

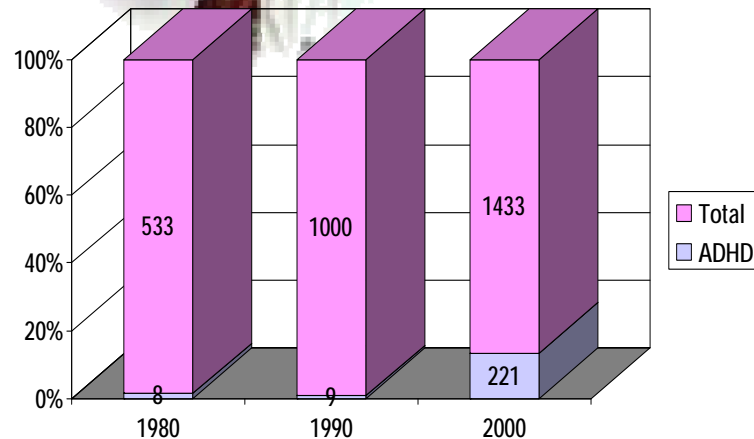
Clinical Service and Research: An Evidence Based Model

Dr Daniel Fung

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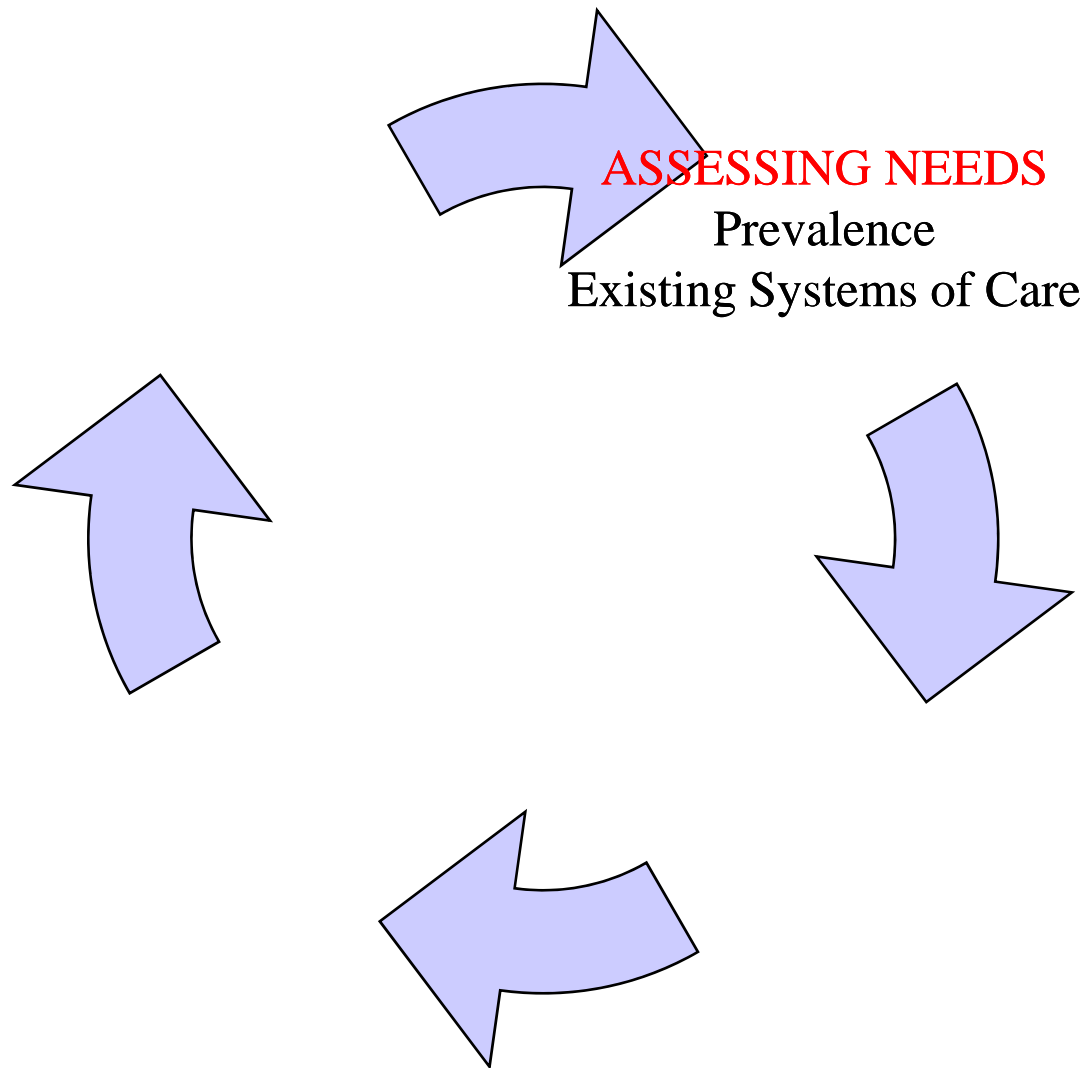
Adjunct Associate Professor, Duke NUS GMS and NTU



