Public Health Researches on child health

The approach to medicine that is concerned with the health of the community as a whole.

Life-course, ecological & developmental approach

Proximal vs Distal Factors

Public Health → Primary care → Secondary/Tertiary
Community Health Care

Env. Determinants → Risk behaviours → Disorders/diseases
(social - poverty, physical, education, built…etc)

CB Chow

Definition

Definition: *Public Health* is the organised response by society to protect and promote health, and to prevent illness, injury and disability.

The starting point for identifying public health issues, problems and priorities, and for designing and implementing interventions, is the population as a whole, or population sub-groups.

Source: National Public Health Partnership (1998), Public Health in Australia: The Public Health Landscape: person society environment (Melbourne, NPHP)

Public Health - interventions not services

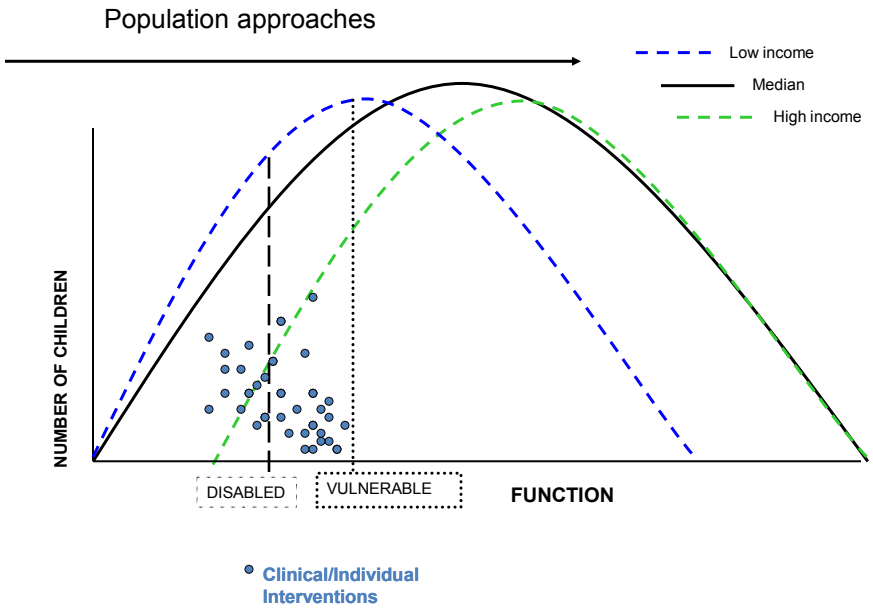
- Defining issues/problems
- Identifying and collecting evidence
- Developing hypotheses and theories
- Designing interventions
- Advocacy in whole-of-government context
- Gaining resources and undertaking program planning (in partnership with service providers)
- Evaluation

