

Some Research on Resilience in Singapore

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*How resilient can Man be when Mother Nature
unleashes her **wrath**?*



26 December 2004 TSUNAMI



“Killed between 176,665 and 184,378 people in Asia and Africa...”

26 December 2004 TSUNAMI



“49,622 and 50,533 people remain unaccounted for”

“Expected to take four years to rebuild much of the parts of south Asia”

More than A Year Later.....



*"I praise your courage and
resilience..."*

*Pakistan President Pervez Musharraf,
09 October 2006*



**1995
KOBE
QUAKE**



5100 deaths



WTC 9/11

*Man becomes the master
of difficult situations by
refusing the assistance of
weak man.*

*He relies on his own
strength of character.*

I Ching



*The gem cannot be polished without friction, nor man
perfected without trials.* *Chinese Saying*



A local gem who has been through many trials and friction in life...

Elizabeth Choy



“Locked up and tortured for 193 days....”



“War Tribunal asked the war heroine if she wanted her torturers executed...”

Her reply:

“If not for war, they would be just like me. They would be at home with their family, doing just ordinary things and peaceful work. Let us pray that there will be no more war...”

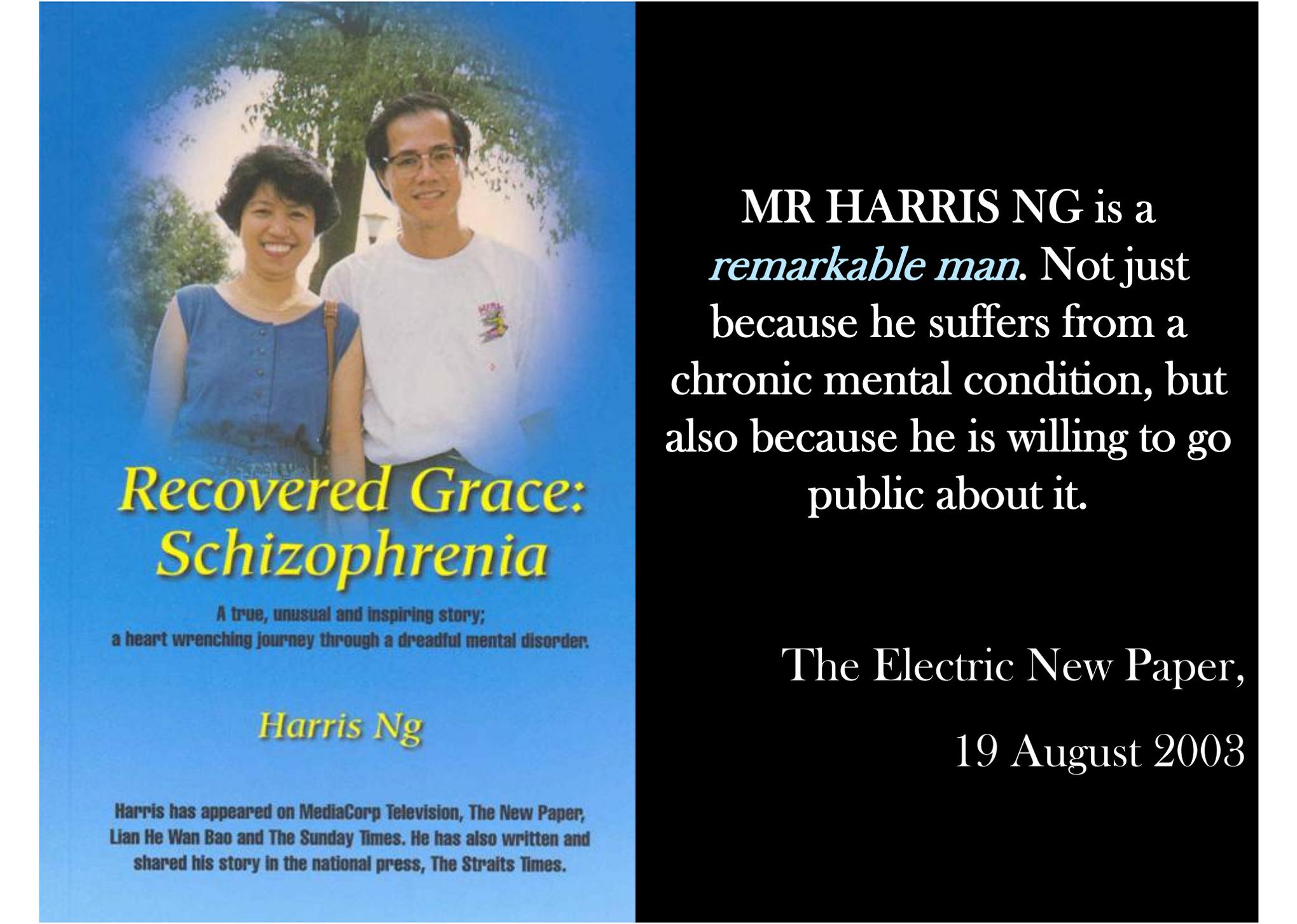
The weak can never forgive. Forgiveness is an attribute of the strong.