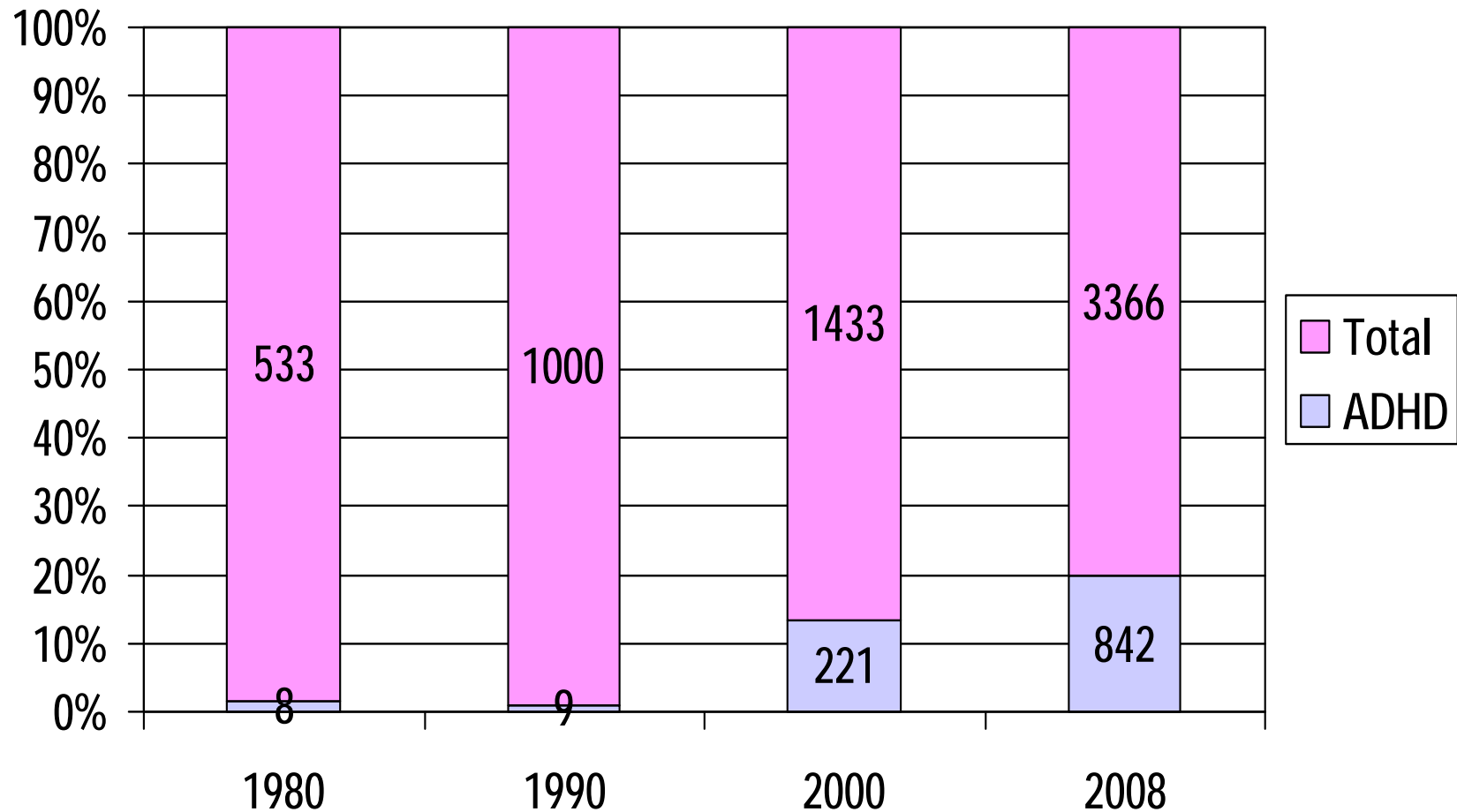


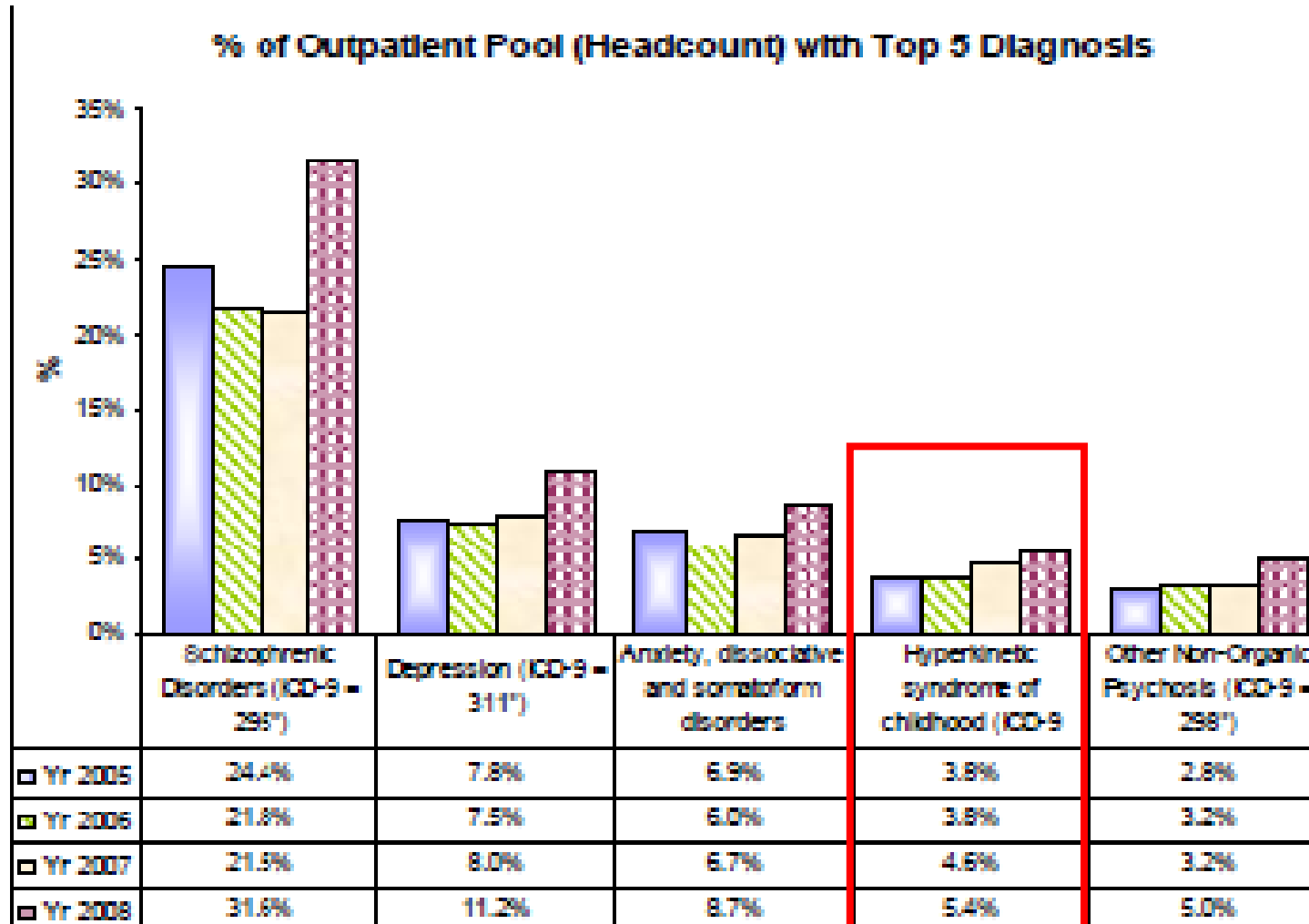
- Child Psychiatry in Singapore established for 30 years
- Produced 10 child psychiatrists
- 1700 new cases annually
- ADHD not a common diagnosis
- Setting up of SPARK





ADHD Diagnosis at CGC





IMH Annual Report 2008

2004-5 study of 2145 children aged 6 to 12 using the CBCL: Externalising Problems include ADHD and Conduct related disorders

Parent's report on prevalence of

- Emotional & Behavioural Problems 12.5%
- Internalising Problems 12.2%
- Externalising Problems 4.9%

Teacher's report on prevalence of

- Emotional & Behavioural Problems 2.5%
- Internalising Problems 2.2%
- Externalising Problems 2.4%

From the Attention Problems sub-scale

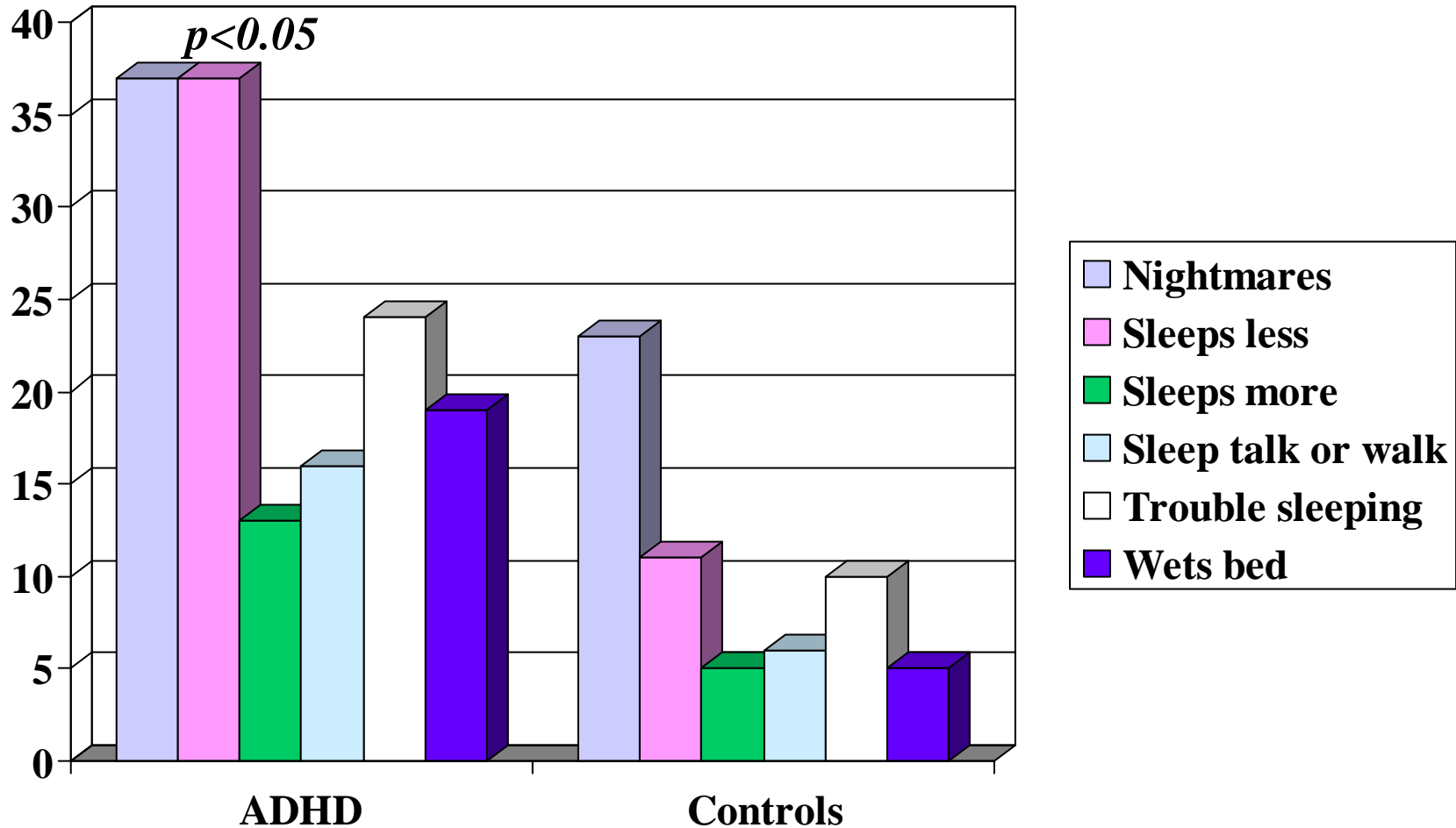
- * Item 8: Can't concentrate, can't pay attention for long
 $R^2 = .105, p < .05$
- * Item 10: Can't sit still, restless, or hyperactive
 $R^2 = .062, p = .068$
- * Item 41: Impulsive or acts without thinking
 $R^2 = .141, p < .05$

From the Aggressive Behavior sub-scale

- * Item 37: Gets in many fights
 $R^2 = .240, p < .05$
- * Item 57: Physically attacks people
 $R^2 = .103, p < .05$
- * Item 86: Stubborn, sullen, or irritable
 $R^2 = .109, p < .05$
- * Item 94: Teases a lot
 $R^2 = .123, p < .05$

From the Delinquent Behavior sub-scale

- * Item 26: Doesn't seem to feel guilty after misbehaving
 $R^2 = .062, p = .066$