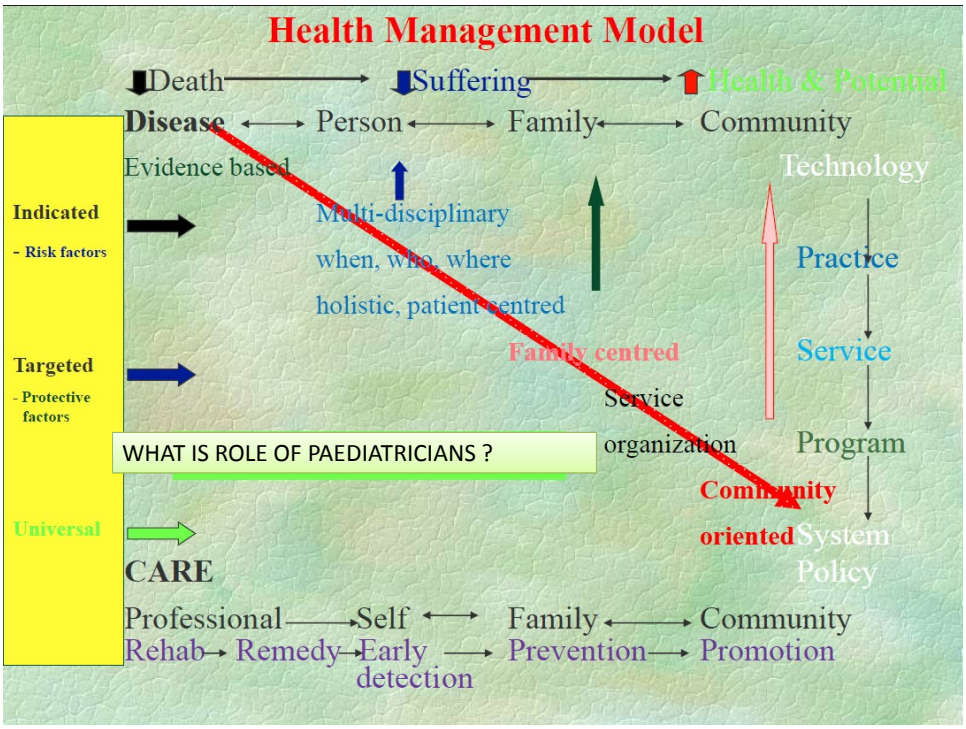
Population as a whole

and/or

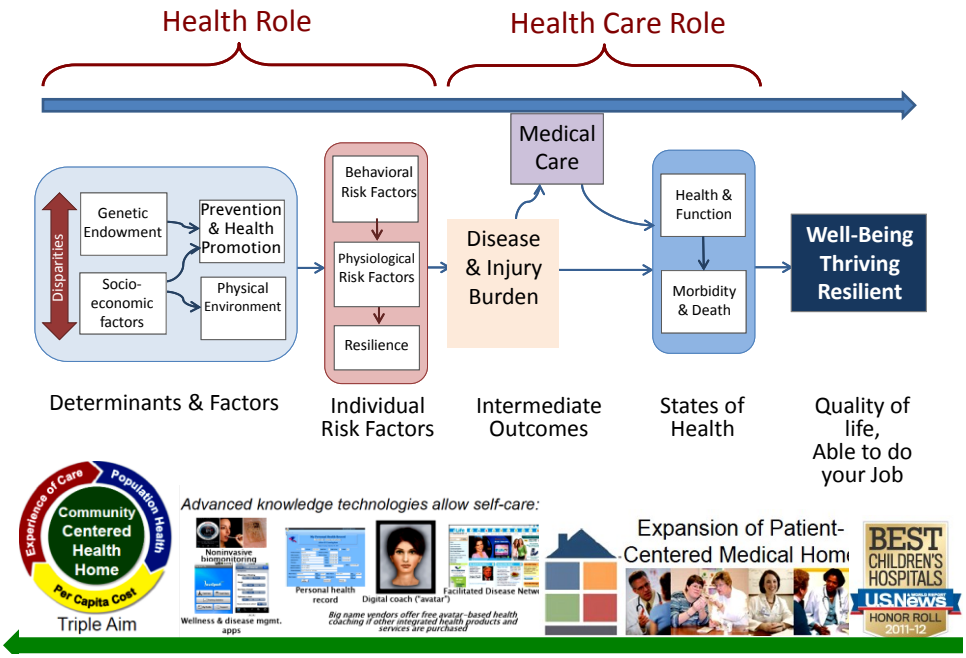
Population sub-groups

Examples: *Immunisation*
Legionella
Health Promotion





Broad View of Population Child Health



Ecological - Life-course and developmental

New sciences and knowledge on child growth & development

Genomic studies especially epigenetics, nutrogenomics, nutrigenetics…

Neuroscience studies especially functional on neuro-development

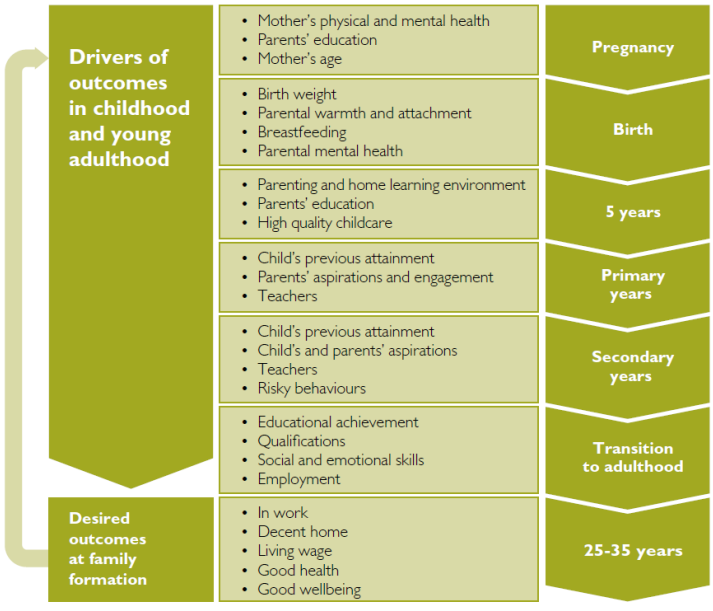
Social determinants of health 社健康的决定因素

Programming – especially on nutrition 营养

Developmental origins of diseases

Longitudinal studies- adverse childhood experience relationships & dynamics…….