Mahatma Gandhi



*Elizabeth Choy could **FORGIVE** her torturers and move on in life...*

How many people could do that?



*Recovered Grace:
Schizophrenia*

A true, unusual and inspiring story;
a heart wrenching journey through a dreadful mental disorder.

Harris Ng

Harris has appeared on MediaCorp Television, The New Paper,
Lian He Wan Bao and The Sunday Times. He has also written and
shared his story in the national press, The Straits Times.

MR HARRIS NG is a
remarkable man. Not just
because he suffers from a
chronic mental condition, but
also because he is willing to go
public about it.

The Electric New Paper,

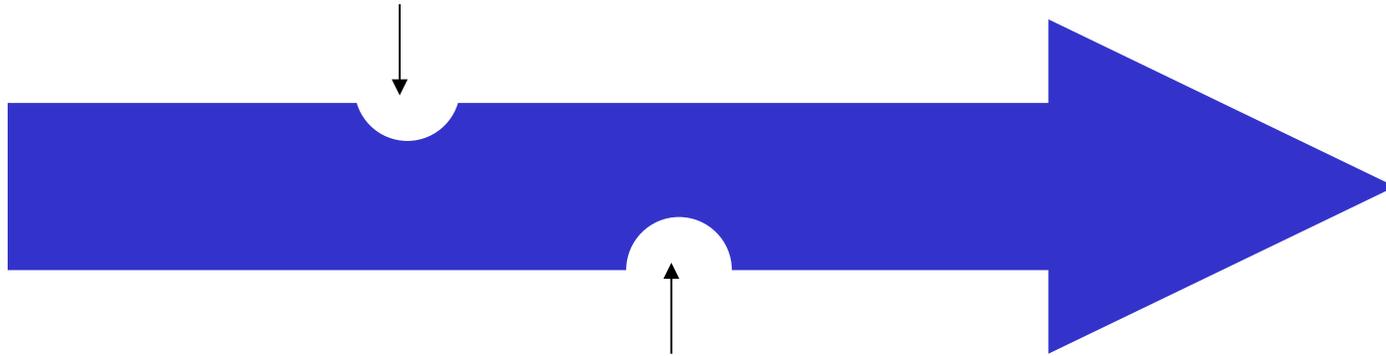
19 August 2003

“If you treat an individual as he is, he will stay as he is, but if you treat him as if he were what he ought to be & could be, he will become what he ought to be & could be.”