Lim et al Ann Acad Med Singapore 2008;37:655-61

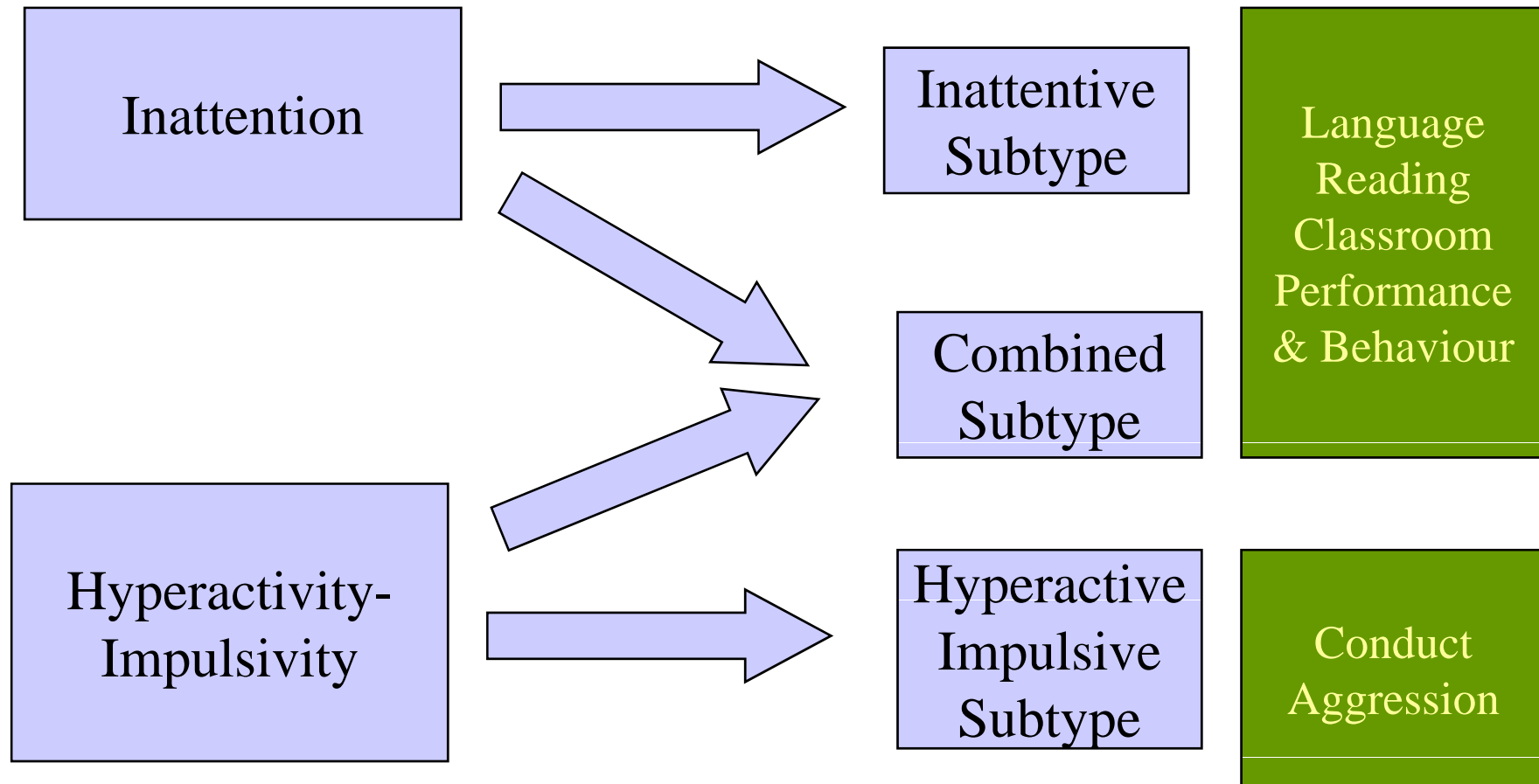
- Health
 - Paediatrics
 - Psychiatry
 - Others e.g. GPs
- Education
 - Ed Psychologists
 - School Counsellors
 - Others e.g. LSC
- Social services
 - Psychologists
 - Child protection
 - Probation



Symptoms

Subtypes

Problems



Symptoms

Subtypes

Problems

Differentials

Inattention

Inattentive
Subtype

Language
Reading
Classroom
Performance
& Behaviour

Learning
Disabilities:
Reading, Maths,
Writing
Disorders
Language
Disorders

Combined
Subtype

Hyperactivity-
Impulsivity

Hyperactive
Impulsive
Subtype

Conduct
Aggression

**Conduct and
Oppositional
Defiant
disorders**
Anxiety disorders
Mood disorders
**Other psychiatric
disorders**

Table III: Attention Deficit/Hyperactivity (ADHD) Block.

Correct responses to questions on ADHD	%
It has been shown that medication alone is the most effective mode of treatment in children with ADHD. (F)	85.4
A child with ADHD may show all the signs at home and yet none of the signs at school. (F)	68.8
Sugar has been clearly proven to be a causative factor for hyperactivity in children. (F)	72.9
Features of inattention and hyperactivity in most ADHD children improve towards adolescence, even without medication. (F)	27.1

Lian et al: Singapore Med J 2003 Vol 44(8) : 397-403

Teachers know very little about ADHD

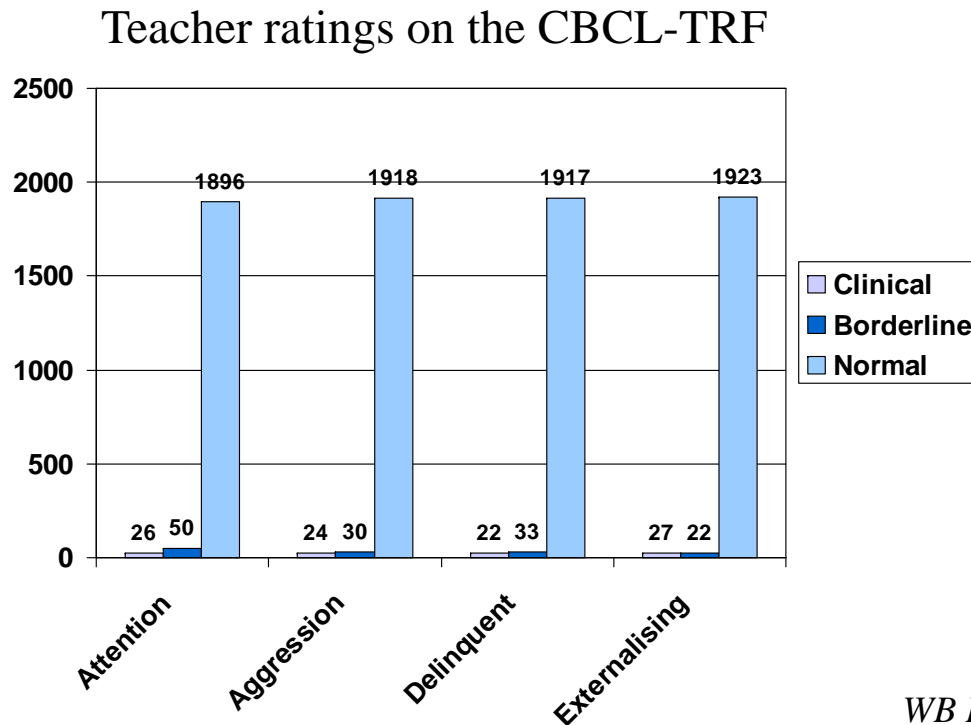


Table 5 Attention deficit/hyperactivity disorder (ADHD) block (n for median score 498)

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.

WB Lian et al (2008) *Journal of Paediatrics and Child Health* 44 (4), 187–194

Woo et al: *Singapore Med J* 2007; 48 (12) : 1100

Table III. Top ten causes of disease burden (in DALYs) in Singapore in 2004 by age group.

