Preschool Emotional and Social Wellbeing: A Psychiatrist’s View

25 Sep 2015
Disclosures

- **Financial** – Receives no honorarium and sponsorship from commercial and pharmaceutical companies in the last 3 years

- **Nonfinancial** – President, Singapore Association for Mental Health; Board member PLMGS; Receives no compensation as member of boards
What I will Cover

SINGAPORE WELLBEING AND ILLNESS
3 Is
ROLE OF PRESCHOOLS
### Singapore Public Healthcare System

<table>
<thead>
<tr>
<th>Service Level</th>
<th>Private GPs (80%)</th>
<th>Public Polyclinics (20%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Care</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary/Tertiary</td>
<td>Private (20%)</td>
<td>Public (80%)</td>
</tr>
<tr>
<td>Care</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Institutions:**

- Alexandra Health
- Khoo Teck Puat Hospital
- Tan Tock Seng Hospital
- SingHealth
- National University Hospital
- National University of Singapore
- National University of Singapore School of Medicine
- National Heart Centre Singapore
- National Dental Centre Singapore
- National Neuroscience Institute
- Singapore National Eye Centre
- Singapore General Hospital
- National Cancer Centre Singapore
- Polyclinics
- SingHealth
- Duke University
- St. Andrew's Community Hospital
- Eastern Health Alliance
- Peacehaven Nursing Home
- Changi General Hospital
- Jurong Health
- Yishun Community Hospital (by 2015)
- Outram Community Hospital (by 2020)
- Sengkang General Hospital (by 2018)
- Sengkang Community Hospital (by 2018)
Global Rankings of Health

6th
The World Health Report 2000
Health Systems: Improving Performance

2003
Political and Economic Risk Consultancy

4th

3rd

1st

2014

Political and Economic Risk Consultancy

2009
IMD International
Real World, Real Learning®

Loving Hearts, Beautiful Minds

A member of the National Healthcare Group
### 2005
- Land area 692.7 km²
- Pop: 4.45 million
  - 20.8% under age 14
- Ethnicity
  - Chinese (76.2%), Malays (13.8%), Indians (8.3%), Others (1.7%)
- Infant Mortality 3.6 deaths per 1000 live births
- Life expectancy at birth 79.9 yrs
- Literacy Rate 98%
- Health expenditure 1% GDP

### 2015
- Land area 716.1 km²
- Pop: 5.40 million
  - Below 15: 16%
  - 15 to 64: 73.5%
  - Above 65: 10.5%
- Ethnicity
  - Chinese (74.2%), Malays (13.3%), Indian (9.1%), Others (3.3%)
- Infant Mortality 2 per 1000 live births
- Life expectancy at birth 82.5 yrs
- Literacy Rate 100%
- Health expenditure 1.9% GDP
Expenditure on Health

2010 Public Health Expenditure per Capita
(US$ purchasing power parity-adjusted)

- Norway: $4,607
- Netherlands: $4,332
- Luxembourg (2009): $4,021
- United States: $3,967
- Denmark: $3,349
- Austria: $3,331
- Germany: $3,158
- Canada: $3,061
- France: $3,046
- Sweden: $3,000
- Belgium: $2,857
- United Kingdom: $2,662
- Ireland: $2,585
- New Zealand: $2,515
- Australia (2009): $2,496
- Japan (2009): $2,443
- Finland: $2,422
- Italy: $2,359
- Spain: $2,267
- Portugal: $2,179
- Slovenia: $2,168
- Greece: $2,131
- Switzerland: $1,628
- Czech Republic: $1,578
- Slovakia: $1,351
- Israel (2009): $1,254
- Korea: $1,185
- Hungary: $1,037
- Estonia: $1,020
- Poland: $995
- Singapore (2009): $762
- Turkey (2008): $667
- Chile: $579
- Mexico: $433

Singapore - 2014

Singapore - 2030
What’s Wrong with Medicine Today?

