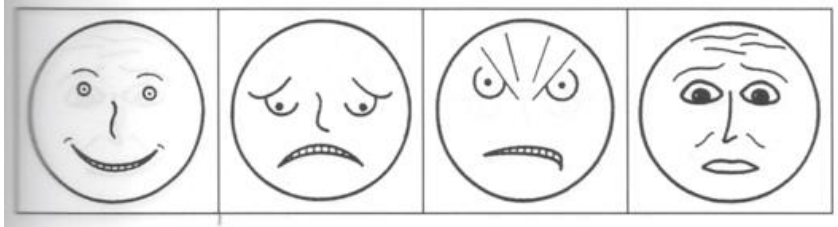
圖片 2：一隻蛇滑動到 Harry 的腳邊。



情緒問題：當 Harry 發現一隻蛇滑動到他的腳邊時，他感覺怎麼樣？

提示：他會覺得高興／難過／生氣／害怕？

判斷問題：他為什麼會覺得高興／難過／生氣／害怕？



階段三 辨識以情境為基礎的情緒

生氣的情境

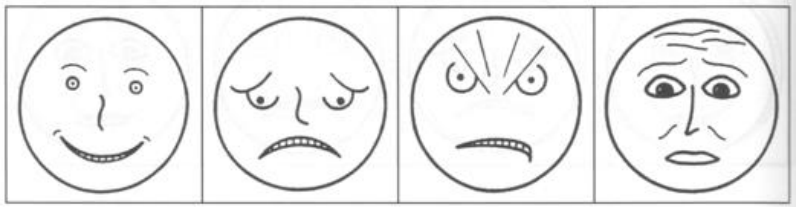
教師：向孩童描述圖片內容，並詢問孩童故事主角人物的感受，讓孩童說出或指出下列的臉部表情圖片來回答。