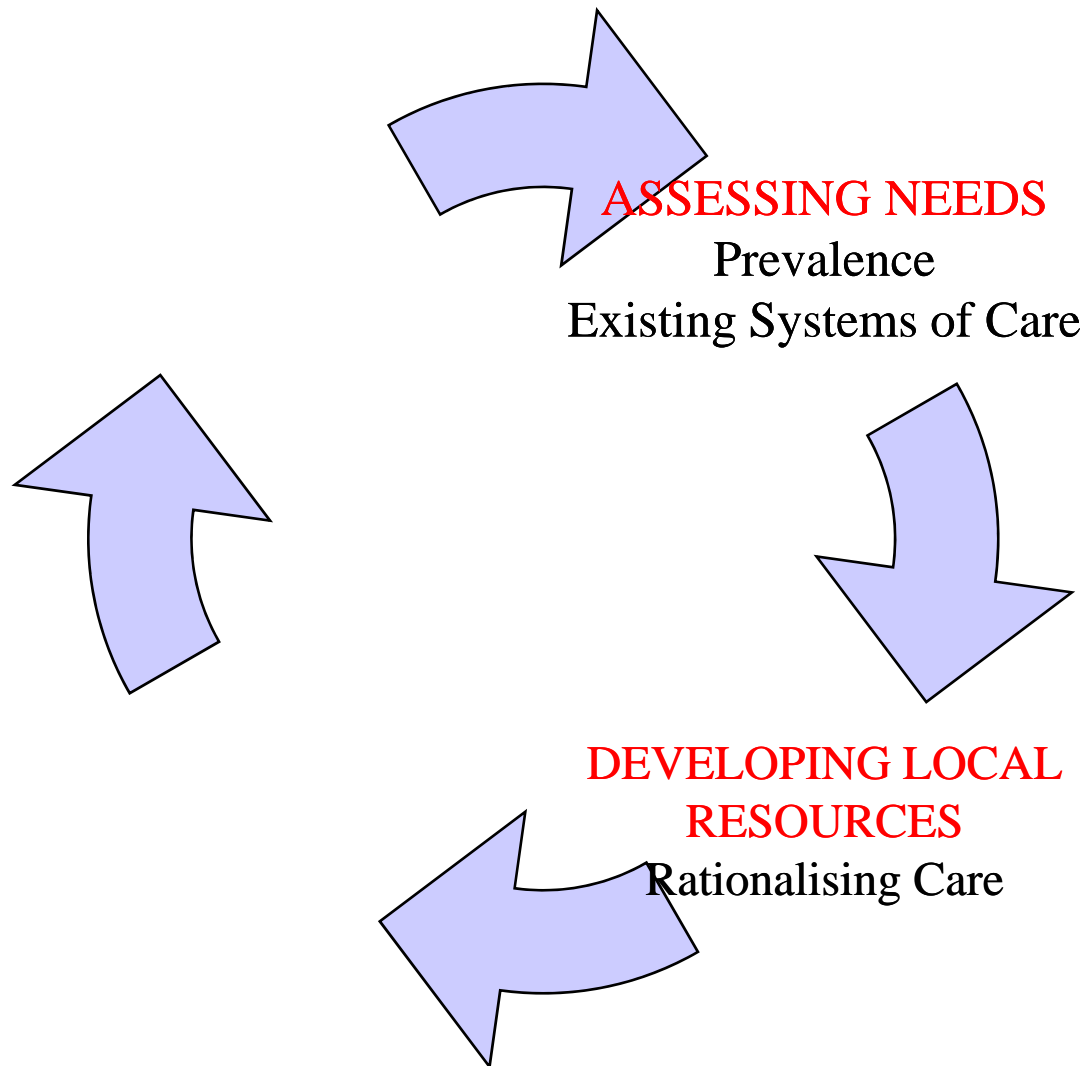
Rank	0–14 years of age (% of DALY) (n = 24,668)	15–34 years of age (% of DALY) (n = 42,223)	35–64 years of age (% of DALY) (n = 165,873)	≥ 65 years of age (% of DALY) (n = 130,466)
1	Autism spectrum disorders (20.7)	Anxiety & depression (25.9)	Diabetes mellitus (15.6)	Ischaemic heart disease (16.1)
2	Asthma (10.9)	Schizophrenia (9.9)	Ischaemic heart disease (9.5)	Stroke (11.6)
3	Attention-deficit hyperactivity disorder (6.0)	Diabetes mellitus (6.5)	Stroke (6.1)	Diabetes mellitus (8.2)
4	Low birth weight (5.8)	Road traffic accidents (6.1)	Anxiety & depression (5.8)	Alzheimer's disease & other dementias (6.5)
5	Anxiety & depression (5.6)	Self-inflicted injuries (5.5)	Breast cancer (4.6)	Lung cancer (5.3)
6	Congenital heart disease (3.3)	Migraine (4.4)	Lung cancer (3.9)	Lower respiratory tract infections (4.8)
7	Falls (2.8)	Asthma (2.3)	Adult-onset hearing loss (3.7)	Vision disorders (4.2) [†]
8	Migraine (2.5)	Anorexia & bulimia (2.1)	Osteoarthritis (3.2)	Chronic obstructive pulmonary disease (3.7)
9	Other chromosomal disorders* (2.1)	Bipolar disorder (1.7)	Schizophrenia (3.0)	Colon & rectum cancer (3.7)
10	Lower respiratory tract infections (1.7)	Falls (1.5)	Self-inflicted injuries (2.9)	Osteoarthritis (2.8)

DALY: disability-adjusted life years

* excludes Down syndrome

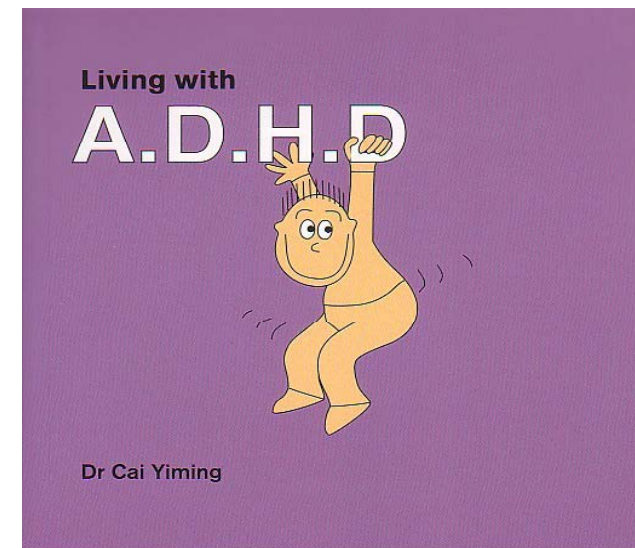
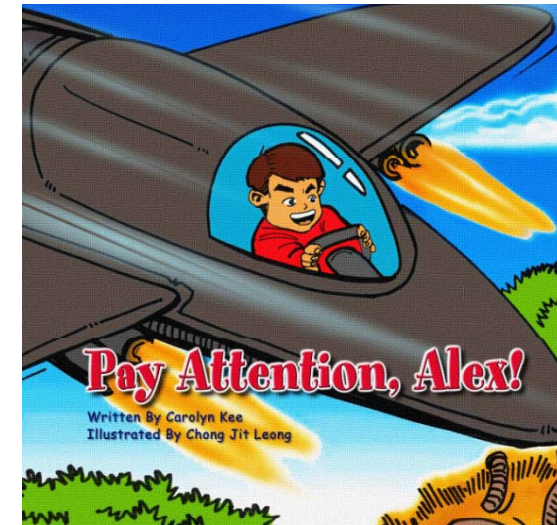
† includes low vision or blindness due to glaucoma, cataract, macular degeneration and all other causes; but excludes diabetic retinopathy and sight loss due to congenital causes, other diseases or injuries.

Singapore Med J 2009; 50(5) : 468

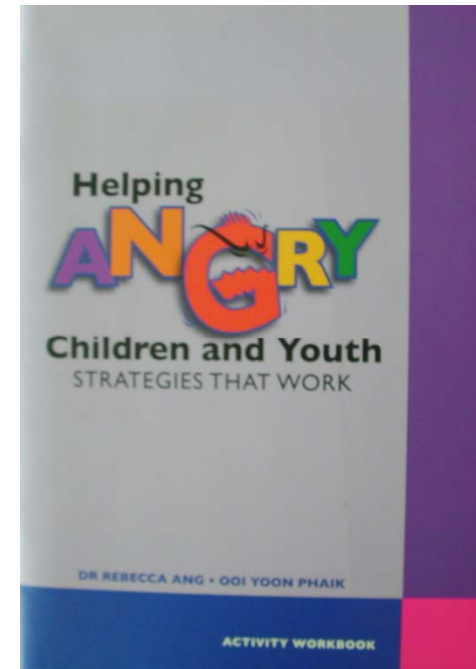
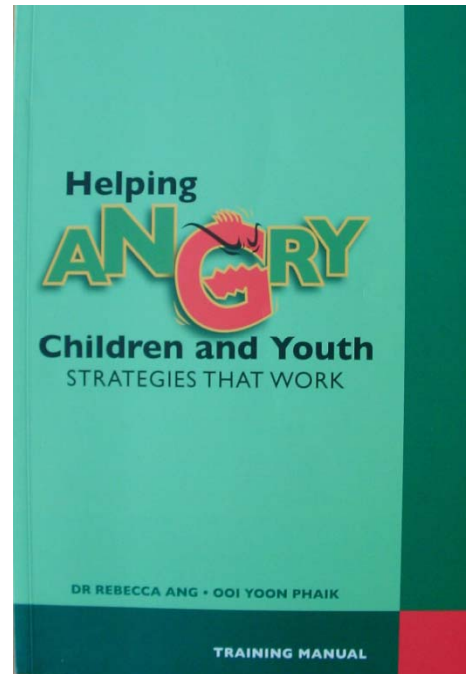
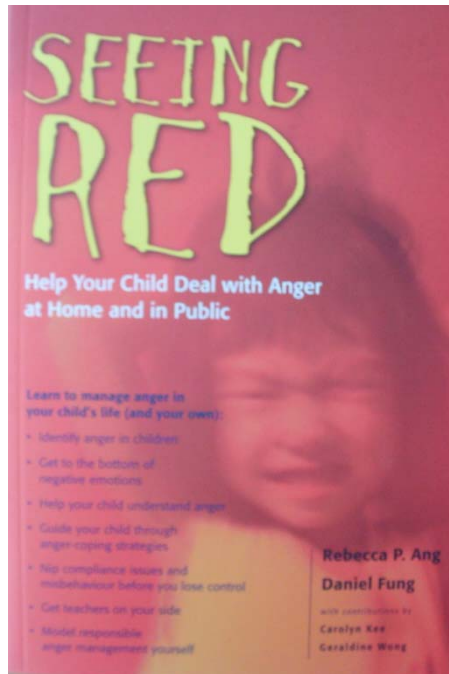


- Children
- Parents and Teachers
- Doctors

SPARK
www.spark.org



■ Cognitive Behavioural Approaches



- Analysis & Synthesis of letter–phoneme correspondences at cluster level
- Speed in phonological retrieval
- Development of orthographic knowledge
- Integration of meaning with orthography
- Training in verbal working memory skills.



- ...not solely a clinical issue but is also determined by psychosocial factors.
- A **Whole-Of-Government approach** is therefore needed to shape a social-cultural environment that supports...