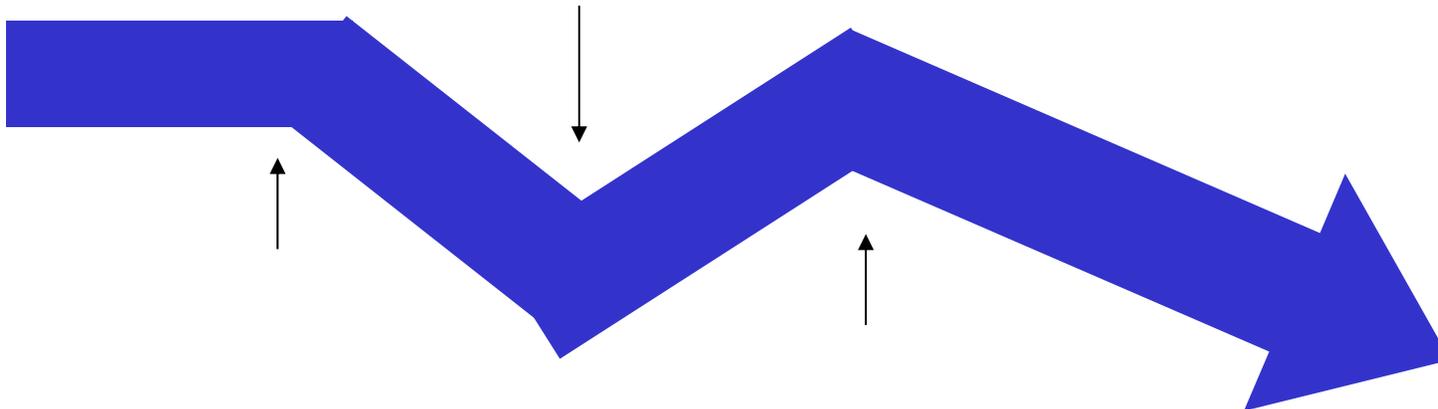
Johann Wolfgang von Goethe

What is Resilience?

- Robustness: Ability to withstand stress

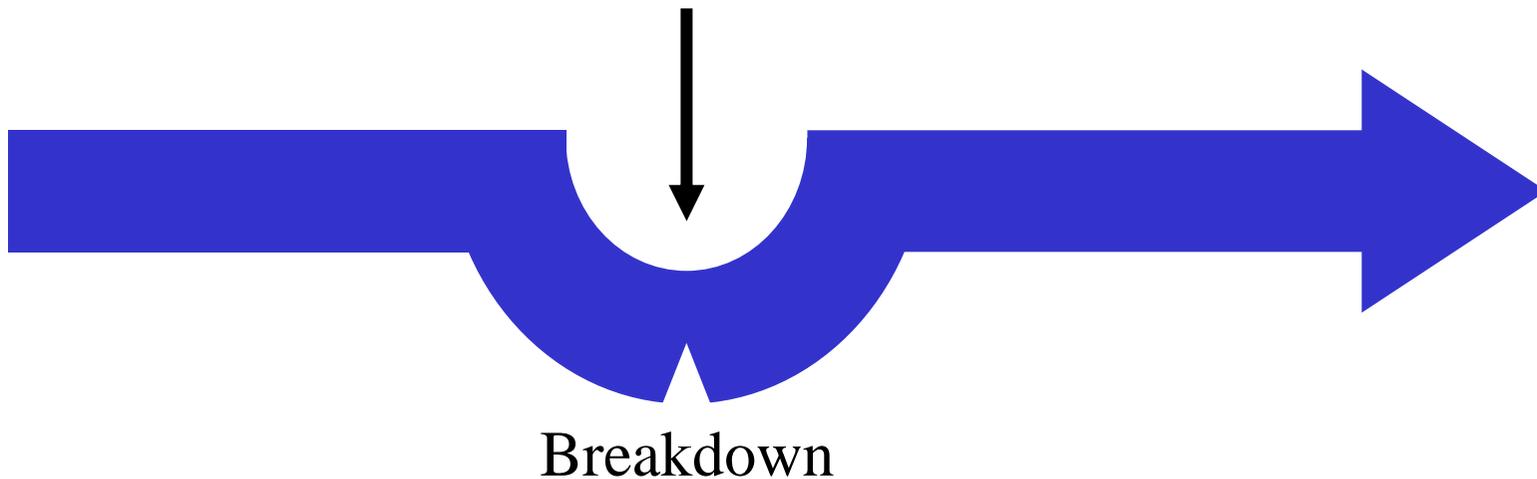


- Flexibility: Ability to change with stress



What is Resilience?