Figure 3.1 The key drivers of life chances throughout childhood



Source: Review team synthesis of research findings.

Well-being & happiness for children framework

Parents
Friends
Teachers
Neighbours

Love/care
Support
Respect
Aspire
Role model

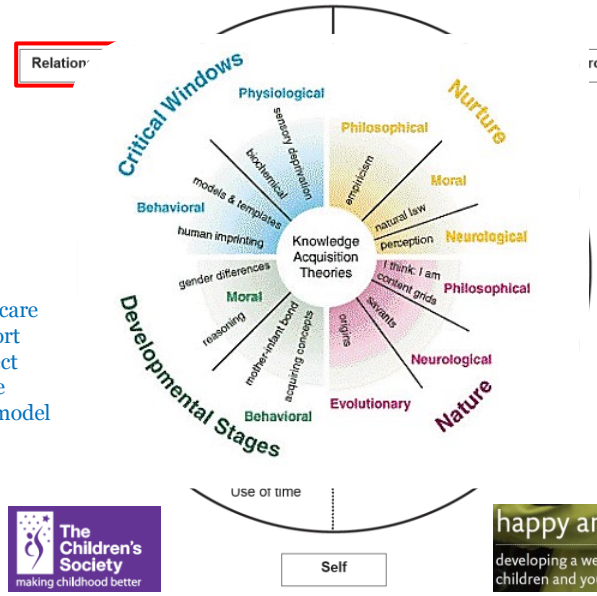
House
School
"Playgrounds"
Community

Learn thru play
Socialize
Explore & experience
Lead
Take responsibility
...

The Children's Society
making childhood better

happy and they know it?
developing a well-being framework based on children and young people consultation

Well-being & happiness for children framework



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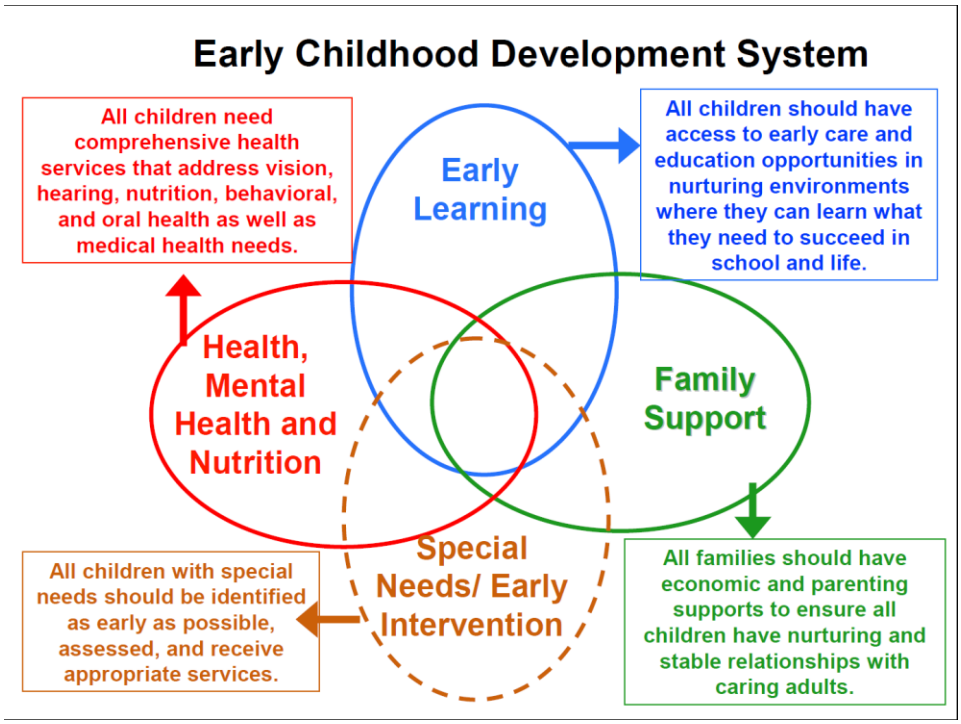

Early Childhood Development System
All children need comprehensive health services that address vision, hearing, nutrition, behavioral, and oral health as well as medical health needs.
Early Learning
All children should have access to early care and education opportunities in nurturing environments where they can learn what they need to succeed in school and life.
Health, Mental Health and Nutrition
Family Support
Special Needs/ Early Intervention
All children with special needs should be identified as early as possible, assessed, and receive appropriate services.
All families should have economic and parenting supports to ensure all children have nurturing and stable relationships with caring adults.