Reporting the National Mental Health Working Group

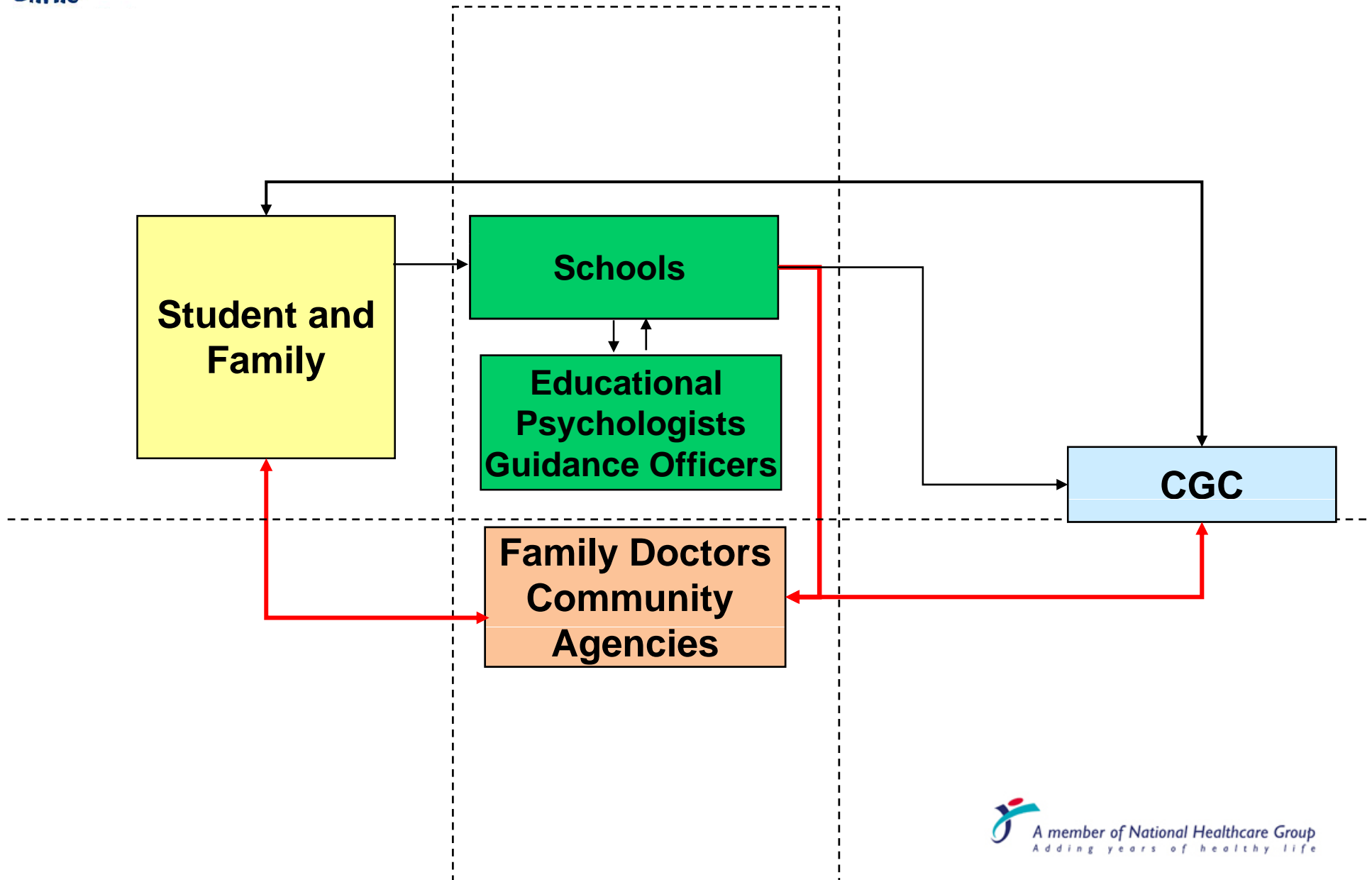


Report of the National Mental Health Working Group

**Changing Times,
Peace of Mind**

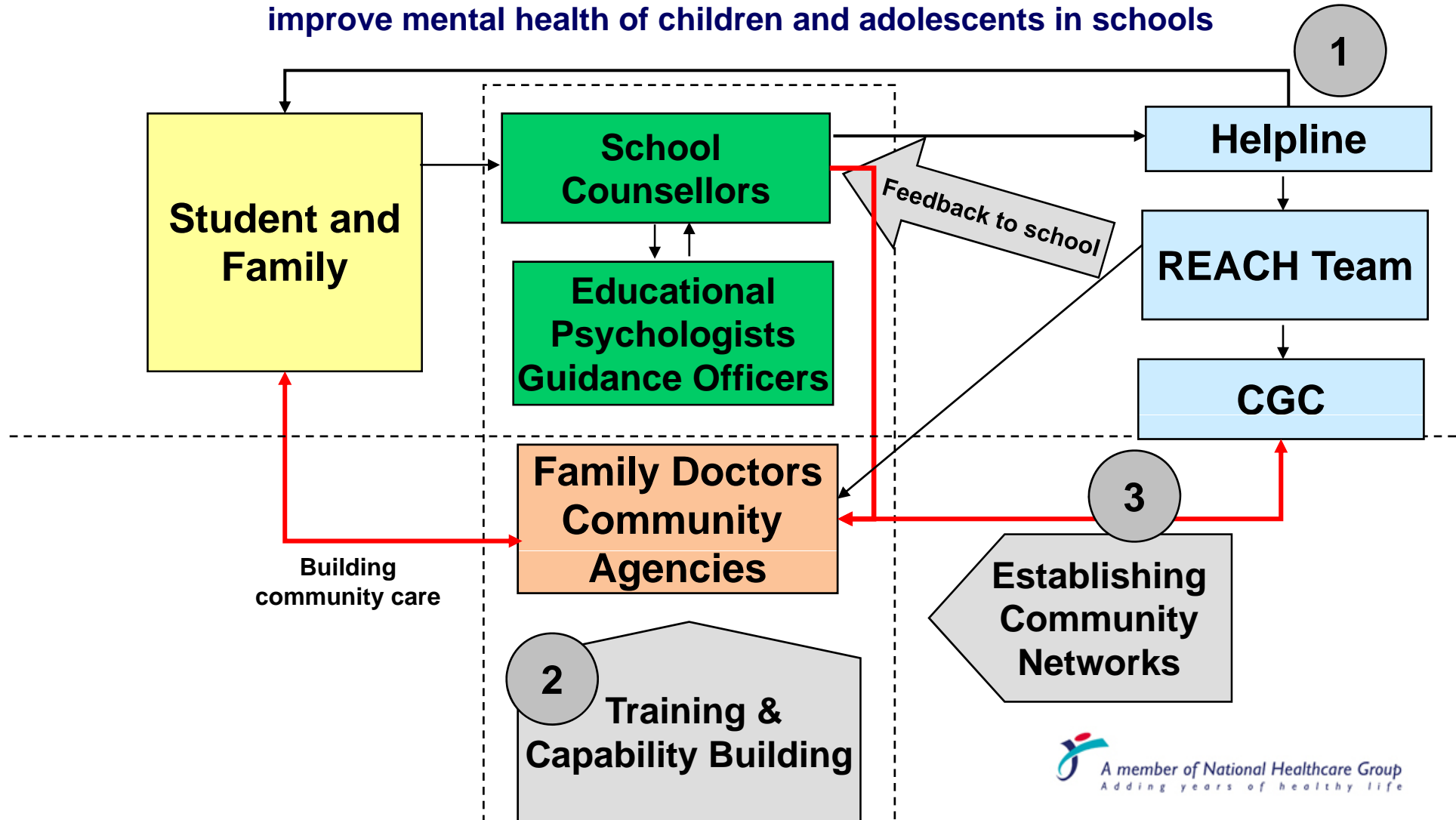
- Investing in Our Mental Wellbeing @ Residence