Good at Illness Care
Costly, Resource intensive
We see patients not people/populations
We see them late
We cannot sustain
Challenges for Singapore

2145 families interviewed in a school based study in 2004

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

Woo et al 2007 Singapore Med J

4.9% of 745,502 (population below 15) 36,530 potential patients

3319 adolescents interviewed in a school based study in 2014

12% of 990,230 (population 15-24) 118,828 potential patients
Singapore undertook a massive training and recruitment exercise to increase psychiatric manpower.

We now have >15 public sector child psychiatrists but...

We will never have enough psychiatrists!

Challenges for Singapore
Opportunity: Preschool Landscape in Singapore

Number of children in preschools in Singapore in 2013

- Total enrolment in Kindergartens: 68,002
- Total enrolment in Child Care Centres: 86,124

Source: Singapore Social Statistics in Brief 2014, MSF
Preschoolers to get mental health lessons

Focus will be on easing pupils’ anxieties as they move to Primary 1

By Lim Yan Leong

PREESCHOOLERS will soon get more lessons intended to promote mental wellness and smooth their transition to Primary 1. Using storybooks, worksheets and skits in the classroom.

Since last month, the Health Promotion Board (HPB) has been distributing a giant storybook to every preschool here.

Called Let’s Go From Kindergarten to Primary 1, it is designed to be used by teachers in the class, and to get pupils to talk about their feelings. Hence, teachers can explore and reach the pupils coping strategies.

This is the first mental wellness tool created for such young children.

“We are focusing on this because most of the stress a preschooler faces is on the transition to primary school,” said Mrs. Chang, Lim Lee Yee, deputy director of the educational institution’s outreach department at the HPB. “We want to step up efforts in terms of mental health education to address their general well-being.”

Also addressing mental health concerns of the preschool level is a skill designed for pupils to perform. Called I Am A YEP, it is about feelings and interpersonal relationships.

Two more books are planned for early next year, along with other activities.

At the launch of I Am A YEP Health conference at Republic Polytechnic yesterday, Senior Parliamentary Secretary for Education and Manpower Heng Swee Keat said that future health education efforts will “adopt a more proactive approach.”

MACC will also focus on promoting mental wellness at an early age to ensure our children have the coping skills to go through different life stages,” he said.

Some preschools have already integrated the storybook into their curriculum, while others will include it next year. At Learning Vision in Changi Business Park, it is used in two ways: As part of a project about advancing to Primary 1, and to make parents aware of the changes their children will likely undergo when making the transition.

“The book is informative because children can relate to and express their concerns and aspirations as going to primary school,” said principal Lin Sui Leng.

Ms. Yap Koon Heng, principal at My First Classroom in East Coast, said that it addresses a fear that many pupils face – feeling the new and alien environment of primary school.

“A child might not be able to tell you what he or she is feeling, they might not have the right words to express themselves, but they do understand,” she said. “With the book, they will be able to tell themselves, ‘Hey, I am not the only one in the world facing this issue.’”

The two-day conference, which opened yesterday, brings together teachers, counselors, healthcare professionals and parents. There were more than 600 participants yesterday.
In search of Happiness

umbrella term to include: positive, desirable subjective experiences that include affective and cognitive experiences.
### Child Mental Wellbeing in Singapore

**Youth Mental Wellbeing Scale for Children (aged 6 to 12)**

<table>
<thead>
<tr>
<th>Positive Functioning</th>
<th>Emotional Intelligence</th>
<th>Social Intelligence</th>
</tr>
</thead>
<tbody>
<tr>
<td>I pay attention in class</td>
<td>I feel relaxed</td>
<td>I like eating with friends</td>
</tr>
<tr>
<td>I listen to my parents</td>
<td>I feel happy with myself</td>
<td>I like playing with friends</td>
</tr>
<tr>
<td>I remember my daily lessons</td>
<td>I think my parents love me</td>
<td>I talk to my friends when I am happy or sad</td>
</tr>
<tr>
<td>I listen to others when they are talking</td>
<td>When I feel sad, I am able to make myself feel better</td>
<td></td>
</tr>
<tr>
<td>I do not stay angry or sad for long</td>
<td>I am comfortable with myself</td>
<td>I talk to my parents when I am happy or sad</td>
</tr>
<tr>
<td>I like going to school</td>
<td>I am able to ask my parents for help</td>
<td>I am able to ask my friends for help</td>
</tr>
<tr>
<td>When talking and in group activities, I take turns to participate</td>
<td>When I am bullied, I am able to get help</td>
<td>I am able to help my friends</td>
</tr>
<tr>
<td>When I fail, I try to do better</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I fail, I cry out</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can follow a timetable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can do my schoolwork</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I like to learn</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Children’s and Adolescents’ Mental Wellbeing Scales in Singapore Final Project Report*
“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”