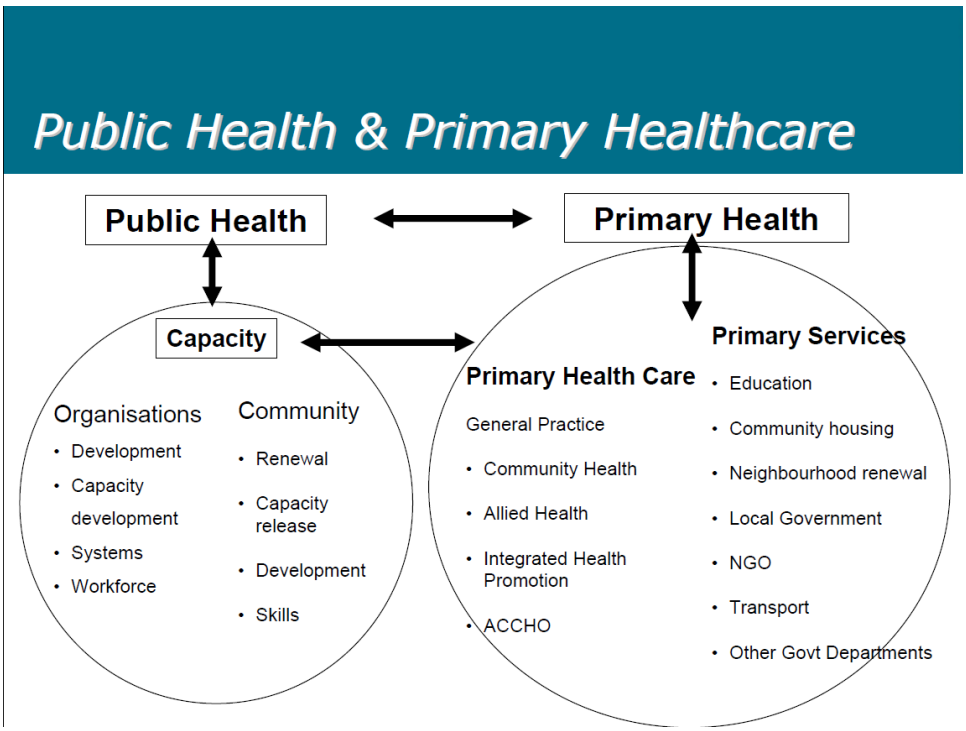

Public Health & Primary Healthcare
Public Health
Primary Health
Capacity
Organisations
• Development
• Capacity development
• Systems
• Workforce
Community
• Renewal
• Capacity release
• Development
• Skills
Primary Health Care
General Practice
• Community Health
• Allied Health
• Integrated Health Promotion
• ACCHO
Primary Services
• Education
• Community housing
• Neighbourhood renewal
• Local Government
• NGO
• Transport
• Other Govt Departments

TABLE 1-1 Perspectives of Medicine and Public Health

Medicine	Public Health
Primary focus on individual	Primary focus on population
Personal service ethic, conditioned by awareness of social responsibilities	Public service ethic, tempered by concerns for the individual
Emphasis on diagnosis and treatment, care for the whole patient	Emphasis on prevention, health promotion for the whole community
Medical paradigm places predominant emphasis on medical care	Public health paradigm employs a spectrum of interventions aimed at the environment, human behavior and lifestyle, and medical care
Well-established profession with sharp public image	Multiple professional identities with diffuse public image
Biologic sciences central, stimulated by needs of patients; move between laboratory and bedside	Biologic sciences central, stimulated by major threats to health of populations; move between laboratory and field
Clinical sciences an essential part of professional training	Clinical sciences peripheral to professional training
Rooted mainly in the private sector	Rooted mainly in the public sector

SOURCE: Based on Fineberg, 2011.