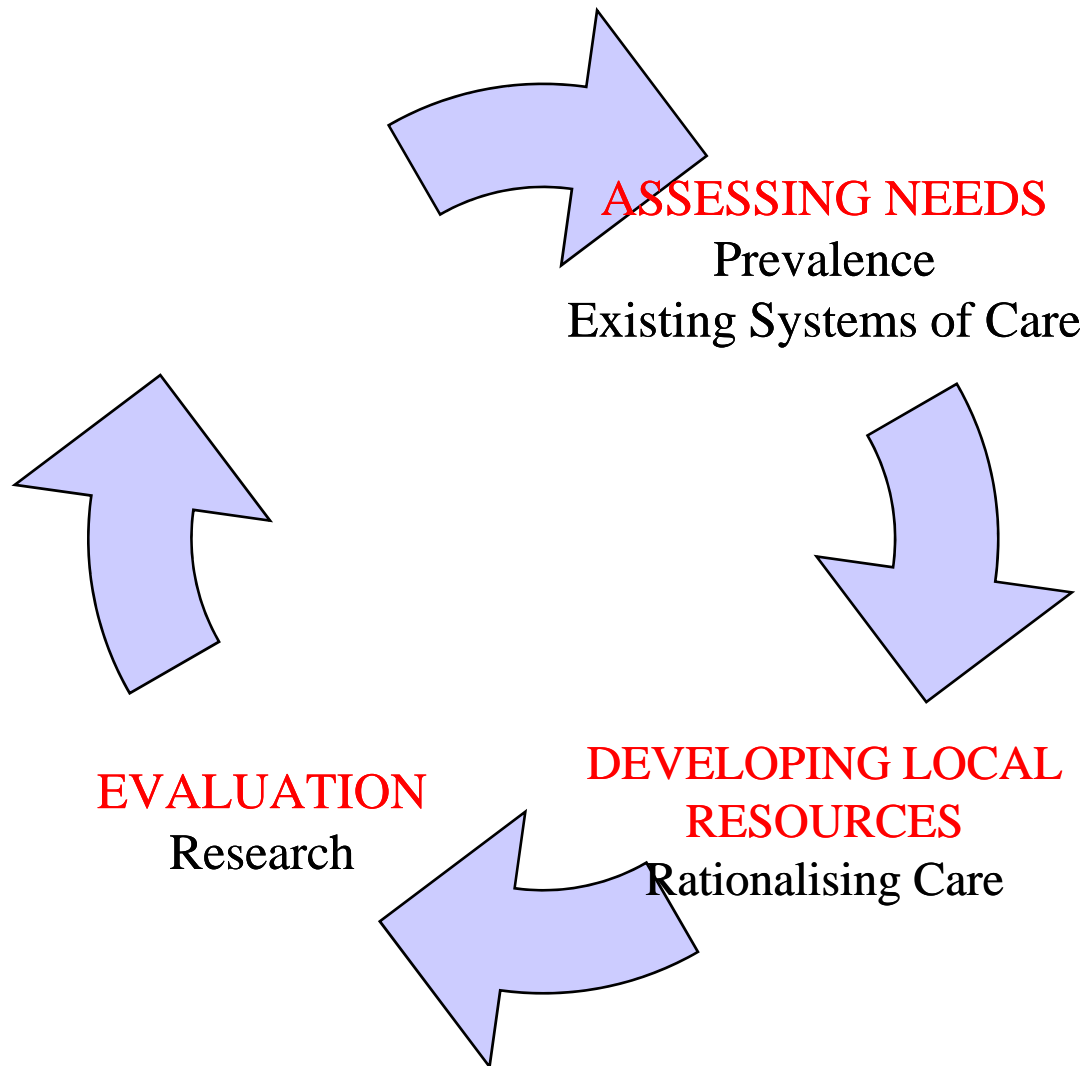
Ministry of Health
Republic of Singapore
December 2008



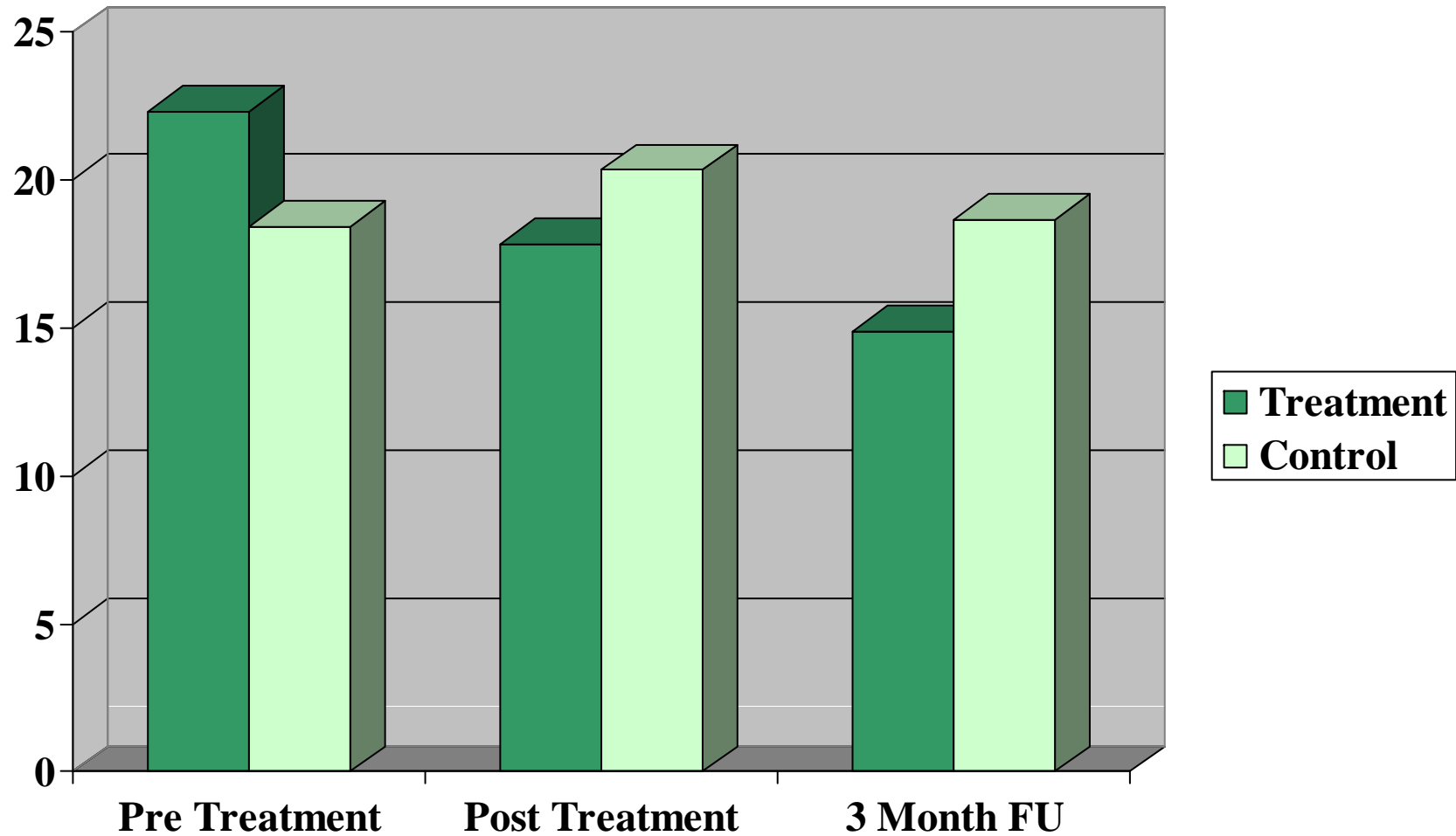
Response, Early intervention and Assessment in Community mental Health
MOH together with MOE & MCYS

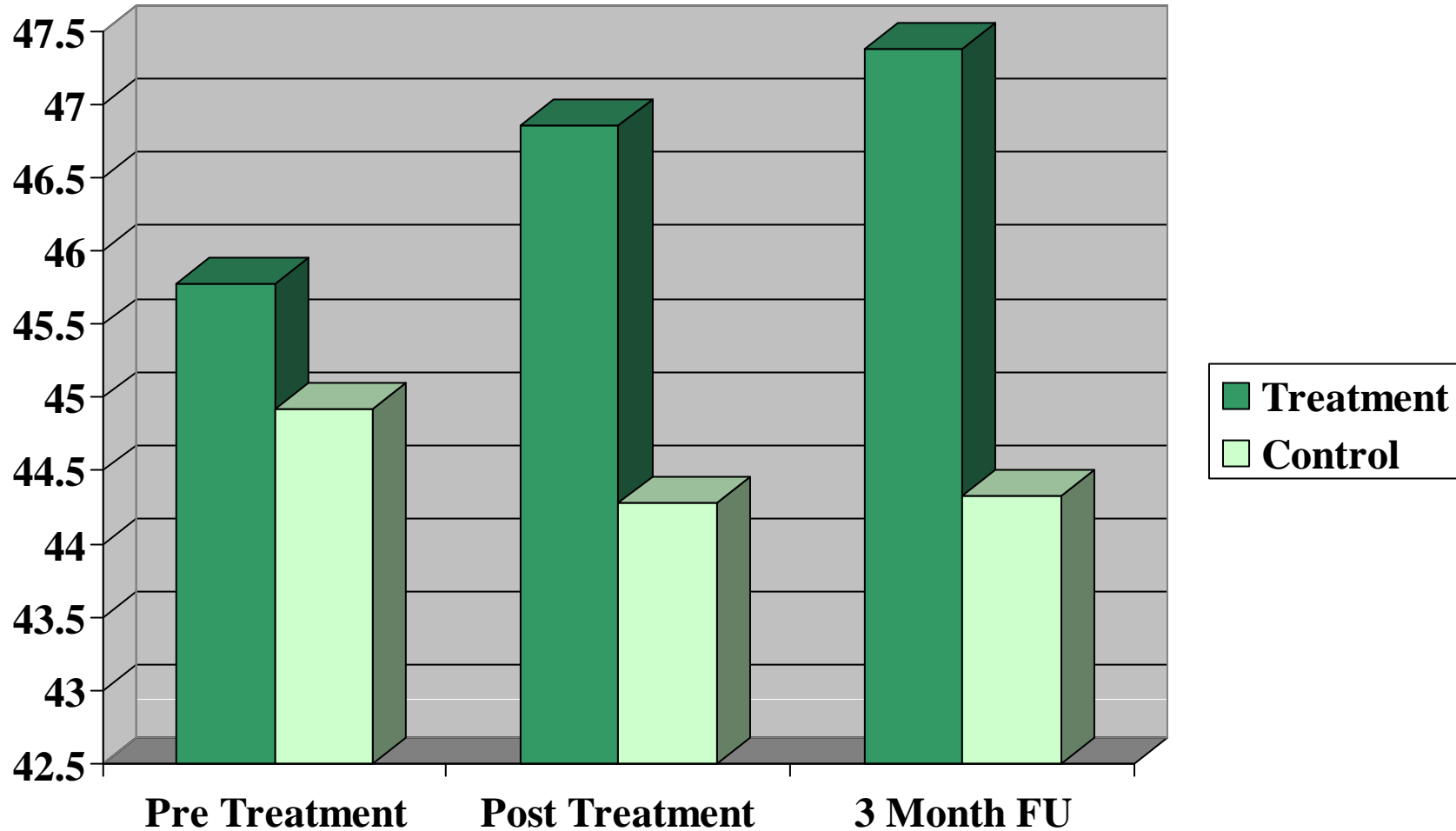
Provide early interventions, support and training to school counsellors & improve mental health of children and adolescents in schools