- Resilience:
 - The **overcoming** of stress or adversity
 - A relatively **good outcome** despite risk experiences



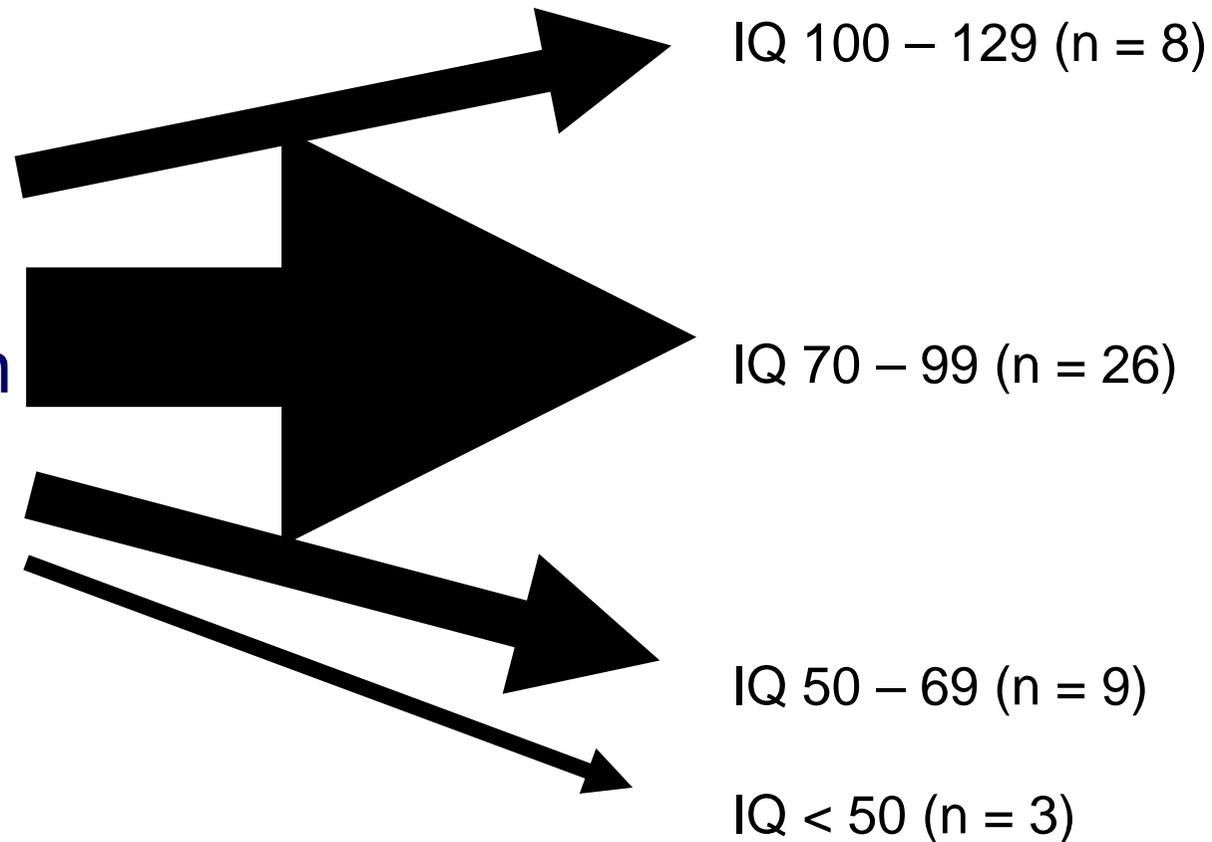
What is Resilience?