Preamble to the Constitution of the World Health Organization 1948

Wellbeing “...continuous process of growing and thriving in an individual”

Ryffl 2001

Orthogonal: Statistically Independent

Languishing With Illness

Languishing No/Little illness

Flourishing Thriving with illness

Flourishing Thriving No illness

Good Wellbeing

Poor Wellbeing

Mental Illness

Healthy, No Mental Illness

Wellbeing of preschoolers
Strong support from family, friends and community, a child copes well with a mental illness.

Good mental health, no mental illness

They may be not be in school, living in poor housing, with little family or social support. The greatest needs for both mental health services and community support.

Child may have severe stresses on their mental health but do not have a mental illness.

Wellbeing of preschoolers

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Strategies in Preschoolers

- Skills/ Competence
- Education
- Life Crisis Management
- Social Support Systems
- Psychologically Healthy Environment
- Reduce Maladaptive Outcomes

Health Promotion

Promote

Specific Protection

Prevent

Illness Prevention

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Example: SES and the Brain

- SES disadvantages reduces brain volume, function, and cortical thickness, especially in the left hemisphere.
- Areas: Prefrontal cortex (E.g. OFC and the pACC) and the amygdala-hippocampus formation.
- Childhood adversity: Volume changes in subcortical structures (Include ventral striatum & hippocampus), and in prefrontal regions (E.g. ACC and the OFC)
- Prenatal smoke exposure: Decreased prefrontal volume and activity (Including ACC and IFG), and ventral striatum activity but with no effect on limbic areas.
301 children aged between 1.5 - 5 years from PAP kindergartens

- **10.3%** of children reported Emotionally Reactive problems
- **19.3%** of children reported Anxious/Depressed problems
- **19.6%** of children reported Somatic Complaints
- **18.9%** of children reported Withdrawn/Depressed problems

**Mental Health of Preschoolers**

- Up to **30%** of pre-schoolers have behavioural or emotion regulation difficulties
- Expulsion rate in preschool is 3 times more than in primary school

**FIGURE 1** Mean Total Problems scores from 24 societies ($N=19,850$). *Note: USA = United States of America; UAE = United Arab Emirates.*

