

ADHD: A Southeast Asian Perspective

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Disclaimer

- This presentation is of the opinion of the presenter, based on his own experience and research.
- Views are not representative of Sandoz or Novartis.





Global

- The global rate of Attention-Deficit Hyperactivity Disorder (ADHD) is 5.29%¹
- Concept of ADHD spread from USA, emerging in the 1950s¹

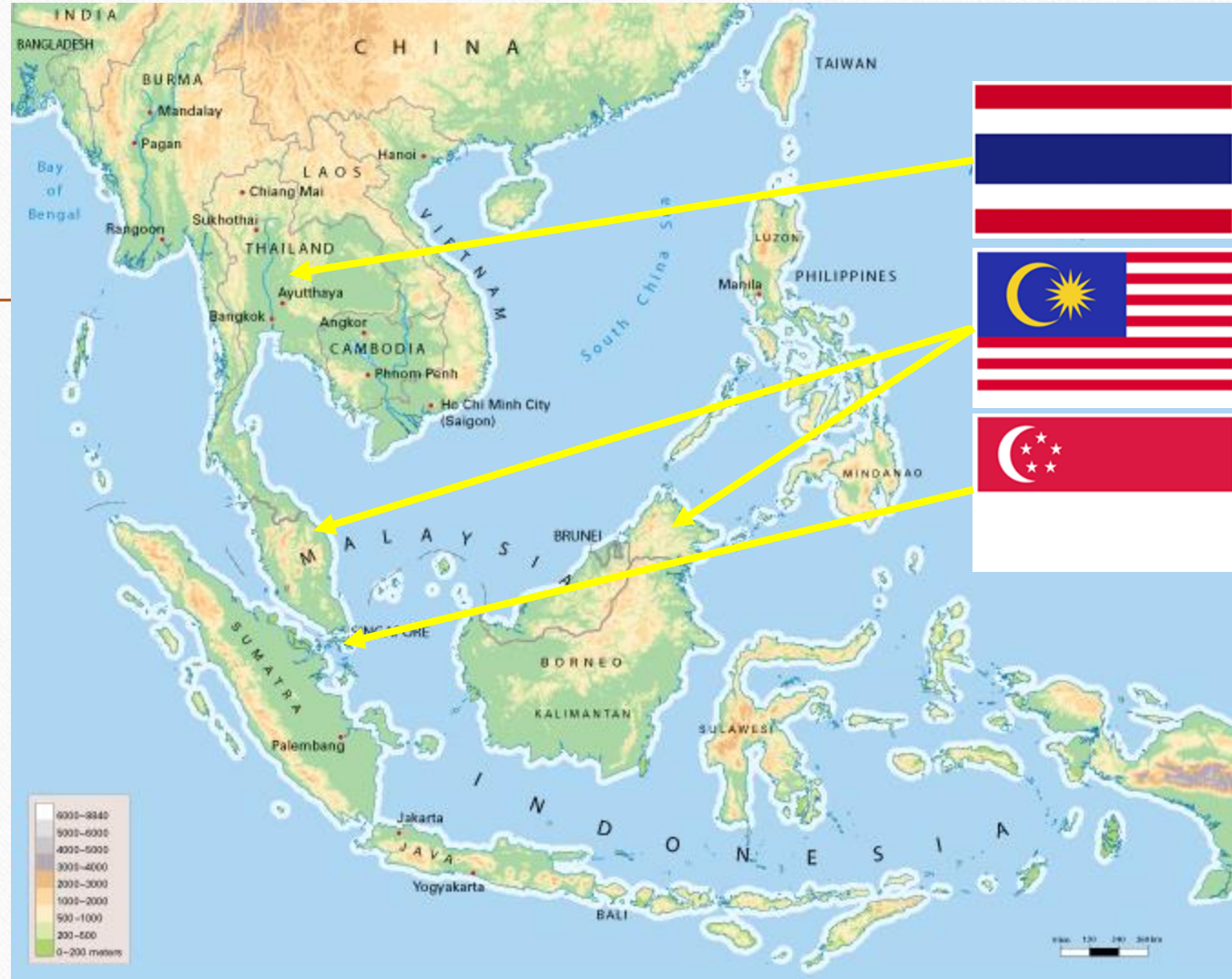


1. Matthew Smith, Hyperactive Around the World? The History of ADHD in Global Perspective, *Social History of Medicine*, Volume 30, Issue 4, November 2017, Pages 767–787, <https://doi.org/10.1093/shm/hkw127>

At a glance...

