



**Psychometric Evaluation of the
Traditional Chinese Version of
Resilience Scale-14 in Assessing
The Resilience Level of Hong Kong Adolescents**

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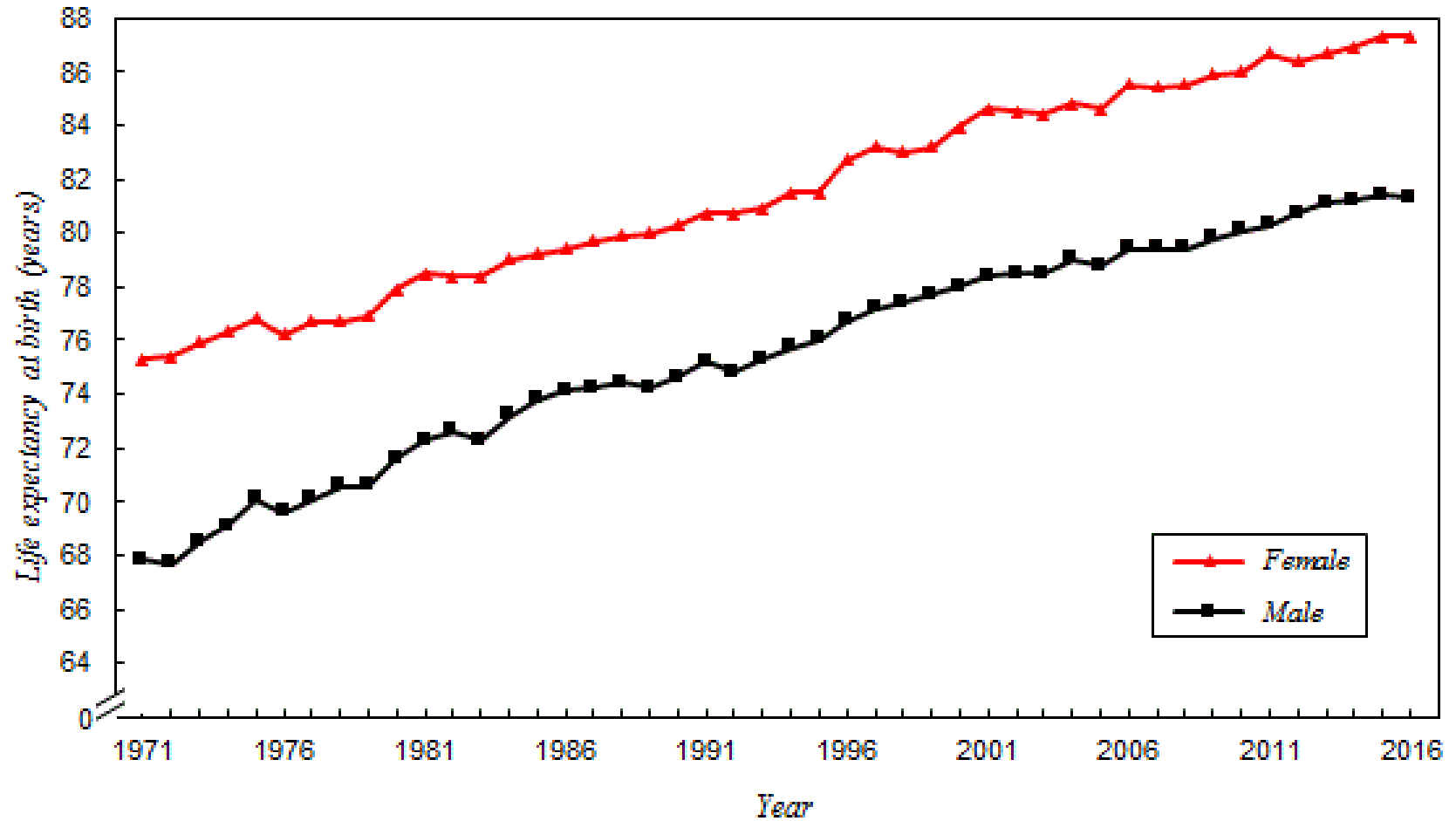
Outlines of Presentation

- **Background on mental health well-being of Hong Kong adolescents**
- **The importance of assessing resilience in adolescents**
- **A study on psychometric evaluation of the traditional Chinese version of Resilience Scale-14 (RS-14)**

Hong Kong has undergone significant changes over the past few decades



Life Expectancy at Birth (Male and Female), 1971 - 2016



Standard of living in Hong Kong

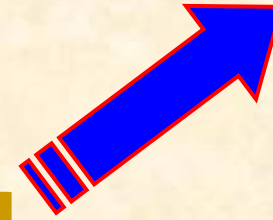
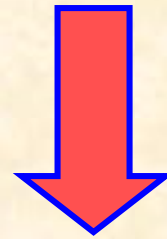
Public Housing Estate in 2000