圖片 37：Neil 在 Claire 的圖畫上亂畫。

情緒問題：當 Neil 在 Claire 的圖畫上亂畫時，Claire 感覺怎麼樣？

提示：她會覺得高興／難過／生氣／害怕？

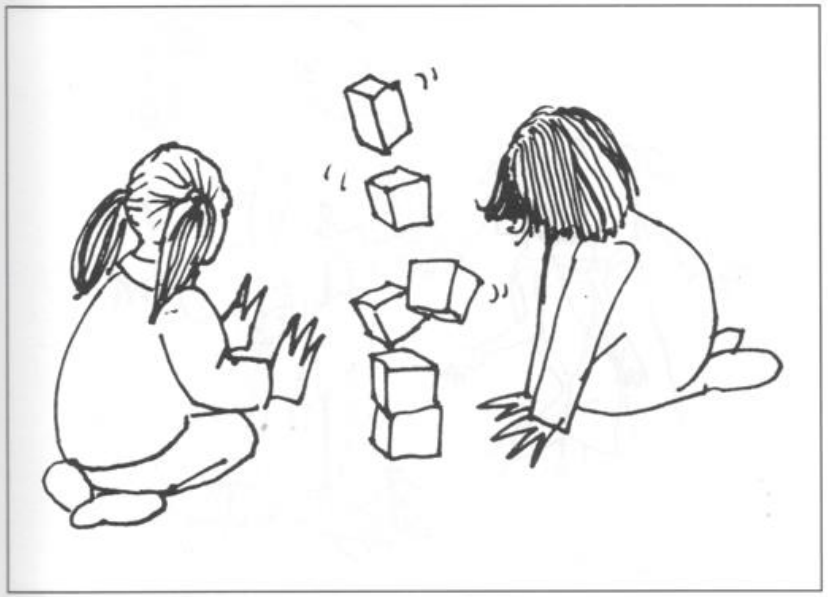
判斷問題：她為什麼會覺得高興／難過／生氣／害怕？



階段三 辨識以情境為基礎的情緒

教師：向孩童描述圖片內容，並詢問孩童故事主角人物的感受，讓孩童說出或指出下列的臉部表情圖片來回答。

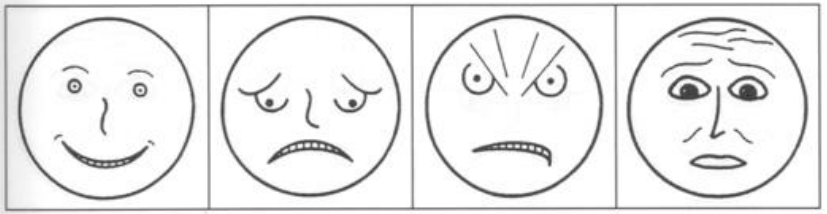
圖片 38：Melanie 把 Angela 堆起來的積木給推倒。

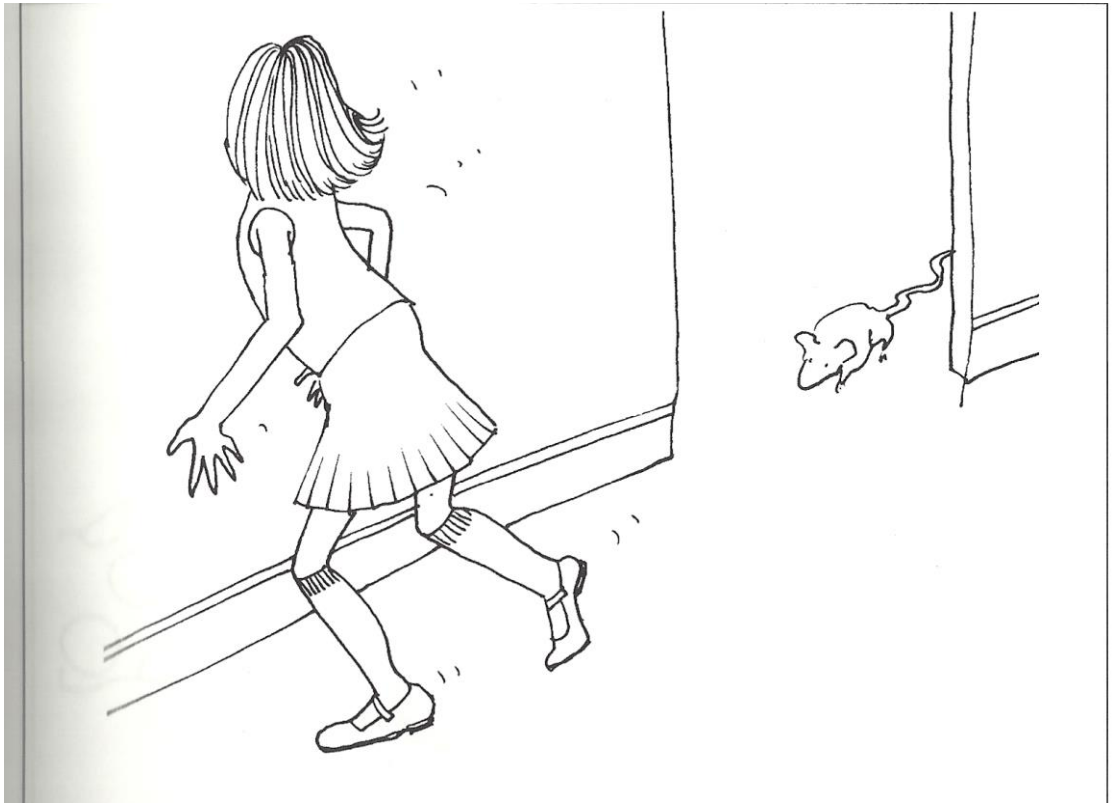


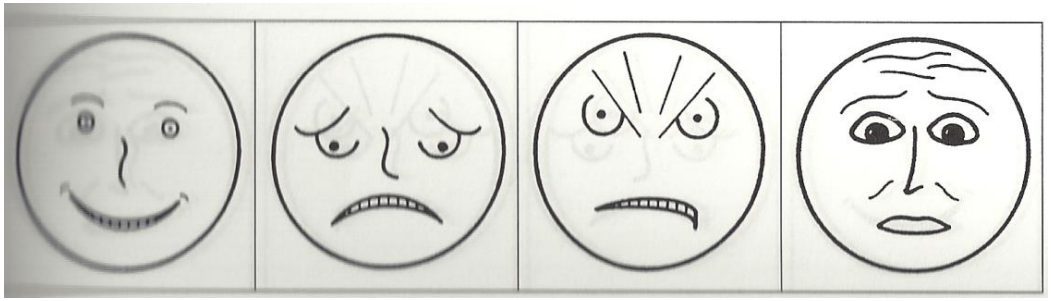
情緒問題：當 Melanie 推倒 Angela 的積木時，Angela 感覺怎麼樣？