- Many different definitions
- It is NOT social emotional wellbeing (or competence)
- It is NOT mental wellness
- Michael Rutter: Relative **resistance** to environmental **risk** experiences

Example of Resilience

IQ SCORES AT 11 YEARS OF ROMANIAN ADOPTEES WHO
CAME TO UK AGED 2-3½ YEARS

Profound
early
deprivation





Risk Factors in Singapore Children

Risk Factors Associated With Emotional & Behavioural Problems In Singaporean Children

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Methods

Sampling frame from MOE
Primary school children aged 6 to 12



2 stage sampling technique
Random sample of 18 of the 178 primary schools in Singapore
Random sample of students from each school proportional to size of school

Informed consent
Obtained from parents of children eligible to participate in study



N=2141 (68%)

Measures

- Child Behaviour Checklist (Achenbach & Edelbrock, 1992):
 - Parent-reported, 118 items, broad range of emotional & behavioural difficulties in children aged 4-18, 6-month period
 - Widely used throughout the world, satisfactory reliability & validity
 - 8 syndromes: Withdrawn, Somatic Complaints, Anxious/Depressed, Social Problems, Thought Problems, Attention Problems, Delinquent Behaviour, Aggressive Behaviour
 - 2 syndrome groups: Internalising & Externalising Problems
 - Total Problems score
- Socio-demographic information:
 - Age, gender, ethnicity
 - Parents' marital status, educational level & occupation
 - Number of siblings, residential type, primary caregiver
- Raven's Progressive Matrices (Raven et al, 2000):
 - Paper & pencil IQ test

Data Analysis

- Children who scored at or above the clinical cut-point on the CBCL were compared to those who scored below the cut-point
- Multivariate logistic regression was performed to determine the risk factors independently associated with mental health problems.

Results

Socio-demographic characteristics of children (n=2141)

	%		%
Male	50.1	Mother: Married	91.5
Female	49.9	Single/divorced	8.5
6-8yr	29.1	Father: Primary	19.0
9-10yr	33.4	Secondary	44.0
11-12yr	37.5	Pre-U	17.6
		Tertiary	19.4
Chinese	76.0		
Malay	14.5	HDB	80.8
Indian/others	9.5	Private	19.2

Risk factors associated with mental health problems

Male gender

*Adjusted OR 2.1, 95% CI 1.4-3.1

Low intellectual ability

*Adjusted OR 3.4, 95% CI 1.5-7.9

Mothers being single, divorced, widowed, deceased

*Adjusted OR 2.9, 95% CI 1.3-6.5

Being cared for primarily by domestic maids, day care service providers, foster parents

*Adjusted OR 1.8, 95% CI 1.0-3.2

*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 $p < 0.05$

Risk factors associated with internalising problems

Older age

*Adjusted OR 2.4, 95%CI 1.0-5.7

Low intellectual ability

*Adjusted OR 3.0, 95%CI 1.2-7.5

Mothers being single, divorced, widowed, deceased

*Adjusted OR 3.6, 95%CI 1.6-8.0

Being cared for primarily by domestic maids, day care service providers, foster parents

*Adjusted OR 2.2, 95%CI 1.2-3.8

*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 $p < 0.05$

Risk factors associated with externalising problems

Low intellectual ability

*Adjusted OR 3.5, 95% CI 1.2-10.0

Fathers being less educated

*Adjusted OR 6.5, 95% CI 1.4-30.4

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 $p < 0.05$

Discussion

- Mental health problems in Singaporean children are associated with multiple risk factors, the most significant being
 - Low intellectual ability
 - Parents being single, divorced, widowed or deceased.
- Protective factors
 - High intellectual ability
 - Being cared for by primarily by parents or grandparents.
- No significant associations were found between mental health problems and ethnicity, number of siblings and residential type.
- Clinical implications
 - More community support for families whose parents are single, divorced, widowed or deceased.
 - Learning support for children with learning difficulties.
 - Close collaboration between child mental health professionals and educationists.