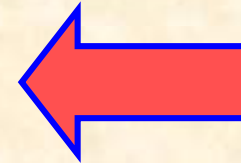
Health Care System

Abuse

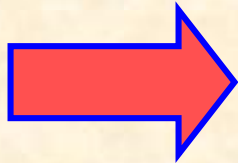
Neglect



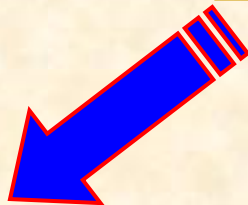
Education



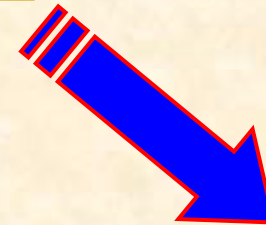
Law



Exploitation



Violence

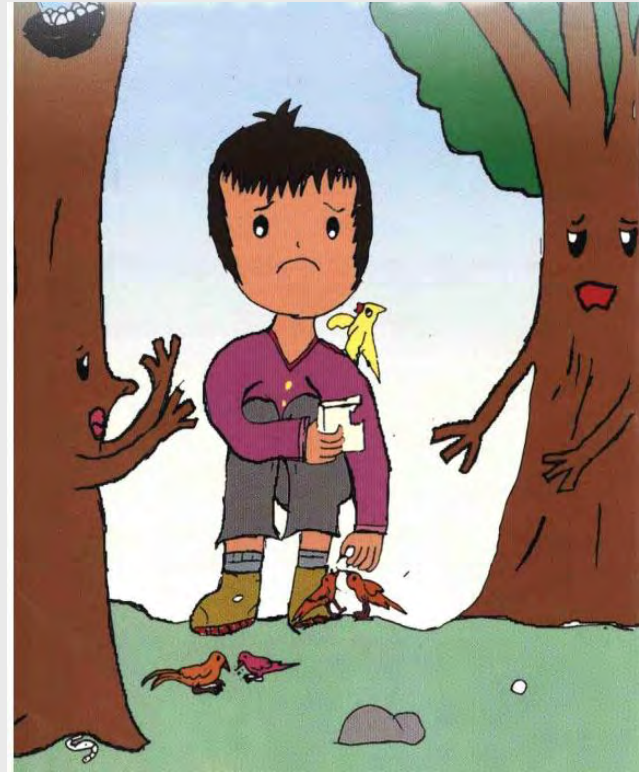


Standard of Living

Unfortunately, ...