*Rescorla et al 2011*
## Mental Health of Preschoolers

### Lian et al 2012

#### Developmental diagnosis

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>CD (%)</th>
<th>DD at 1 yr (%)</th>
<th>Sensitivity (%)</th>
<th>Specificity (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No developmental disorder</td>
<td>7.4</td>
<td>6.6</td>
<td>7.4</td>
<td>78</td>
</tr>
<tr>
<td>ASD as primary diagnosis</td>
<td></td>
<td></td>
<td>31.3 (24.1)</td>
<td>84</td>
</tr>
<tr>
<td>High functioning type/AS</td>
<td>3.9</td>
<td>3.5</td>
<td>4.4 (2.8)</td>
<td>98</td>
</tr>
<tr>
<td>Moderate</td>
<td>19.3</td>
<td>16.4</td>
<td>12.7 (7.9)</td>
<td>98</td>
</tr>
<tr>
<td>Severe</td>
<td>5.9</td>
<td>7.6</td>
<td>14.2 (13.3)</td>
<td></td>
</tr>
<tr>
<td>S&amp;L disorder unassociated with ASD *</td>
<td>26.2</td>
<td>26.4</td>
<td>30.1</td>
<td>98</td>
</tr>
<tr>
<td>Isolated S&amp;L disorder</td>
<td>15.5</td>
<td>17.7</td>
<td>14.4</td>
<td>98</td>
</tr>
<tr>
<td>Language without speech disorder</td>
<td>11.9</td>
<td>15.7</td>
<td>16.7 (9.8)</td>
<td>98</td>
</tr>
<tr>
<td>Speech without language disorder</td>
<td>3.6</td>
<td>1.3</td>
<td>3.7 (2.5)</td>
<td>98</td>
</tr>
<tr>
<td>Combination S&amp;L disorder</td>
<td>-</td>
<td>-</td>
<td>5.7 (2.7)</td>
<td>98</td>
</tr>
<tr>
<td>GDD as primary diagnosis</td>
<td>9.7</td>
<td>9.2</td>
<td>8.5</td>
<td>88</td>
</tr>
<tr>
<td>ADHD as primary diagnosis</td>
<td>5.5</td>
<td>6.6</td>
<td>7.8 (4.6)</td>
<td>98</td>
</tr>
<tr>
<td>Predominant inattentive form</td>
<td>0.9</td>
<td>0.2</td>
<td>1.5 (0.9)</td>
<td></td>
</tr>
<tr>
<td>Predominant hyperactive form</td>
<td>1.6</td>
<td>2.4</td>
<td>1.3 (0.4)</td>
<td></td>
</tr>
<tr>
<td>Combined form</td>
<td>3.1</td>
<td>4.1</td>
<td>5.0 (3.3)</td>
<td></td>
</tr>
<tr>
<td>Cognitive impairment</td>
<td>36.3</td>
<td>36.5</td>
<td>36.5 (21.6)</td>
<td>95</td>
</tr>
<tr>
<td>Cognitive Impairment without ASD</td>
<td>10.0</td>
<td>12.5</td>
<td>12.9 (6.0)</td>
<td>95</td>
</tr>
<tr>
<td>Isolated cognitive impairment</td>
<td>4.1</td>
<td>4.2</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td>Cerebral palsy</td>
<td>3.2</td>
<td>3.0</td>
<td>2.4</td>
<td>98</td>
</tr>
<tr>
<td>CP with cognitive impairment</td>
<td>0.8</td>
<td>1.3</td>
<td>1.3 (0.6)</td>
<td>98</td>
</tr>
<tr>
<td>Hypotonic</td>
<td>1.7</td>
<td>1.8</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>Spastic</td>
<td>1.4</td>
<td>0.9</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>Mixed</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Learning disability</td>
<td>3.8</td>
<td>2.6</td>
<td>4.2</td>
<td>52</td>
</tr>
<tr>
<td>Dypraxia/DCD</td>
<td>2.4</td>
<td>2.6</td>
<td>2.9</td>
<td>50</td>
</tr>
<tr>
<td>SLD without ASD *</td>
<td>2.4</td>
<td>1.1</td>
<td>1.7</td>
<td>99</td>
</tr>
<tr>
<td>Mainly behavioural/environmental problems *</td>
<td>3.1</td>
<td>3.5</td>
<td>8.3</td>
<td>99</td>
</tr>
</tbody>
</table>
Pre-school teachers’ knowledge, attitudes and practices on childhood developmental and behavioural disorders in Singapore

Wee Bin Lian, Selina Ho Kah Ying, Sylvia Choo Henn Tean, Daisy Chan Kwai Lin, Yeo Cheo Lian and Ho Lai Yng

Department of Neonatal and Developmental Medicine, Singapore General Hospital, and Child Development Unit, KK Women’s and Children’s Hospital, Singapore

Aim: Demands for diagnostic and intervention services in childhood developmental and behavioural disorders (CDD&B) have increased over the years in Singapore. With earlier enrolment of some 50,000 children in preschools, early childhood educators must be well-versed in normal development (ND) and CDD&B, to help detect children with potential difficulties and refer for early diagnosis and intervention.

Methods: Knowledge, attitudes and practices in ND and CDD&B were evaluated among 503 preschool teachers, most aged 30–40, with a median pre-school experience of 6.0 (0.1, 40) years, most had received formal training in early childhood but not specialty-related CDD&B education.