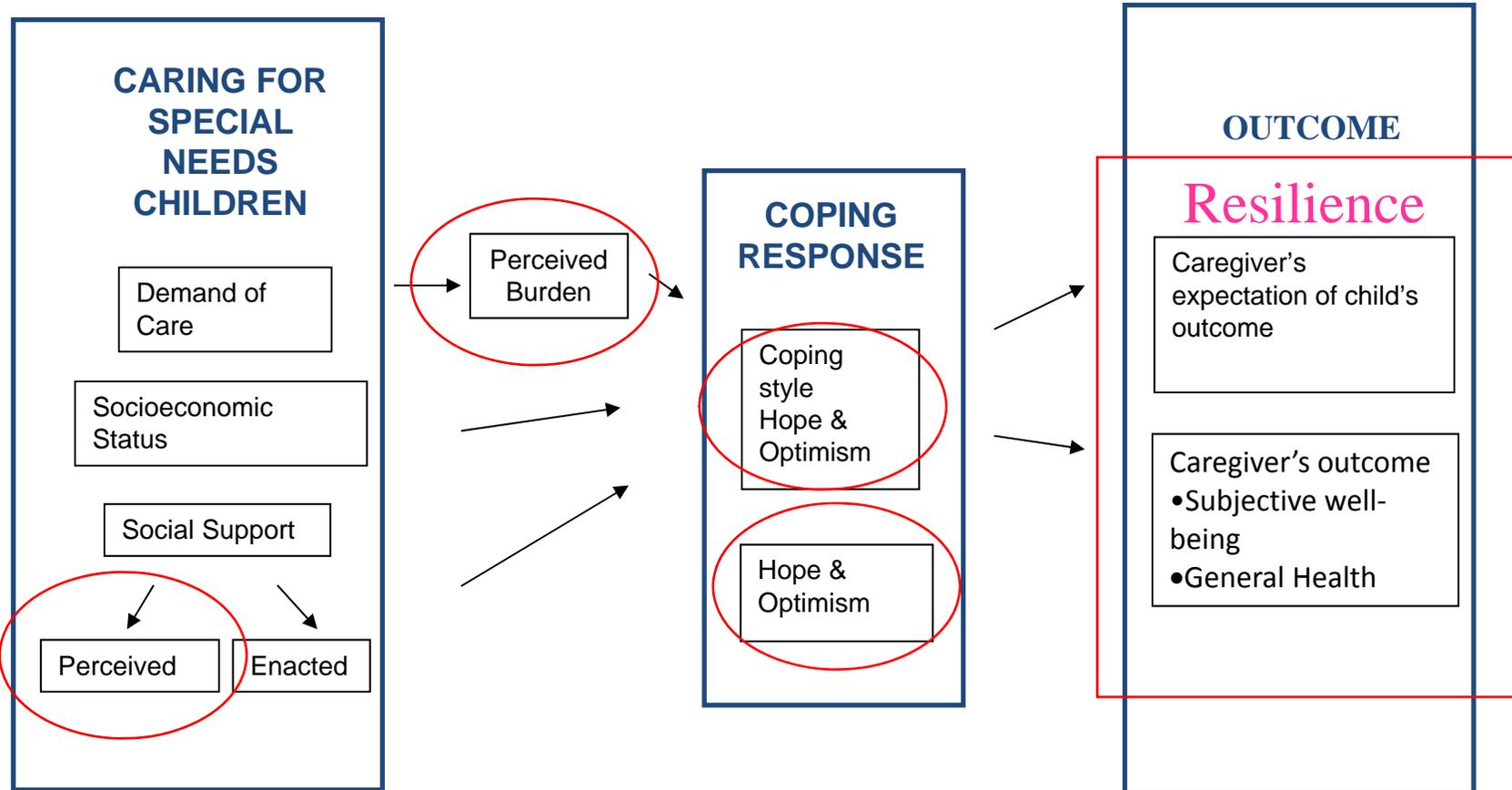


Conclusions

Singapore Example II

- 149 parents of children with special needs (developmental disorders and intellectual disability)
- 119 females (79.9%) and 29 males (19.5%)
- Most parents were within 30-49 years of age
 - 52.3% of parents in the median age group of 40-49
 - 38.9% of parents from 30-39 years
- 75.2% were Chinese, 13.4% were Malays, 6.7% were Indians and 4.7% were of other ethnicities.
- 36.9% of this population was Christians, 27.5% were Buddhists, 15.4% was Muslims and 18.8% had other religions.
- Most parents were married (91.3%)
- 51.7% of the parents had full-time jobs

Singapore Example II



Family Resilience

- 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:
 - Family solidarity (the bonding, care and love within the family)
 - Meaning-making (making sense of life situations)