Physically fit



At risk for

Mental health problem

**Mental
Health
Problems**



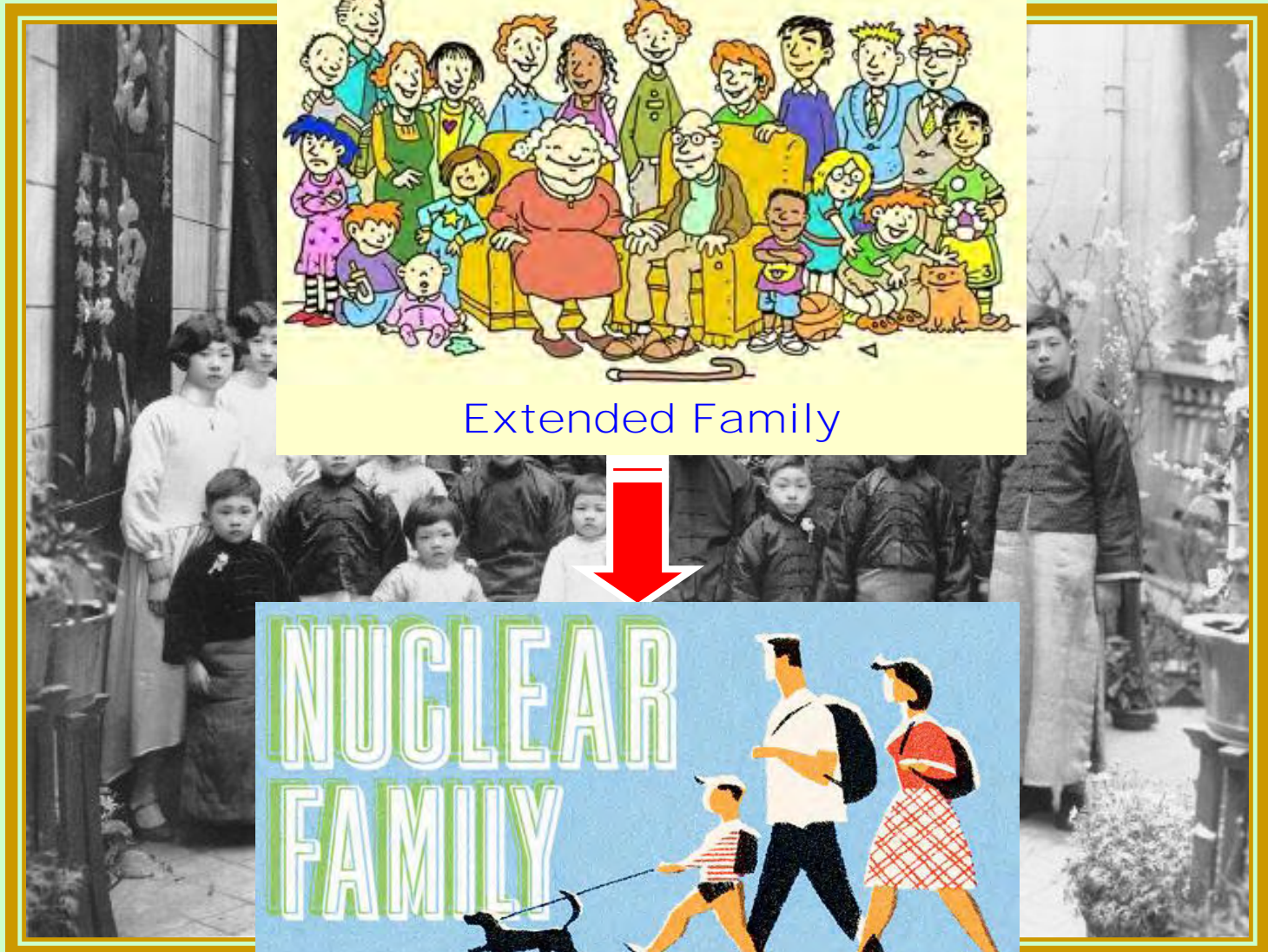
Hong Kong

Suicide

Family Structure in Hong Kong



Extended Family



Today's children being more vulnerable & less resilient ...

Over Protection Results in Less Resilience to Psychological Distress

hket.com
經濟日報

Research: HK kids lack resilience

By Louise Ho and Teddy Ng (China Daily)
Updated: 2007-07-13 07:03

HONG KONG: Children here are less able to cope with adversity than their peers from Guangzhou and Beijing, a recent study has shown.

The research was conducted by the Boys & Girls Association of Hong Kong, the Center for Social Work Education and Research of Sun Yat-sen University and the College of Politics and Law of Capital Normal University.

In a test of the resilience of children from the three cities - where a low score equals high resilience - Hongkongers scored an average of 37.4 out of 75, worse than youngsters from Guangzhou (31.9) and Beijing (31.7), James Leung, assistant director of the Boys & Girls Association of Hong Kong, said.

Resilience encompasses such things as psychological management and rehabilitation when facing adversity, he said.

The study sampled more than 3,000 Grade 4, 6 and 7 students from the three cities between March and June.

A lack of resilience could affect children's growth in many different ways including their academic and social performances, Leung said.

The level of resilience is affected by factors such as mother-child relations, social values and emotional management, he said.

The research also found that fewer Hong Kong children agreed with the resilience indicators.

For example, 46.5 percent of them said they could "overcome difficulties when faced with them".

About 70 percent the youngsters from Guangzhou and Beijing agreed with the indicators.

As for why Hong Kong children are less resilient, Leung said: "In Hong Kong, parents and teachers are under greater pressure and spend less time with their children."

"This has affected their resilience," he said.