Results: A pass rate in knowledge (≥50% total score) was achieved in 55%, with the overall median total score of 50 (0, 67%). In specific domains on ND, autistic spectrum disorder and attention deficit/hyperactive disorder, pass-rate was achieved in 66%, 68% and 32%, with median block scores of 56 (0, 100), 50 (0, 100) and 40 (0, 100) respectively. Results on attitudes and perceptions revealed that most support children with CDD&B in mainstream integration and aides in the classroom, agreeing that both the government and parents should pay for such support services. Teachers most felt unequipped, further training interested them, with >90% wanting to and feeling that they could make a difference for these children.

Conclusion: This study demonstrated educational deficits in CDD&B among our preschool teachers. Yet, most care and want to improve their skills to aid integration and improve SH education, calling for more training and resource support. Necessary changes in policy and future resource allocation should occur to allow better-integrated children CSs.

Key words: childhood developmental disorders; preschool; knowledge; attitudes; training; education.

Identification of Autism Spectrum Disorders Using the Child Behavior Checklist in Singapore

Yoon Phaik Ooi · Leslie Rescorla · Rebecca P. Ang · Bernardine Woo · Daniel S. S. Fung
Expert team a phone call away

Social workers who need help with difficult cases can activate three
young nurses comprising mental health workers from the Institute of Mental
Health: EWA West reports.

# Recurrence
# Portability
# Consistency

"In a study conducted in 2015, more than 80% of the cases reported
by nurses were linked to the need for support in dealing with
complex cases. This highlights the importance of having an expert
team on standby."

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Levels of urgency:

1. First: Immediate response, where clients require immediate
   attention. This includes clients with acute needs and those
   who are at risk of self-harm or suicide.

2. Second: Urgent attention, where clients require rapid response
   but can be managed within a day or two.

3. Third: Referral, where clients require support from specialized
   services or longer-term intervention.

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INTEGRATION, IMPROVEMENT & INNOVATION

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Models of Care

Wellbeing

RTI
Response to Interventions

Illness

RTI
Response to Illness

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New Model of Care for Youths

Current Model

- Treatment (Usually in Clinics)
- Diagnosis: Labelling

Desired Model

- Individual Treatment
- Group Interventions
- No labelling
- Basic Assessment at school entry or earlier?

Etiology

Treatment (Usually in Clinics)

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Response Early intervention & Assessment in Community mental Health

1. Professional Helpline
2. Training and Capability Building
   - Educational Psychologists
   - Social workers
   - Counsellors
   - Schools, IHLs
3. Establishing Community Networks

- Family
- GPs
- Medical Services

- 70% Response Early intervention & Assessment in Community mental Health
- 20%

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Roles of REACH

- **Clinical Services**
  - Advice on mental health issues through the REACH helpline
  - Responsive evaluation of referred students through triaging system
  - Early intervention of common child mental health problems e.g. school refusal, ADHD, Anxiety etc.

- **Training**
  - Training of school counsellors in identifying and managing mental health issues, as well as in mental health promotion.
  - Training of GPs & staff of social service agencies in managing mental health problems

- **Networking/Integrating care**
  - Facilitate linkages between schools, social & community agencies, GPs & mental health service providers to integrate care processes
  - Inter-agency consultation & case conference
Collaboration Within Healthcare

North Zone

KTPH
CGC@IMH
NAMS relive

South Zone

NUHS
KKH

West Zone

CGC@HPB

East Zone

REACH East
@SACH

REACH West
CHAT@scape
Collaboration Outside Healthcare

North Zone
- KTPH
- REACH
- CGC@IMH
- NAMS relive

West Zone
- Fei Yue
- Rainbow Centre
- CGC@BP
- REACH @Cantonment

South Zone
- NUHS
- REACH West
- KKH
- CHAT@scape

East Zone
- REACH East
- REACH @SACH
- ST. ANDREW’S AUTISM CENTRE

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Community Centric Model

Anually

55,000 students seeing Counsellors
372 schools
513,968 students

Schools, IHLs

7000 calls
800 referred
800 case conferences

Social Services

4 hospitals
IMH, KKH, NUHS KTPH

Medical Services
31 GP Partners
45 GPs trained per year

800 seen

800 referred

Family
Outcomes: Value Compass

- Clinical Status
- Patient Satisfaction
- Cost
- Health Related Quality of Life
### Outcomes