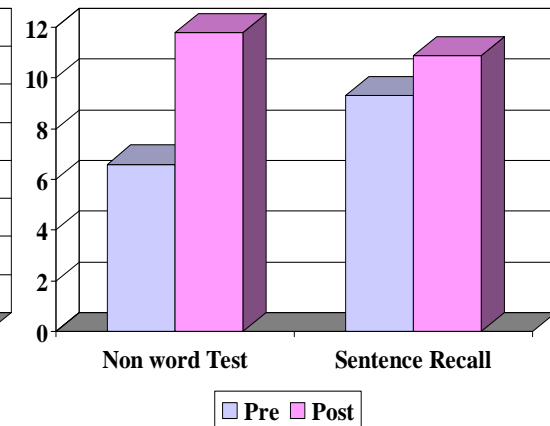
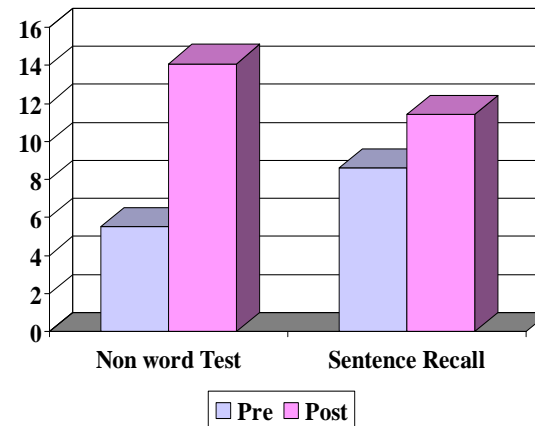
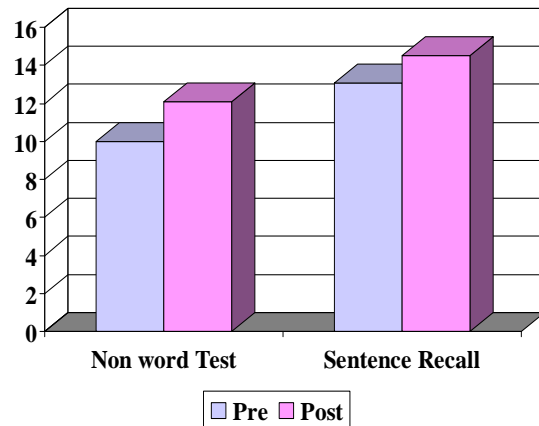
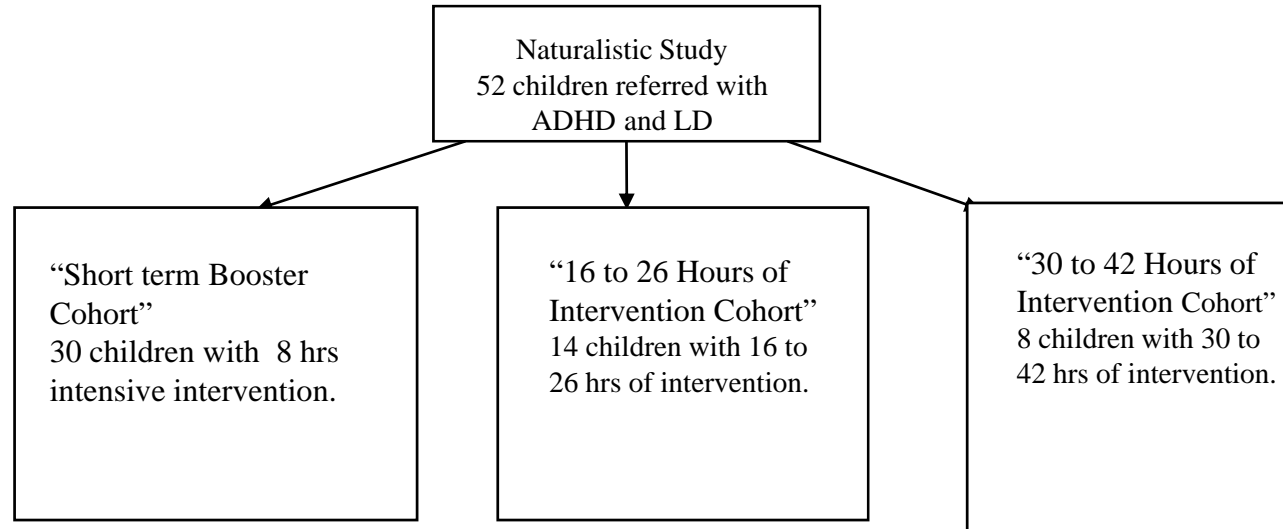
- 103 children
- Aged 8 to 12 (Mean 10.22, SD 1.31)
- 51 CBT+TAU, 52 TAU
- CBT 9 1.5 hours weekly training on:
 - Recognising signs of anger
 - Modifying thoughts that promote anger
 - Learning problem solving strategies