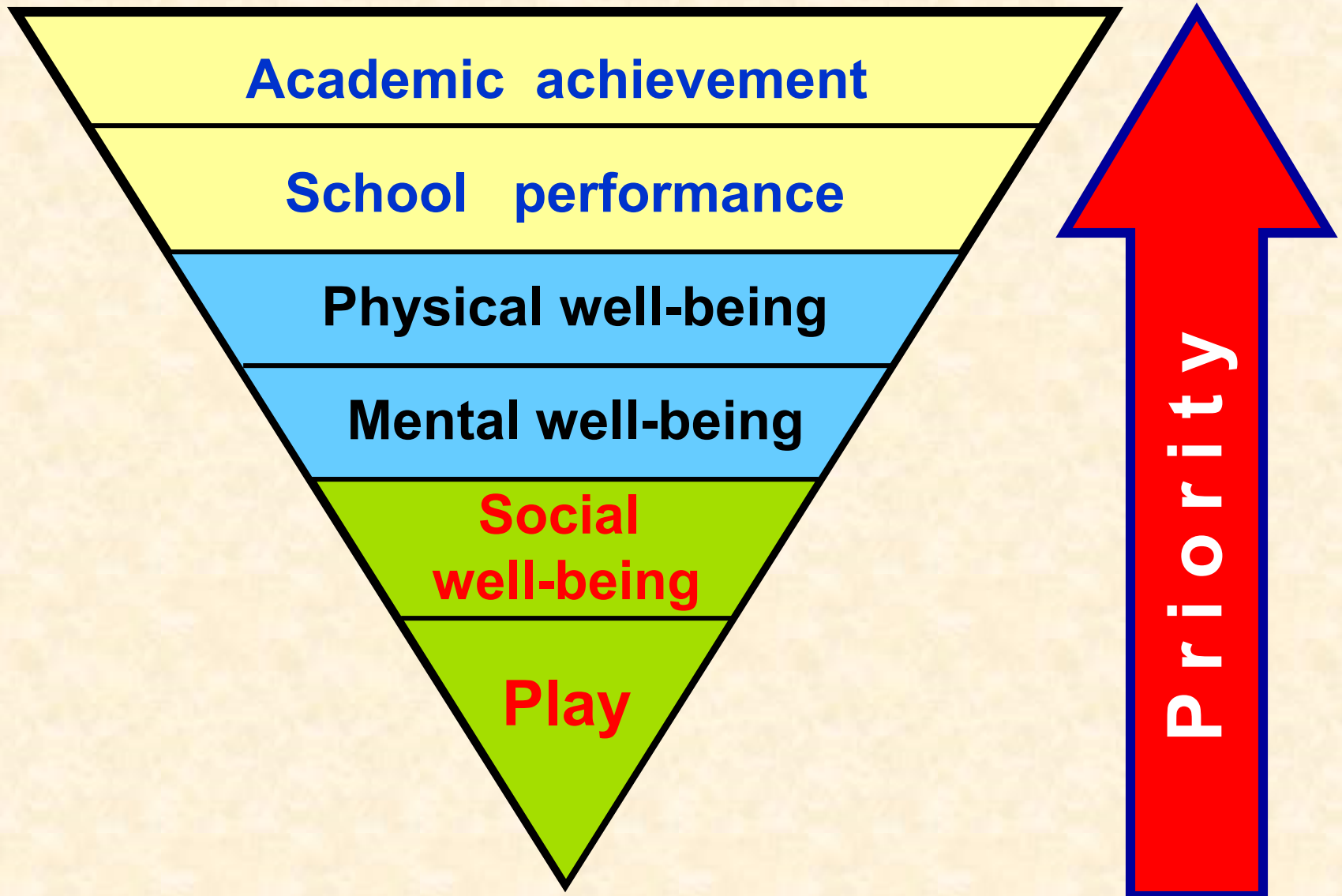


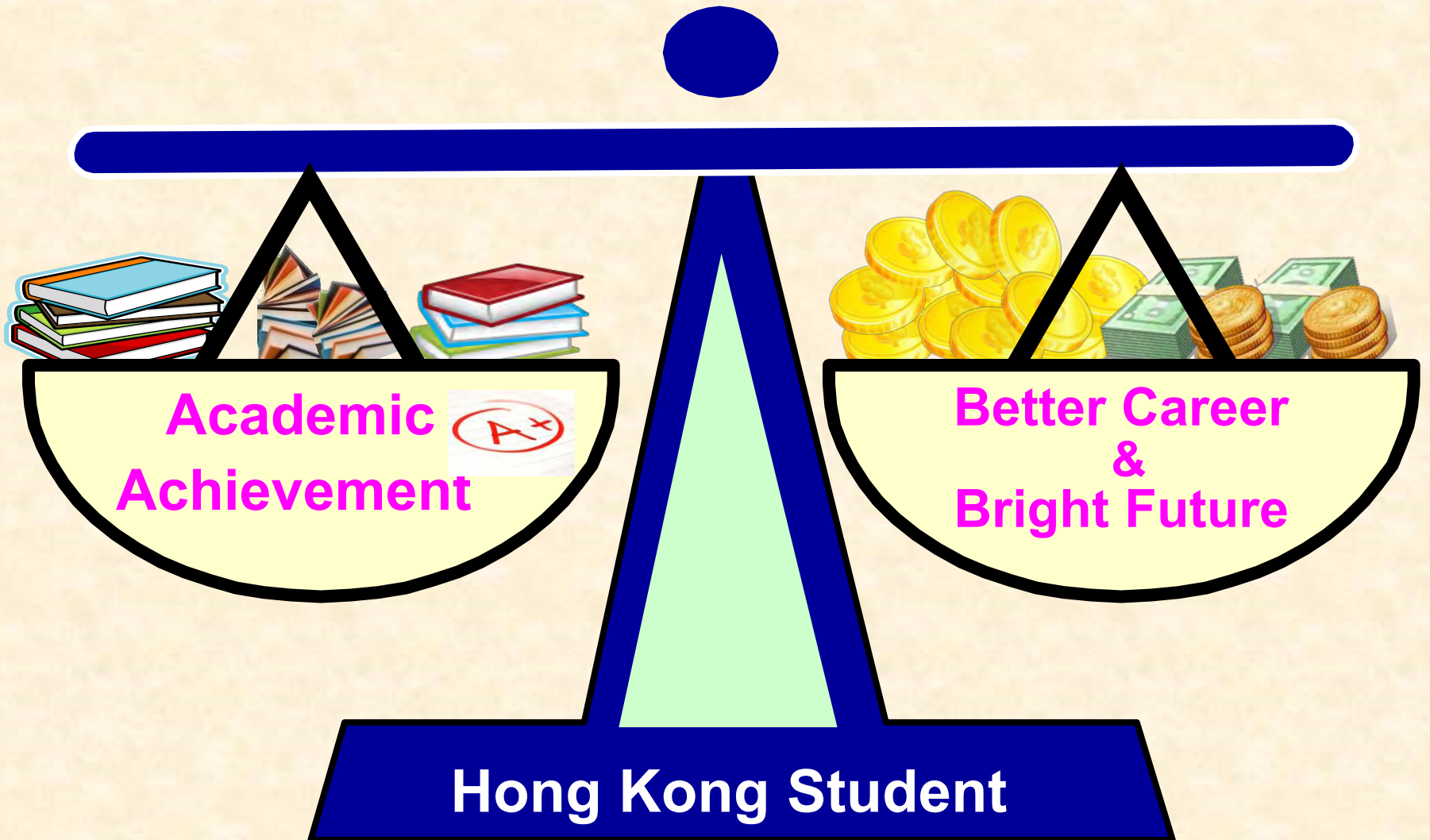
PRESSURE

Academic
Performance



Hong Kong Parents' Expectations





**Academic
Achievement**



**Better Career
&
Bright Future**

Hong Kong Student



A challenge for healthcare professionals

How can we contribute in enhancing the health and mental well-being of the children in our community?



For a better community,

For a better future,

Ensuring healthy growth & development of our children

Promoting Better Psychological Well-being, It Start with Building Resilience in Children



Resilience is defined as the ability of an individual to utilise protective factors, such as personal and



RESILIENCE

social resources and perceived level of family cohesion, to maintain mental wellbeing in the face of stress and adversity.

Resilience effectively prevents the development of mental health problems and is associated with positive mental health outcomes in adolescents, such as reduced levels of anxiety, depression, and obsessive-compulsive symptom





14-ITEM Resilience Scale (RS-14)

Circle the number in the appropriate column	Strongly Disagree				Strongly Agree		
	1	2	3	4	5	6	7
1. I usually manage one way or another.	1	2	3	4	5	6	7
2. I feel proud that I have accomplished things in life	1	2	3	4	5	6	7
3. I usually take things in stride.	1	2	3	4	5	6	7
4. I am friends with myself.	1	2	3	4	5	6	7
5. I feel that I can handle many things at a time.	1	2	3	4	5	6	7
6. I am determined.	1	2	3	4	5	6	7
7. I can get through difficult times because I've experienced difficulty before.	1	2	3	4	5	6	7
8. I have self-discipline.	1	2	3	4	5	6	7
9. I keep interested in things.	1	2	3	4	5	6	7
10. I can usually find something to laugh about.	1	2	3	4	5	6	7
11. My belief in myself gets me through hard times.	1	2	3	4	5	6	7
12. In an emergency, I'm someone people can generally rely on.	1	2	3	4	5	6	7
13. My life has meaning.	1	2	3	4	5	6	7
14. When I'm in a difficult situation, I can usually find my way out of it.	1	2	3	4	5	6	7

If... the developed instrument is used in a linguistically different population



- Translation would be a critical step
- Ensuring cross-cultural equivalence

In translation...

Language Differences



Cultural Incongruence

In translation...