**Clinical Status**

**Patient Satisfaction**

- **Health Related Quality of Life**

- **Strength and Difficulties**
  - **Pre**
  - **Post**

- **CGAS**
  - **Pre**
  - **Post**

<table>
<thead>
<tr>
<th>Health Related Quality of Life</th>
<th>Community-based care</th>
<th>Hospital-based care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost over 6 months</strong></td>
<td>$1,609.63</td>
<td>$2,623.00</td>
</tr>
<tr>
<td><strong>Incremental cost</strong></td>
<td>-$1,013.37</td>
<td></td>
</tr>
<tr>
<td><strong>Diff bet. Hospital &amp; Community Care</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>QALY</strong></td>
<td>0.065</td>
<td>0.010</td>
</tr>
<tr>
<td>Change (95% CI) in EQ-5D utility scores after adjusted for age, gender, ethnicity &amp; CGI scores</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Incremental QALY</strong></td>
<td>0.055 (-0.027, -0.338)</td>
<td></td>
</tr>
<tr>
<td>Using upper &amp; lower 95% CI of EQ-5D change scores</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cost per QALY gained</strong></td>
<td>-$18,307.64 (-$18,672.69, $1,499.15)</td>
<td></td>
</tr>
</tbody>
</table>
10 out of 100 children have emotional/behavioural problems.

9 out of 100 children can be supported in the community.

By primary healthcare and social service providers.

1 in 100 will require specialist care services.

A member of the National Healthcare Group.
10 out of 100 children have emotional/behavioural problems

Community Care

Community Teams led by Public Hospitals

Preschoolers School-going

REACH Plus

Specialist Care

High-dependency inpatient unit
Wellbeing of preschoolers

- Good Mental Health
- Healthy, No Mental Illness
- Poor Mental Health
- Mental Illness

- Reclaim
- Promote
- Treat
- Prevent

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Getting help for preschoolers

Reclaim Primary Care

Treat Community Teams

Secondary Care Clinics

Tertiary Care Hospitals

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Why Improve?

- Desired outcomes of education
  - a **confident person**
  - a **self-directed learner**
  - an **active contributor**
  - a **concerned citizen**

- Actual outcomes in mental disorders?
  - Lack of confidence; poor self esteem
  - Need a lot of support
  - Contribution sporadic
  - Lack of social skills
Interpreting Parents’ Concerns About Their Children’s Development With the Parents Evaluation of Developmental Status: Culture Matters

Jennifer S.H. Kiing, FRACP,* Poh Sim Low, MD, FRCPCH, FRCP (Ed), FRACP,† Yiong Huak Chan, PhD,‡ Maureen Neithart, PsyD.§

World Perspectives

Objectives: This study explored the potential roles and utility of the Parents Evaluation of Developmental Status (PEDS) to screen children for developmental delays in a Southeast Asian clinical sample of preschool children. The PEDS is a 10-item questionnaire instrument used in pediatric settings for reporting parents’ concerns for their children’s development, learning, and behavior. Clinicians use it to make decisions about clinical pathways for high-, moderate-, and low-risk categories of concerns, but its utility in cross-cultural contexts has not been well documented. Methods: Participants in this study were 1806 parents, teachers, and child care workers of preschool children in Singapore. Of these, 47.2% were English speaking, 21.2% were Mandarin Chinese speaking, and 31.6% were Malay speaking. PEDS was translated into Chinese and Malay for parents using these languages predominately. Results: Only parent results were analyzed. The reporting of significant parental concern was considerably higher than US norms and Australian pilot figures when western cutoff scores were applied. When cutoff scores were adjusted, similar patterns of reporting of high, medium, and low risk for disability could be captured. Conclusions: Parents’ interpretation of the concept of “concern” varies across language and culture. Findings highlight the importance of evaluating a screening tool’s use in local contexts before its widespread implementation to yield clinically meaningful results.