- Epidemiology – ADHD in Southeast Asia
- Referral
- Diagnosis
- Management
- Follow-up







Malaysia

- According to the National Health and Morbidity Survey (NHMS), psychiatric morbidity in children (5-15 years) was at 20% ~ 1.74 million children with mental health difficulties¹
- In a sample of admissions to a child psychiatric unit, ADHD-diagnosed children accounted for 25% of the population, whereas various learning disabilities made up 11.9%²
- The prevalence of attention problems in Malaysian children were reportedly in the range of 9-12.5%²

1. Norhaniza, I., Abdullah, A., Hh, A., Ks, M., & Pillai, S. (2010). Mental health difficulties in children: a University Hospital experience. *The Malaysian Journal of Psychiatry*, 19.

2. Woo, Pei Jun & Hj, Teoh. (2007). An Investigation of Cognitive and Behavioural Problems in Children with Attention Deficit Hyperactive Disorder and Speech Delay. *Malaysian Journal of Psychiatry*. 16.



Malaysia

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- In a descriptive study regarding the utilization of child mental health services in a university hospital in Kuala Lumpur, 373 children were assessed¹
 - 54.7% from primary school age group, 65.4% males¹
 - 60% had a single diagnosis – ADHD was the highest at 27.3%; 61.5% in those with more than one diagnosis¹
 - The most common comorbid condition in children was primary group difficulties¹



Table 3. Top five common single diagnoses among the new patients

Diagnosis	Frequency		Total
	Male	Female	
Hyperkinetic disorders	45 (19.8%)	17 (7.5%)	62 (27.3%)
Mental retardation	32 (14.1%)	19 (8.4%)	51 (22.5%)
Pervasive developmental disorders	42 (18.5%)	7 (3.1%)	49 (21.6%)
Problems related to negative life events	5 (2.2%)	4 (1.7%)	9 (3.9%)
Other problems related to primary support group, including family circumstances	3 (1.3%)	5 (2.2%)	8 (3.5%)



Singapore

- Estimated prevalence in Singapore is approximately less than 5%¹
- ADHD is the fourth-largest contributor to disease burden in children aged 14 and below (as measured in disability-adjusted life years)¹
- The emergence of a comprehensive community mental health programme known as REACH – Response, Early Intervention and Assessment in Community Mental Health, has enhanced the detection of ADHD by two-fold¹



Thailand

- Overall prevalence in Thailand was 8.1%¹
- The prevalence of ADHD among children in a rural setting in central Thailand was 2.2%¹
- 495 primary school children were screened using the SNAP-IV, after which they were diagnosed by child psychiatrists based on DSM-V criteria¹
- Qualitative assessments on caregivers and teachers show a lack of knowledge and misconceptions regarding ADHD¹