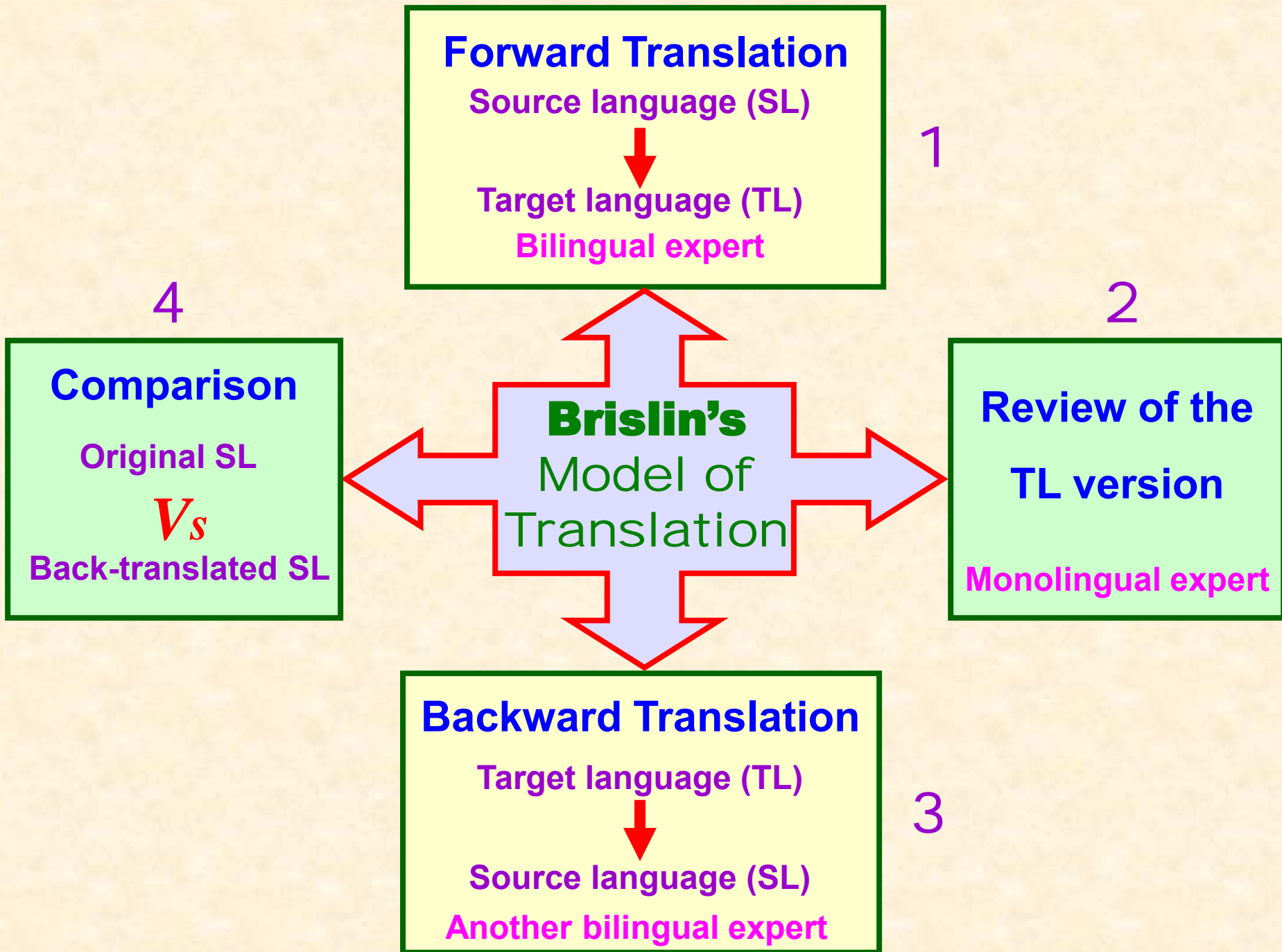


Conceptual rather than literal meaning is the aim in translation.



Aim

1. To translate the RS-14 from English into traditional Chinese
2. To conduct a cross-sectional study to examine the psychometric properties of the newly translated scale



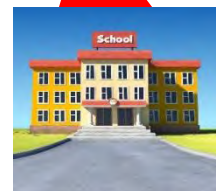
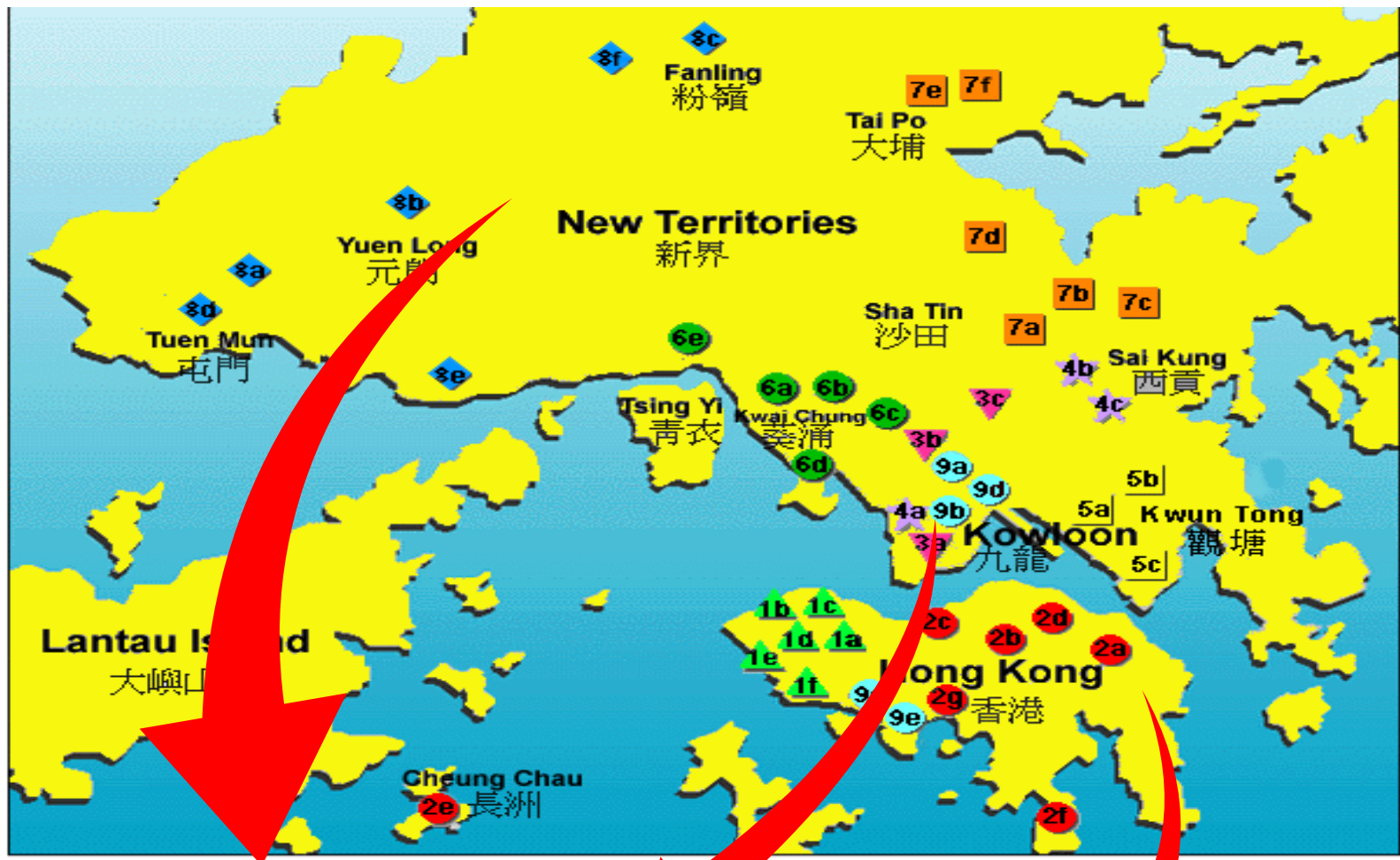
A study