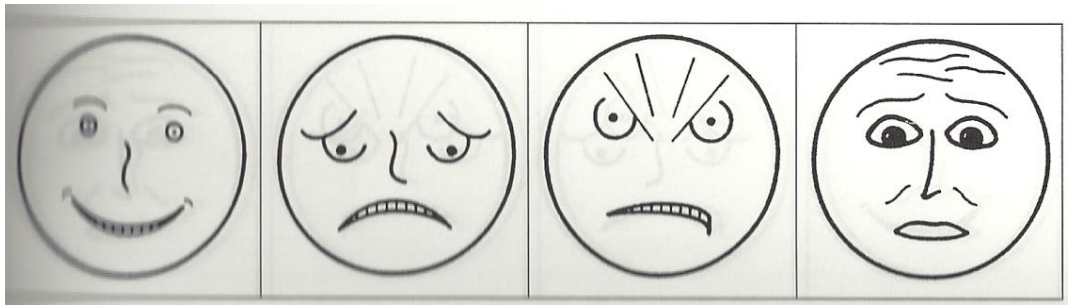
提示：她會覺得高興／難過／生氣／害怕？

判斷問題：她為什麼會覺得高興／難過／生氣／害怕？







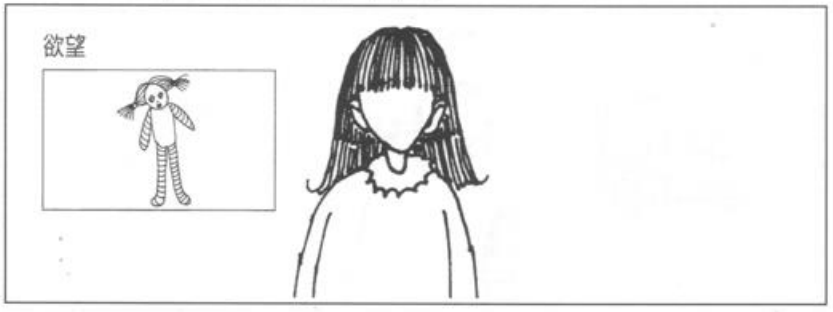


階段四 辨識以慾望為基礎的情緒

教師：先告訴孩童故事主角人物的欲望是什麼，再描述故事的結果。先確認孩童是否瞭解故事主角人物的欲望，再讓孩童說出故事主角人物的感受，或指出下方的臉部表情圖片。

這是 Betty。這張圖告訴我們 Betty 想要什麼。

欲望 24B：Betty 想要洋娃娃當作生日禮物。

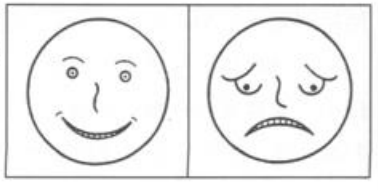


結果 24B：Betty 的奶奶送她一隻小熊玩偶當作生日禮物。

欲望問題：Betty 想要什麼？

提示：看！這張圖告訴你 Betty 想要什麼。

情緒問題：當 Betty 的奶奶送她一隻小熊玩偶當作生日禮物時，她感覺怎麼樣？



提示：她會覺得高興／難過？

判斷問題：她為什麼會覺得高興／難過？

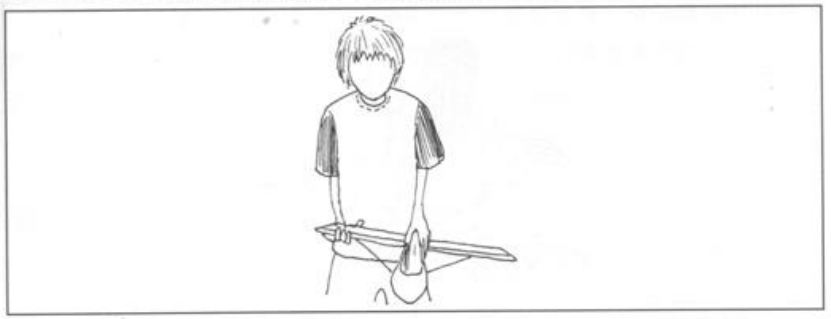
階段四 辨識以慾望為基礎的情緒

教師：先告訴孩童故事主角人物的欲望是什麼，再描述故事的結果。先確認孩童是否瞭解故事主角人物的欲望，再讓孩童說出故事主角人物的感受，或指出下方的臉部表情圖片。

這是 Matthew。這張圖告訴我們 Matthew 想要什麼。

欲望 23B：Matthew 想要一輛玩具火車。

結果 23B：Matthew 的哥哥給他一架玩具飛機。



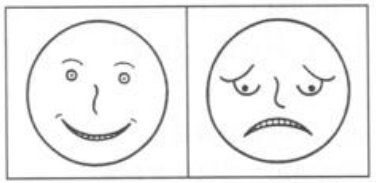
欲望問題：Matthew 想要什麼？

提示：看！這張圖告訴你 Matthew 想要什麼。

情緒問題：當 Matthew 的哥哥給他一架玩具飛機時，他感覺怎麼樣？