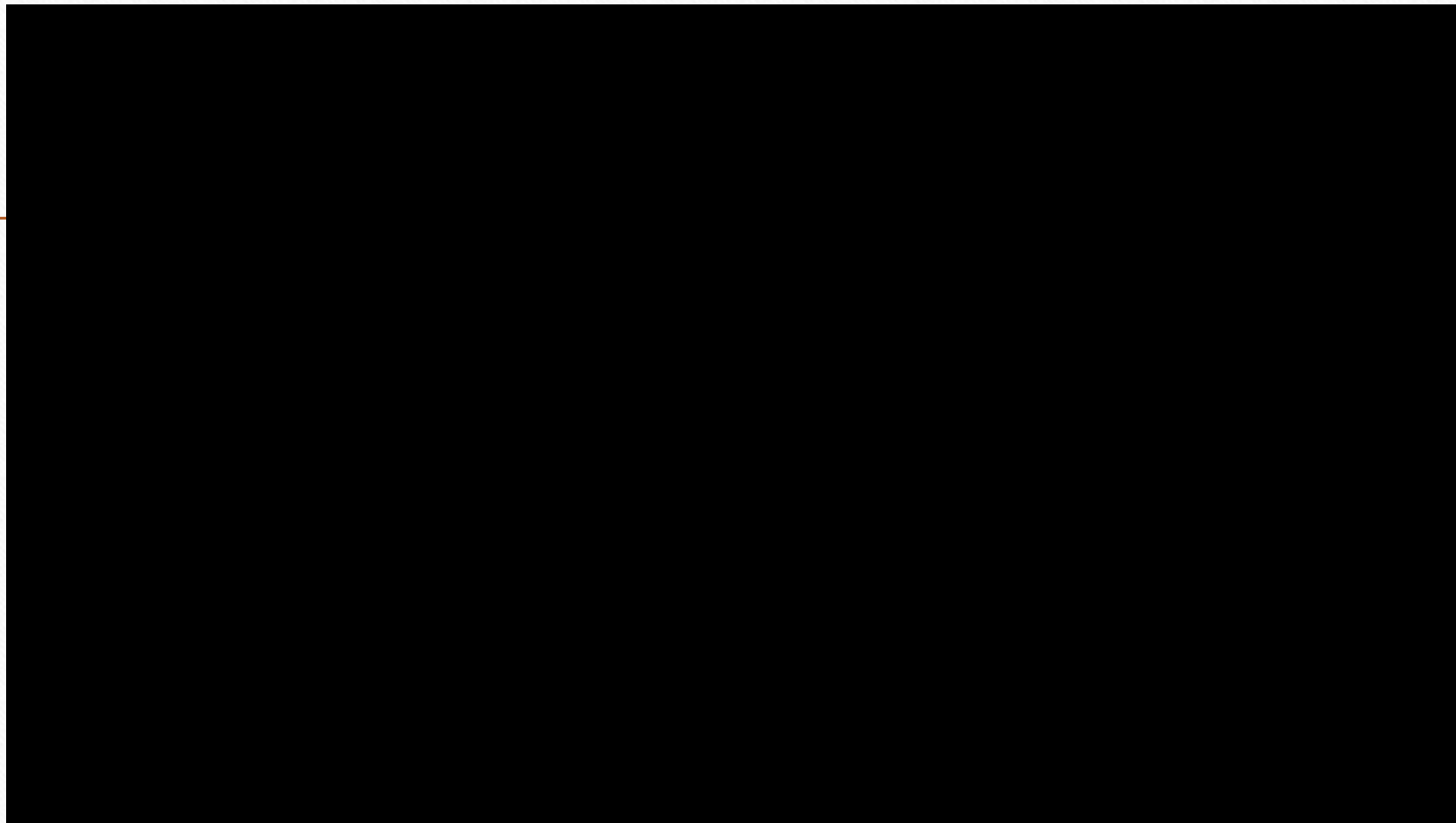


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- “He is obstinate and never ever stays still and climbs up tree after tree. He is just going right away after we tell him not to.”¹



Thailand

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- In an attempt to ascertain knowledge of Thai teachers in Ayutthaya, the old capital city, a cross-sectional study was done¹
 - The Knowledge of Attention-Deficit Disorder Scale (KADDS) was conducted¹
 - Only 19.4% passed this scale and teachers under 31 years of age were more likely to pass¹





Referral

- In the government hospital setting, any child or adolescent would require a referral letter for full mental assessment if ADHD is suspected
- The letter is to be obtained from primary care – local healthcare clinic or general practitioner
 - Government hospitals can have a high load of patients, including walk-ins
 - As a preliminary assessment





Measures to facilitate interview

- Toys, colouring activities
- Seek assistance from paramedics in child clinic
- Interview child separately if requested or to encourage more detailed history





ADHD Diagnosis

Kanak-kanak ADHD haruslah menunjukkan bentuk tingkahlaku yang terdapat dalam tiga katagori utama yang sering berlaku dalam beberapa persekitaran seperti di rumah, di sekolah dan sebagainya.

Hiperaktiviti .