On

psychometric evaluation of the

traditional Chinese version of RS-14

Sampling Method



400



ANALYSIS



Checking **SEMANTIC** Equivalence

Equivalence is a form of *Validity* that refers to the agreement between two measures of the same construct

Resilience Scale-14 (extract)

		Not Appropriate 1 2 3 4 Most appropriate				
1	I usually manage one way or another.	我通常會設法完成所有事情。	1	2	3	4
2	I feel proud that I have accomplished things in life	我為自己能夠完成在人生中的事情而感到自豪。	1	2	3	4
3	I usually take things in stride.	我通常能夠從容地應對及解決問題。	1	2	3	4
4	I am friends with myself.	我喜歡我自己。	1	2	3	4
5	I feel that I can handle many things at a time.	我覺得我能在同一時間內處理很多事情。	1	2	3	4

Any item deemed as inappropriate (rating less than 3) by more than 20% of respondents would be amended

Checking CONTENT Equivalence

Resilience Scale-14 (extract)

	Not Relevant	1	2	3	4	Most Relevant		
1. 我通常會設法完成所有事情。		1		2		3		4
2. 我為自己能夠完成在人生中的事情而感到自豪。		1		2		3		4
3. 我通常能夠從容地應對及解決問題。		1		2		3		4
4. 我喜歡我自己。		1		2		3		4
5. 我覺得我能在同一時間內處理很多事情。		1		2		3		4
6. 我做事很決斷。		1		2		3		4
7. 因為有過艱苦的經歷，我有信心能渡過困難時期。		1		2		3		4
8. 我有自律性。		1		2		3		4
9. 我對事物感興趣。		1		2		3		4
10. 我通常能夠找到讓我開心的事情。		1		2		3		4

CVI should be \geq 80% (total numbers of rating 3 or 4)

Analysis

- Convergent validity was established by finding correlations between resilience and self-esteem scores.
- Discriminant validity was estimated by examining the correlation between resilience and depressive symptoms scores.
- Both exploratory and confirmatory factor analyses were performed to allow more precise testing of the configuration of the factor structures of the RS-14, and to examine whether the proposed factor structures adequately fitted the data

Analysis



- Internal consistency reliability of the Chinese version of the RS-14 was assessed by calculating Cronbach's alpha.
- To examine the stability of the RS-14, 20% of the students ($n = 80$) were randomly selected to respond to the RS-14 again after two weeks, via telephone follow-up.

RESULTS



Semantic equivalence

The average equivalence rate was 96% (range from 94% to 98%), indicating that each item of the Chinese version of the RS-14 remained conceptually and idiomatically the same as in the English version.

Content equivalence

The Content Validity Index (CVI) was 95%, indicating the valid content of the Traditional Chinese version of the RS-14.

RESULTS



Convergent validity

- There was a strong positive correlation between resilience and self-esteem scores ($r = 0.63$, $n = 400$, $p < 0.01$).
- This indicated that adolescents with greater resilience had higher self-esteem.