 - Spirituality (faith in God / ancestors worshipping)
 - Emotion-regulation

Family Resilience

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

Family-unit variables	FR (Mean)	FR (SD)	SWB	Anxiety
FR (Mean)	-	-.16	.50**	-.21
FR (SD)	-	-	-.19	.26*
SWB	-	-	-	-.61**

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

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

“Steeling” Effects

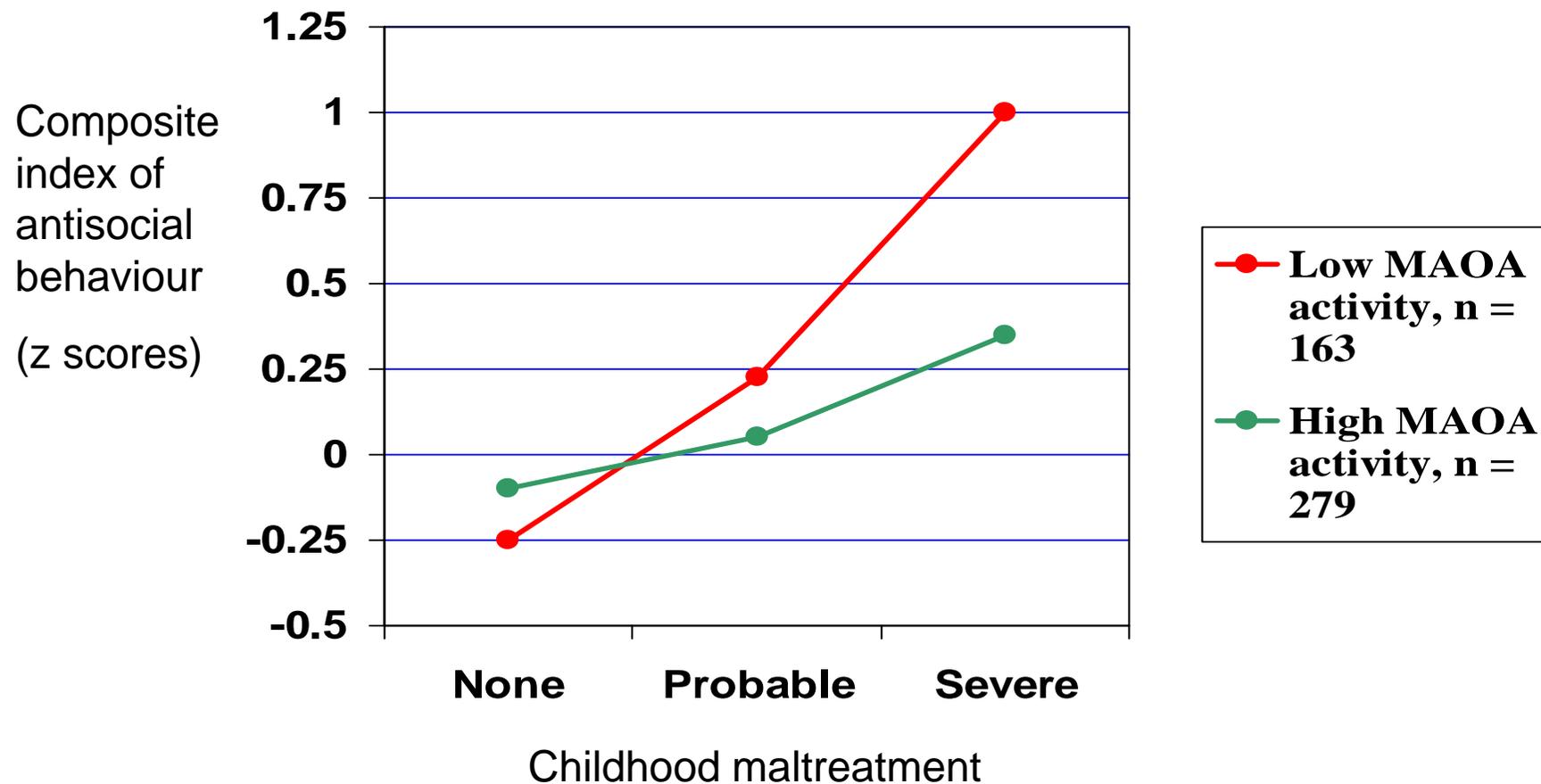
- Experimental stress in animals leads to beneficial effects on the neuroendocrine system.
- Repeated parachute jumping leads to physiological adaptation.
- Exposure to infections leads to relative immunity.
- Experience of happy separations in early childhood leads to better adaptation to hospital admission.
- Experience in older children of coping with family poverty may lead to psychological strengths.