- Kerap menggerakkan tangan atau kaki, mengeliang-ngeliut di tempat duduk.
- Selalu meninggalkan tempat duduk ketika di dalam kelas.
- Selalu berlari ke sana ke mari atau suka memanjat dan pada kebanyakan masa tidak kekok.
- Kerap menghadapi masalah untuk bermain atau melakukan aktiviti riadah secara senyap.
- Selalu banyak bercakap.
- Sering bergerak cemas atau kerap bertindak seolah-olah "digerakkan oleh motor".

Hyperactivity

Tempoh Tumpuan Yang Singkat .

- Sering gagal memberi tumpuan yang teliti kepada butir-butir terperinci atau cual serta membuat kesilapan semasa membuat kerja sekolah.
- Selalu tidak mematuhi arahan dan gagal menyiapkan kerja sekolah, kerja harian atau tugas.
- Kerap mengalami masalah untuk mengatur tugas atau aktiviti-aktiviti.
- Kerap mengelak, tidak suka atau keberatan hendak melakukan sesuatu tugas yang memerlukan tumpuan yang lama (seperti kerja sekolah atau kerja rumah).
- Selalu kehilangan barang (contoh : pensil, pemadam, buku dll).
- Mudah pelupa walaupun tidak sepatutnya jika mengikut usia dan keupayaan.

Inattentiveness

Tingkahlaku Impulsif .

- Selalu memberi jawapan sebelum soalan lengkap diajukan.
- Kurang sabar dan menghadapi masalah ketika menunggu giliran.
- Sering mengganggu atau mencelah perbualan atau aktiviti orang lain.
- Sering membuat pertimbangan yang salah dan mudah mengalami kemalangan.

Impulsivity

- 3 main criteria
- In line with DSM-V
- Ascertain type of presentation
- Symptoms occur in two or more settings
- Poor scholastic performance is common



Challenges in Diagnosis (Malaysia)

- Misdiagnosis of ADHD can occur due to various factors¹
- Lack of comprehensive information from child, parents and teachers¹
- Speech and language delay disorders are often mistaken for ADHD¹
- Psychological tests may be necessary to determine these differences¹



Challenges in Diagnosis

Speech & Language Delay	ADHD
Low verbal IQ and communication	Normal verbal and performance IQ
Less behavioural problems	More problems of impulsivity, learning and hyperactive behaviour
Clear relationship between learning disabilities and specific behavior patterns	Impulsivity, restlessness and inattention is a consistent problem



Challenges in Diagnosis

- In a study among 95 Malaysian children aged 3.5 to 15 were assessed (2 separate groups of ADHD and Speech & Language Delay), along with their parents (who also were asked to fill in a behavioral questionnaire). Teachers where possible, were also instructed to do so.¹
- Assessments were analysed in both groups of children – cognitive abilities and adaptive behavior were compared.¹
- The study suggests that collecting data from more than one test or one source is important to make a diagnosis in the child.¹
- Psychological testing can determine the extent of verbal IQ and communication ability in children with Speech and Language Delay, whereas ADHD have more behavioral problems.¹



Challenges in Diagnosis

- In Singapore, due to the burden of ADHD and other childhood developmental and behavioural disorders, early diagnosis and intervention has been emphasized
- Pre-school teachers' knowledge, attitudes and practices on these disorders were assessed by way of questionnaire
- The teachers were most aware on questions regarding need for medication in ADHD and importance of symptoms in more than one setting for diagnosis
- Awareness of an existing ADHD Parents Support Group was very low



Table 5 Attention deficit/hyperactivity disorder (ADHD) block (*n* for median score 498)

Correct responses to questions on ADHD	%
1. Medication can help to improve learning in some children with ADHD. (T)	58
2. Children with ADHD will outgrow their inattention and hyperactivity. (F)	28†
3. A child with ADHD may show all the signs at home and yet none of the signs at school. (F)	61
4. Children with ADHD may present with just inattention and without hyperactivity (i.e. ADD – attention deficit disorder) (T)	28†
5. A child with ADHD will not sit still for an hour of computer play. (F)	22†

†Pass mark not achieved for that question.