Discriminant validity

- There was a strong negative correlation between resilience and depressive symptoms ($r = -0.52$, $n = 400$, $p < 0.01$).
- The result indicates that children with lower resilience was associated with more depressive symptoms.

RESULTS



Internal consistencies

Alpha coefficients = 0.82

Test-retest reliability

Alpha coefficients = 0.84

Factor Analyses

Both exploratory and confirmatory factor analyses supported the 2-factor structure (personal competence, and acceptance of self and life) of the Chinese version of the RS-14

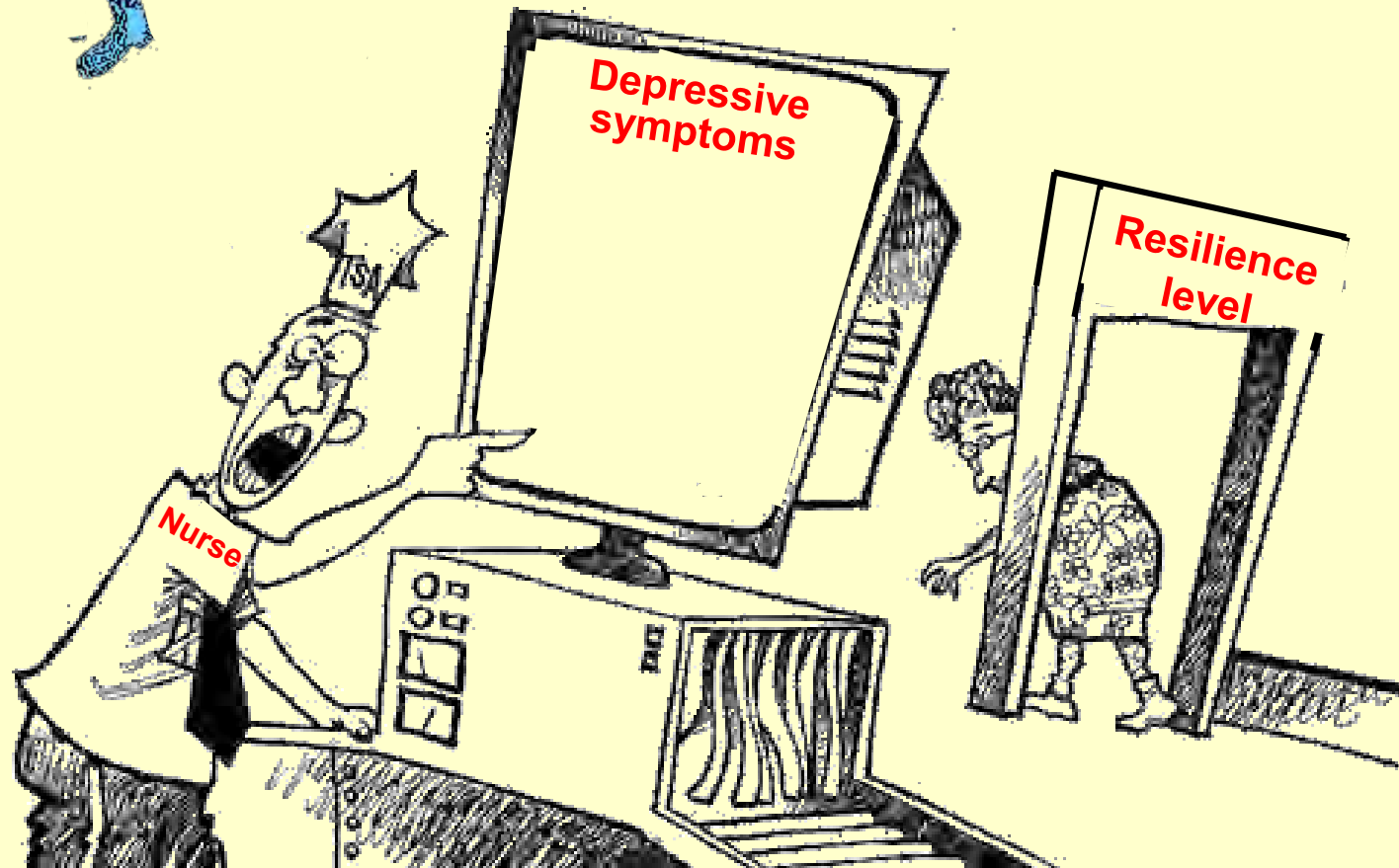


Discussion



- ❖ A reliable and valid instrument that can accurately assess the level of resilience is a prerequisite for a better understanding how adolescents responses to stress and adversity.
- ❖ A better understanding of the resilience is crucial for planning, developing, and evaluating interventions to promote positive mental well-being among adolescents.

Implication for Nursing Practice



Conclusion

This study suggest that the newly-translated scale can be used as a self-report assessment tool in assessing the resilience level of Hong Kong Chinese adolescents



Q & A?