Reasons for “Steeling”

- Physiological adaptation
- Psychological habituation (mental preparedness)
- Sense of self-efficacy (competence)
- Acquisition of effective coping strategies (problem solving)
- Cognitive redefinition of the experience (reframing)

Gene and Environmental Interactions

ANTISOCIAL BEHAVIOUR AS A FUNCTION OF MAOA ACTIVITY AND A CHILDHOOD HISTORY OF MALTREATMENT (Caspi et al., 2002)



What have we learned?

1. Wide range of outcomes to similar risks
2. Resilience may be the result of individual variations in the absence of negative environmental hazards
3. Resilience may come from physiological or psychological coping processes rather than external risk or protective factors
4. Family resilience is linked to individual resilience
5. Resilience may be affected by genes or by the damaging effects of stress/adversity on the brain

Promoting Resilience

Fostering protective qualities

- good intelligence / scholastic achievement
- secure selective attachments
- multiple harmonious relationships
- sense of self-efficacy
- range of social problem-solving skills
- positive social interactional style
- flexible, adaptive approach to new situations

Promoting Resilience

Provision of range of adaptive experiences

- opportunities to cope successfully with
- challenges / stresses within the individual's capacity
- opportunities to succeed in range of settings and circumstances

Managing Adversity

Dilution of impact of stress / adversity

- Provision of alternative sources of support / relationships etc
- Fostering social problem solving / self-efficacy / adaptive coping
- Fostering positive adaptive cognitive set
- Avoidance of damaging coping strategies (such as reliance on drugs, destructive anger, 'giving up')

After Negative Experiences

Focus on 'turning point' experiences that:

- Provide new opportunities that involve a break with the negative aspects of the past
- Provide a change of mental set
- Provide improved coping strategies

Summary

- Reduction of impact of adversity on the individual
- Reduction of negative chain reactions
- Increasing positive chain reactions
- Opening up opportunities
- Neutralising experiences
- Positive cognitive processing of experiences

In Conclusion

- **F**eel good about themselves
- **R**elate well with their families, caregivers and peers
- **E**nabled resilience
- **E**mpowered from harm





Thank You