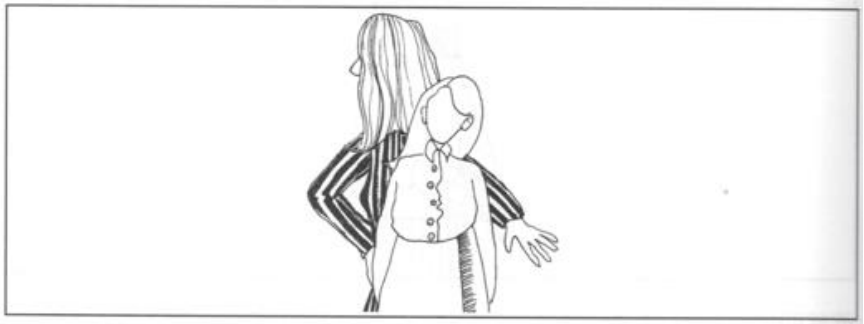
提示：他會覺得高興／難過？

判斷問題：他為什麼會覺得高興／難過？



階段五 辨識以想法為基礎的情緒

實際情況：Jean 的媽媽要帶她去騎馬。

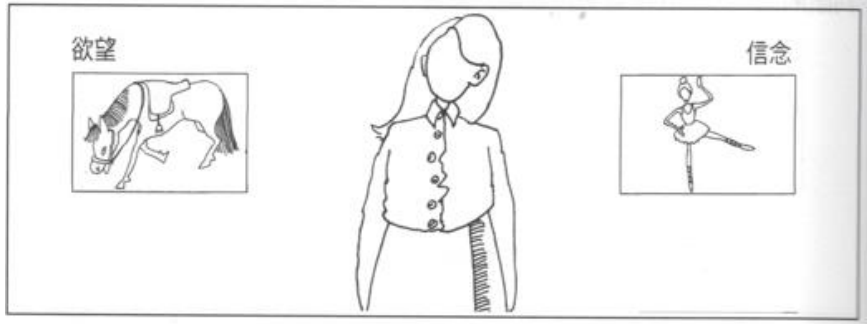


這是 Jean。這張圖告訴我們 Jean 想要什麼。

欲望：Jean 想要騎馬。

這張圖告訴我們 Jean 的想法。

信念：Jean 不知道媽媽要帶她去騎馬。她認為她們要去跳舞。



欲望問題：Jean 想要什麼？

提示：看，這張圖告訴我們 Jean 想要什麼。

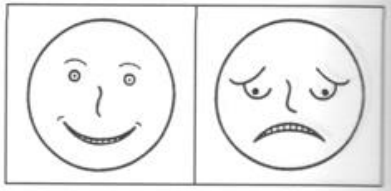
信念問題：Jean 的想法是什麼？

提示：看，這張圖告訴我們 Jean 的想法。

情緒問題：Jean 想要騎馬，且她認為她們要去跳舞。Jean 感覺怎麼樣？

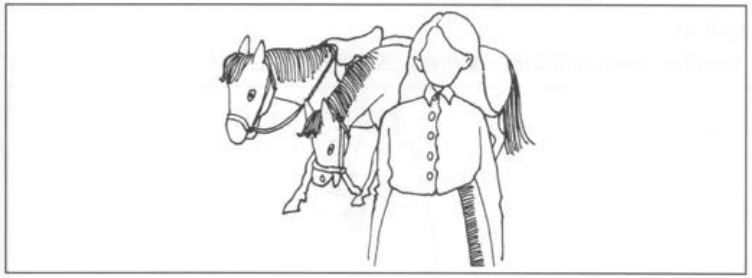
提示：她會覺得高興／難過？

判斷問題：她為什麼會覺得高興／難過？



階段五 辨識以想法為基礎的情緒

結果：Jean 的媽媽帶她去騎馬。



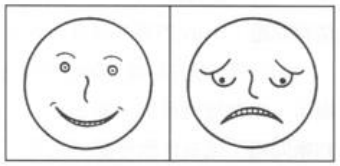
欲望問題：Jean 想要什麼？

提示：看，這張圖告訴我們 Jean 想要什麼。

情緒問題：當 Jean 的媽媽帶她去騎馬時，她感覺怎麼樣？

提示：她會覺得高興／難過？

判斷問題：她為什麼會覺得高興／難過？



階段五 辨識以想法為基礎的情緒

D 部分：錯誤信念和未實現的欲望

範例 1D

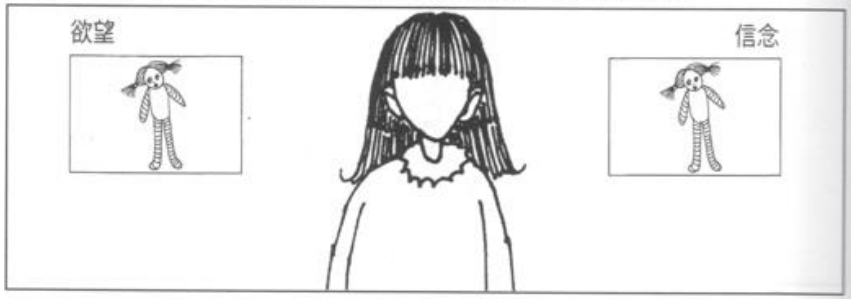
實際情況：Betty 的奶奶買一隻小熊玩偶給她當作生日禮物。

這是 Betty。這張圖告訴我們 Betty 想要什麼。

欲望：Betty 想要洋娃娃。

這張圖告訴我們 Betty 的想法。