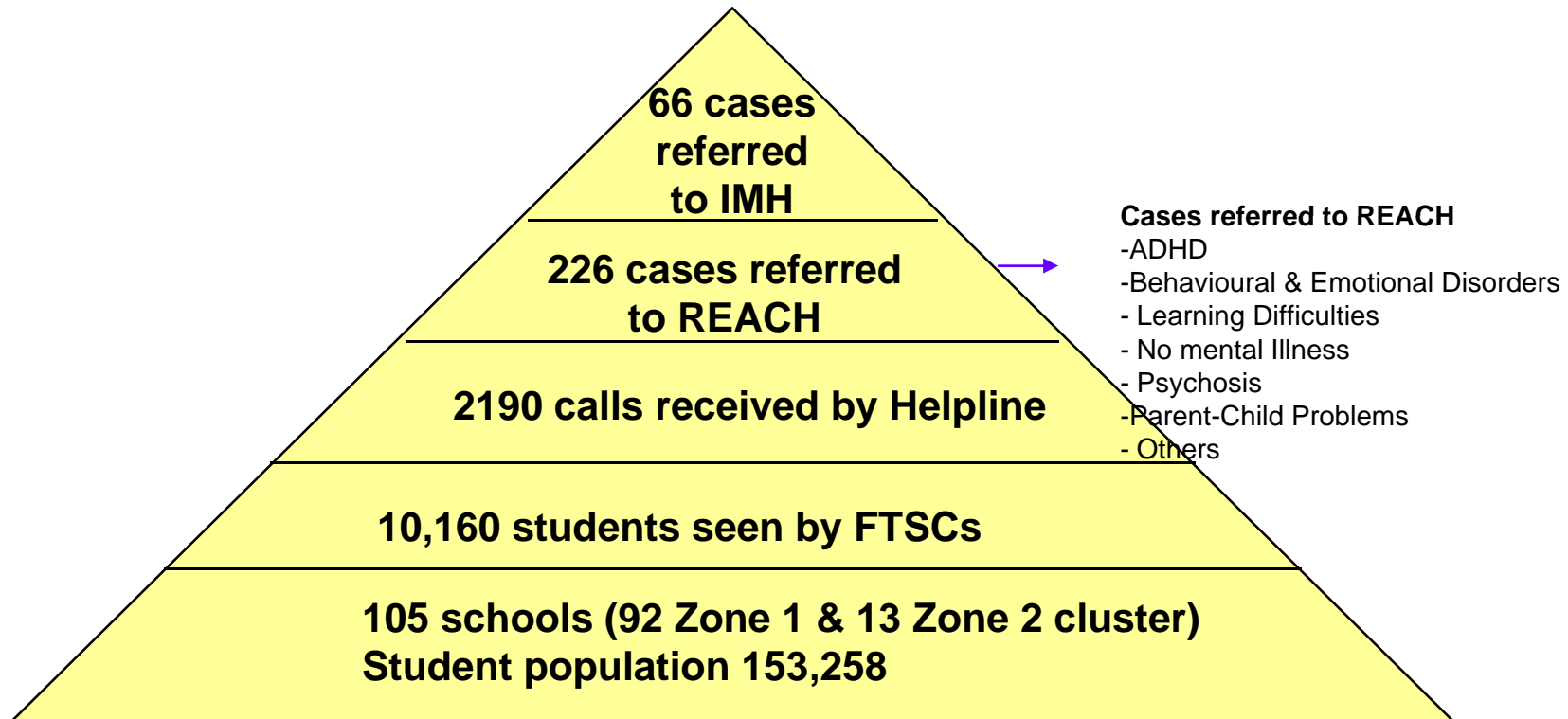




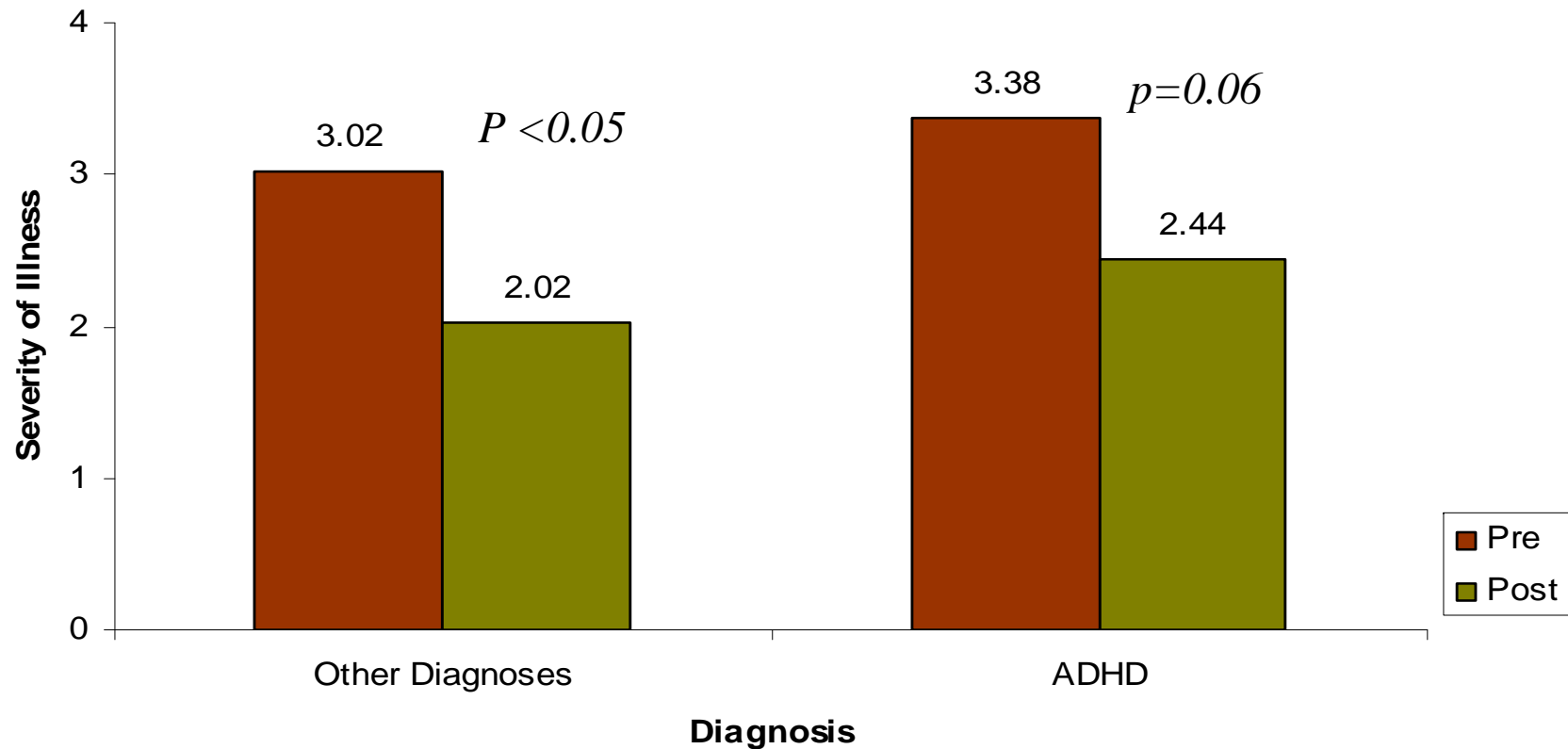
Ooi et al ASEAN J Psychiatry 2007

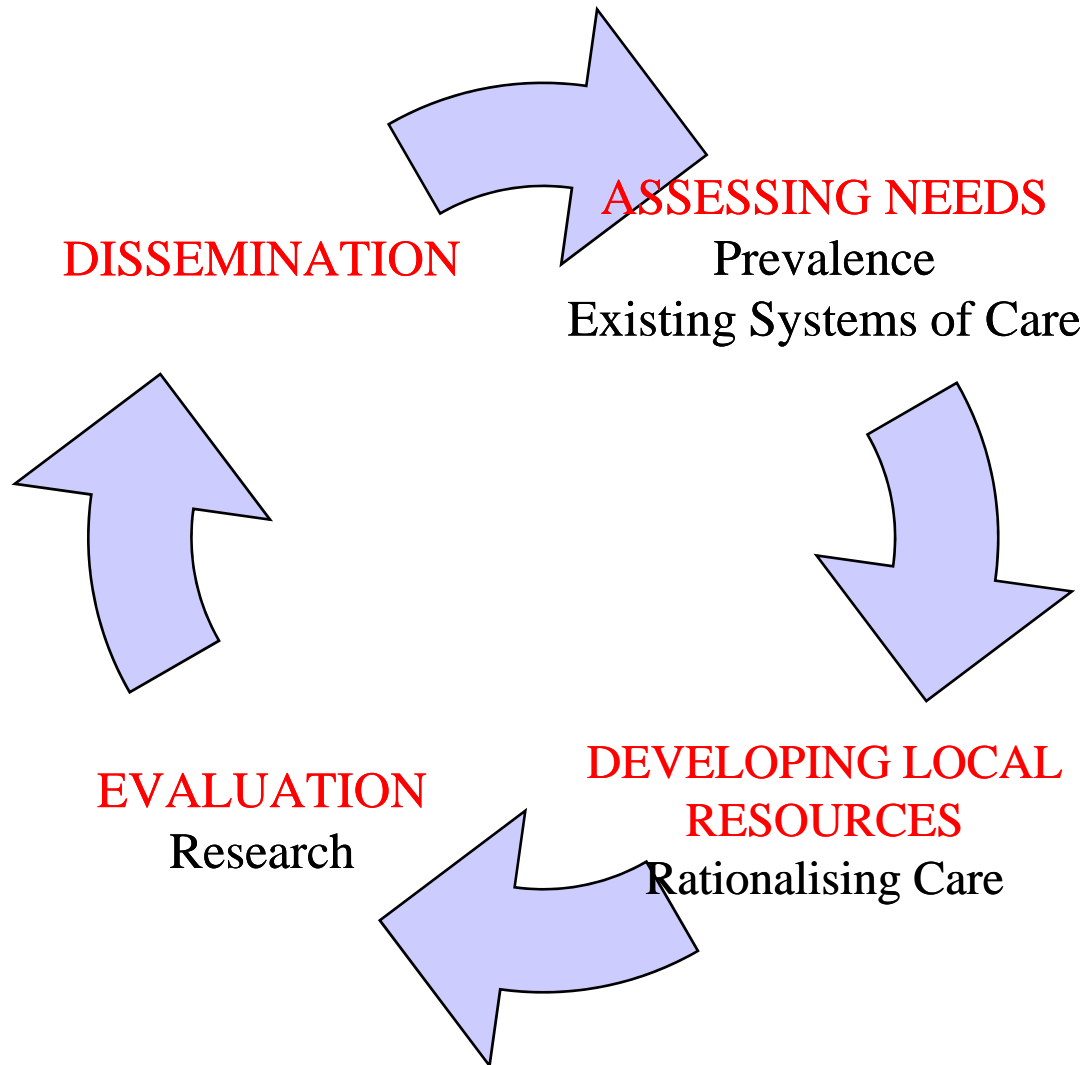
Results of Reading Interventions





ADHD (N=20) vs. Other Diagnoses (N=60) Pre and Post Comparison



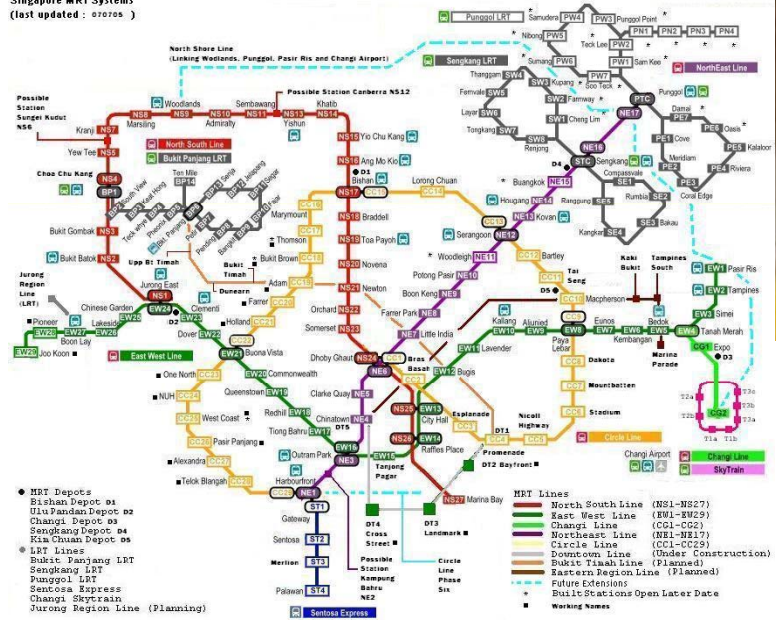


Moving Forward



Photo 2001 © Thomas Schunk

Singapore MRT Systems (last updated: 02/07/05)



- Services for the most needed
 - Juvenile forensic services
 - School dropouts
 - Special schools support
- Well developed community network
 - Partnerships with primary care providers i.e. schools, general practitioners and social service agencies