INDEX TERMS: child development, developmental delay, screening, Asia, PEDS, risk categories.
Over reliance on medicines

- Very poor evidence base
- Medications widely used but usually as chemical restraints
- Effective in some conditions e.g. ADHD
- Beware of side effects especially in preschoolers
Standardising Treatments

Autism Spectrum Disorders in Pre-School Children

AMS-MOH Clinical Practice Guidelines 1/2010

Attention Deficit Hyperactivity Disorder

AMS-MOH Clinical Practice Guidelines 1/2014
Psychosocial Interventions

Behavioural Tools
Largely Parent/ Teacher administered
Reward positive effort and penalise impulsivity

A Parent’s Guide to Children’s Behaviour
Psychosocial Interventions

**Psychological Tools**
Activating the Affective Mechanism:
- promote motivation to learn,
- raise self confidence,
- ownership in learning.
- Encourage Self monitoring.
- Mediated Learning.

**Cognitive Tools**
- Attention building tasks
- Training on Reading/decoding
- Explicit Auditory-Visual Clustering of Letters
- Improve Speed of Retrieval in Sound and Spelling Patterns
- Awareness of Orthographic Structures
- Training in Sentence Recall (Verbal Working Memory)

**Behavioural Tools**
- Largely Parent/Teacher administered
- Reward positive effort
- Penalise impulsivity
Psychosocial Interventions

Behavioral Tools

- ROC and ASH: Legend of the Snow Orchard
- RegnaTales
- meekymouse workbook

Web-based, video, mobile

Cognitive Tools

- Attention building tasks
- Training on Reading/decoding
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Psychological Tools

- Activating the Affective Mechanism: promote motivation to learn, raise self-confidence, ownership in learning.
- Encourage self-monitoring.

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Why Change?

Every system is perfectly designed to achieve what it was designed to achieve.
Types of Change

Improvement

Innovation

Is Disruptive
Preschool Mental Health

ROLE OF PRESCHOOLS

Image source: (URL) A Day at an MOE Kindergarten
The Dubious Promise of Universal Preschool

David J. Armor and Sonia Sousa

In his 2013 State of the Union address, President Obama proposed a “Preschool for All” initiative, pledging $75 billion in new federal funding over a period of ten years. In a partnership with the states, the federal government would provide the majority of funds needed for the implementation of “high-quality” preschool for all four-year-old children whose families make up to 200% of the poverty line.
Preschool Mental Health

It is an approach to improving the mental health outcomes of an entire school (adapted from Kindig & Stoddard 2003)

Child’s Needs
- Physical
- Cognitive
- Emotional
- Social
- Spiritual/Moral

Parental Expectations
- Aim high
- Be realistic

Teacher’s Stress

The key to teachers’ happiness

Loving Hearts, Beautiful Minds
A member of the National Healthcare Group
Resilience: Singapore Example 1

Risk factors associated with internalising problems

Mothers being single, divorced, widowed, deceased
  *Adjusted OR 3.6, 95%CI 1.6-8.0
Low intellectual ability
  *Adjusted OR 3.0, 95%CI 1.2-7.5
Older age
  *Adjusted OR 2.4, 95%CI 1.0-5.7
Being cared for primarily by domestic maids, day care service providers, foster parents
  *Adjusted OR 2.2, 95%CI 1.2-3.8

Risk factors associated with externalising problems

Fathers being less educated
  *Adjusted OR 6.5, 95%CI 1.4-30.4
Low intellectual ability
  *Adjusted OR 3.5, 95%CI 1.2-10.0
Being cared for primarily by domestic maids, day care service providers, foster parents
  *Adjusted OR 3.2, 95%CI 1.4-7.7

*OR adjusted for age, gender, ethnicity, intelligence level, marital status, parents’ educational level, parents’ occupation, primary caregiver, number of siblings, residential type. All results significant at p < 0.05

Woo et al 2007
Resilience: Singapore Example II

149 parents of children with special needs (developmental disorders and intellectual disability)