信念：Betty 不知道有小熊玩偶。她認為奶奶有買一個洋娃娃給她。



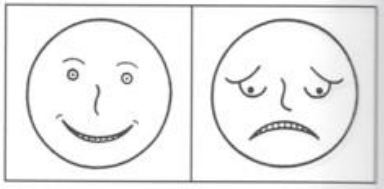
欲望問題：Betty 想要什麼？

提示：看，這張圖告訴我們 Betty 想要什麼。

信念問題：Betty 的想法是什麼？

提示：看，這張圖告訴我們Betty的想法。

情緒問題：Betty想要洋娃娃，且她認為奶奶有買一個洋娃娃。Betty感覺怎麼樣？



提示：她會覺得高興／難過？

判斷問題：她為什麼會覺得高興／難過？

階段五 辨識以想法為基礎的情緒

結果：Betty 的奶奶買一隻小熊玩偶給她當作生日禮物。

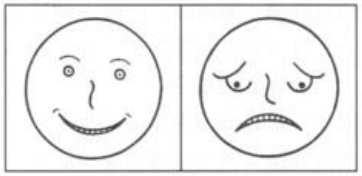
欲望問題：Betty 想要什麼？

提示：看，這張圖告訴我們 Betty 想要什麼。

情緒問題：當 Betty 的奶奶送她一隻小熊玩偶時，她感覺怎麼樣？

提示：她會覺得高興／難過？

判斷問題：她為什麼會覺得高興／難過？



察顏觀行

- 表情拼貼
- 運用表情拼圖，幫助孩子辨認表情
- 利用孩子喜歡的DVD，停留在情緒相關的片段，取消字幕，讓孩子單由畫面描述情緒及可能的原因

--以上，皆可分別讓孩子指認眼睛、眉毛、嘴巴、鼻子等細部的線索特徵

- 利用圖片，幫助孩子從身體姿勢辨識情緒
- 利用有聲書，或是用不一樣的語調念相同的句子，練習以語調等辨識情緒

如何增加孩子在團體中的良好行為？

- 不在第一時間強迫參與團體活動，可先培養觀察團體規則、遊戲規則，或是耐心的教導其遊戲方式
- 可帶孩子前往有很多孩子一同玩樂的地方，如：社區公園、麥當勞的遊戲區等
- 在旁陪同孩子觀察『其它孩子怎麼玩？』
  - 可先由家長擔任旁白，描述相關的互動行為，如：輪流、等待、討論等
- 給予清楚的良好行為的定義
- 實際參與團體活動，若有良好行為即給予正向回饋

如何示範人際技巧？

- 演戲
- 錄影帶
- 角色扮演
- 創造情境以示範

感謝您們的聆聽 !!