Table 7 Support services and agencies (*n* = 503)

Correct responses regarding the existence of:	%
Autistic Association (Singapore) (T)	67
Attention Deficit Hyperactivity Disorder Association (Singapore) (F)	22†
Dyspraxia Association (Singapore) (F)	39†
Dyslexia Association (Singapore) (T)	83
ADHD Parents' Support Group (T)	33†
Autism Resource Centre (T)	56
Social Skills Support Group (F)	44†
TOUCH Learning Support Services (T)	72

†Pass mark not achieved for that question.



Challenges in Diagnosis

- A retrospective study among 202 children who came to a child mental health clinic with ADHD was conducted in Thailand¹
- M:F = 3.4:1¹
- Comorbidity found in 53.5%¹
- Most frequent complaint was academic/learning problems¹



Challenges in Diagnosis

- Intelligence assessments are not routinely conducted in children with suspected ADHD¹
- Because of the large proportion of children with poor academic performance in this study, IQ tests were done – more than half showed an IQ below 90¹
- One fifth of sample had been assessed by other healthcare personnel, but parents were seeking a second opinion¹



Management of ADHD

- Upon receiving the referral at the outpatient department clinic, obtaining a collaborative history and establishing a diagnosis of ADHD, treatment options are considered
- Pharmacotherapy is not the first line in milder patients
- Occupational therapy plays an important role
- Referral to psychologist if learning disorder is suspected
- Referral to speech therapist if there is any delay in speech
- Reward system





Management of ADHD: Pharmacotherapy

- Methylphenidate, Methylphenidate XR (extended release) or Atomoxetine
- Considerations
 - Age of child
 - Beginning of treatment or maintenance
 - Severity of symptoms
 - Adverse effects
 - Schooling hours





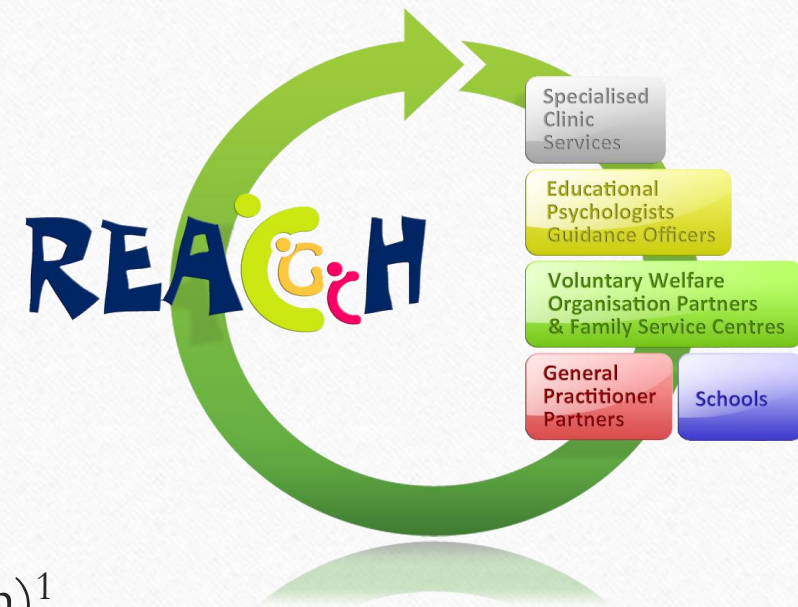
Management of ADHD

- Based on the study in Thailand among children from the middle-upper socioeconomic class
 - 38% of sample were manageable solely through behavioral measures
 - 62% needed stimulants, 28% of these needed additional psychotropics
- A notable difference compared to Malaysia is that medication in the long term may be a financial burden – not subsidized by government



Follow-up

- Outpatient services – Child & Adolescent Mental Health Clinic
- Community Psychiatry Unit & Acute Home Care – home visits and collaborations with schools
- Similar initiative in Singapore known as REACH (Response, Early Intervention and Assessment in Community Mental Health)¹



1. Introduction to Southeast Asia (article). (n.d.). Retrieved December 02, 2020, from <https://www.khanacademy.org/humanities/art-asia/southeast-asia/beg-guide-southeast-asia/a/introduction-to-southeast-asia>

Southeast Asian Overview

- Different diagnostic thresholds¹
- Cultural elements influence how ADHD symptoms are described¹
- Expectations of a child's behavior may vary between countries¹
- Classroom environment¹
- Academic performance and expectation¹





Thank You