CARING FOR SPECIAL NEEDS CHILDREN

- Demand of Care
- Socioeconomic Status
- Social Support
- Perceived vs. Enacted

COPING RESPONSE

- Perceived Burden
- Coping style
- Hope & Optimism
- Hope & Optimism

OUTCOME

- Resilience
- Caregiver’s expectation of child’s outcome
- Caregiver’s outcome
  - Subjective well-being
  - General Health

Su LY et al 2009
Resilience: Singapore Example III

• Resilience often studied as an individual adaptive mechanism
• Family plays a prominent role in an individual’s life and provides financial, social and emotional support for the individual
• Family resilience is measured as:
  1. Family solidarity (the bonding, care and love within the family)
  2. Meaning-making (making sense of life situations)
  3. Spirituality (faith in God / ancestors worshipping)
  4. Emotion-regulation
Resilience: Singapore Example III

188 participants: 111 nurses and 77 family members from two Singapore hospitals affected by SARS in 2003.

<table>
<thead>
<tr>
<th>Family-unit variables</th>
<th>FR (Mean)</th>
<th>FR (SD)</th>
<th>SWB</th>
<th>Anxiety</th>
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<td>.26*</td>
</tr>
<tr>
<td>SWB</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-.61**</td>
</tr>
</tbody>
</table>

*p<.01, **p<.001

Note. FR=family resilience; SWB = Subjective well being.

Isnis et al 2009
“The perinatal environment affects the epigenetic state of genes in offspring tissues that, in turn, affect metabolic and neural development and function ... for our understanding of how the mother’s nutrition and lifestyle have long-lasting effects on the health of the offspring.”
Towards Resilient Prechools

• Wide range of outcomes to similar risks
• Resilience may be the result of individual variations in the absence of negative environmental hazards
• Resilience may come from coping processes rather than external risk or protective factors
• Family resilience is linked to individual resilience
• Resilience may be affected by genes or by the damaging effects of stress/adversity on the brain
Towards Resilient Prechools

Coping skills
- Self esteem
- Self efficacy
- Training opportunities

Good Relationships
- Parent Support Groups
- Caregivers
- Staff
- Students

School
- Identify at risk children
- Cyberwellness
- Protect against abuse, bullying
- Prevent dropout

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Thank You

A Member of the National Healthcare Group
3 Observations

**The haze situation**

**Major Palm Oil Suppliers**
and the Trend to Forest Conservation and Human Rights

**Category Indicators**

- **GREEN TIGERS:** RESPONSIBLE SUPPLIERS
- **YELLOW LIST:** SERIOUS ISSUES IN SUPPLY CHAIN
- **RED LIST:** IRRESPONSIBLE SUPPLIERS

- **Category Indicators**
  - Good to excellent performance
  - Changing or ambiguous performance, or inadequate data provided
  - Poor Performance

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**FOR EMPLOYERS**
- Provide N95 masks to susceptible employees carrying out outdoor work
- Deploy susceptible employees to work indoors where possible
- Preferably doing work which is not physically strenuous

**TIPS ON WEARING MASKS**
- Elderly, people with chronic lung disease, heart disease or stroke have reduced lung volumes and should stop using a N95 mask if they feel uncomfortable. They should consult their doctor about whether they can use the N95 mask.
- Similarly, women in the 2nd and 3rd trimesters of pregnancy also have reduced lung volumes and should use the N95 mask for a short duration each time. They should also consult their doctor before using the mask.

**FOR THE GENERAL PUBLIC**
- Minimise prolonged or strenuous outdoor physical activity
- Avoid all outdoor activities if outdoor activity is unavoidable, wear an N95 mask*.

*The use of N95 mask increases the effort in breathing and may cause discomfort, tiredness or headaches. For most people this is not serious.

Source: NEA

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**FOR THE GENERAL PUBLIC**
- Healthy people
- Minimise prolonged or strenuous outdoor physical activity
- Elderly, pregnant women, children
- Minimise prolonged outdoor activity
- Persons with chronic lung disease, heart disease, or stroke
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3 Observations

• Why?
  – We need a sustainable future
  – Disruptive Innovation
  – It starts with me
3 Observations

SinglishTeaTime
By Singaporean students from the Renaissance Engineering Programme in Europe.

Working in Woking