Outline

- Life expectancies
- Mortalities
  - Infant
  - Under-5 mortality
  - Adolescent mortality
- Morbidities
  - Birth weight
  - *Injuries* – child abuse, *domestic violence*
  - Obesity and diabetes
  - Developmental disorders – ADHD, autism, *SLD*
  - Risk behaviours – smoking, *drug abuse*…
  - Mental health – suicide, deliberate self harm

⇐ At least 70% premature adult deaths reflect behaviours started or reinforced during adolescence

Outline

At least 70% premature adult deaths reflect behaviours started or reinforced during adolescence

- Ecological factors – half of adult diseases have origin in childhood
  - Environment – smoking, air pollution, alcoholism…
  - Child – birth weight, nutrition- breast feeding, physical activity, learning environment, adverse childhood experiences… ADHD, autism, SLD…
  - Family – parenting style, single, new immigrants, socio-economic, social support …
  - Community – housing, social capital, facilities …
- *Service provision and utilization*

IMPACT OF POVERTY ON CHILD HEALTH

社會發展指數 — 兒童狀況

	原始數據					
兒童狀況分類指數	2000	2002	2004	2006	2008	2010
居住於低收入住戶的0-14歲兒童佔該組別人口的百分比 (-) Poverty	26.0	27.2	25.8	25.8	25.3	23.9
居住於單親家庭的兒童佔總兒童人數的百分比 (-) Single families	5.5	6.6	7.3	8.1	8.7	9.1
0-4歲兒童的死亡人數 (每十萬名) (-) Under-5 mortality	71.9	61.6	62.4	72.3	77.5	80.6
2-6歲兒童入讀幼稚園或幼兒中心學生人數 (每十萬名) (+) Pre-school education	60,381	62,904	67271	57,722	58,087	60,512
0-17歲人口的虐兒個案數目 (每十萬名) (-) Child maltreatment rate	36.2	39.8	49.9	67.3	77.3	90.7
已接受三重疫苗注射的兒童佔總兒童人口百分比 (+) Immunization rate	89.5	86.4	79.8	95	95	95
10-15歲兒童的被捕人數 (每十萬名) (-) Arrest	1,164.5	991.3	971.1	907.8	882.9	830.9

16

- 0-4歲兒童的死亡人數、單親兒童百分比及虐兒個案增幅顯著上升。

Major challenges

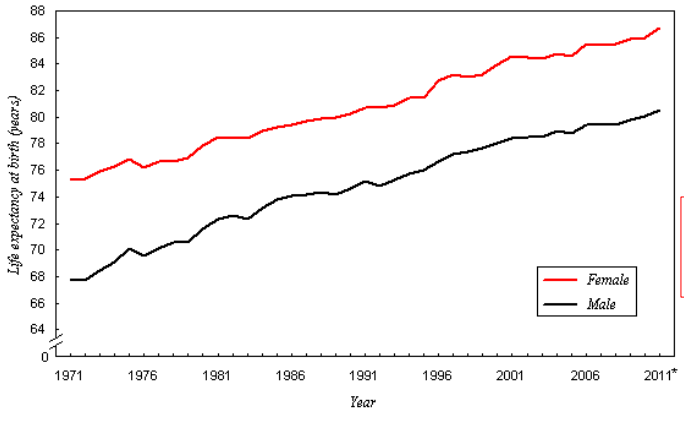
- We do have lots information on problems and needs
- We also have effective intervention programmes
- Major research-practice gap is in **public health or population approach** to many intervention programmes – parenting, family, school, community ….on problems like obesity, child abuse, poverty, developmental behavioural problems…. **proportional universalism + outcome accountability**
  - Linking research with policy, service organization and clinical practice
  - Linking public health, primary care with secondary/tertiary care
  - Linking health with other professionals
  - Linking child-family-school-community
  - Linking child-parents-friends-teachers-neighbours
  - Life cycle and transition
  - Geographical and risk factors targeted
- Medical →Health →Child leadership

Towards a public health approach to parenting programmes for parents of adolescents. J of public health 2012; 34:141-7

Life Expectancy at Birth (Male and Female)

- Hong Kong now ranks number 1 for females and males

The life expectancies at birth for both sexes have steadily increased during the past 41 years, from 67.8 years for males and 75.3 years for females in 1971 to 80.5* years and 86.7* years respectively in 2011.



2011

F: 86.7

Japan 85.9

M: 80.5

Japan 79.44

Why so good?

Notes:
Figures from 1996 onwards are compiled based on the population estimates under the "resident population" approach instead of the "extended de facto" approach. Also, the Population Census conducted in June to August 2011 provides a benchmark for revising the population figures compiled since the 2006 Population By-census.
*** Provisional figures for year 2011.**

Table A10 : Age-standardised Death Rate by Ten Leading Causes of Death 2005 to 2009 (Ranking according to year 2009's number of deaths)
表A10 : 二零零五年至二零零九年按十大死因劃分的年齡標準化死亡率 (根據二零零九年的死亡人數作排序)

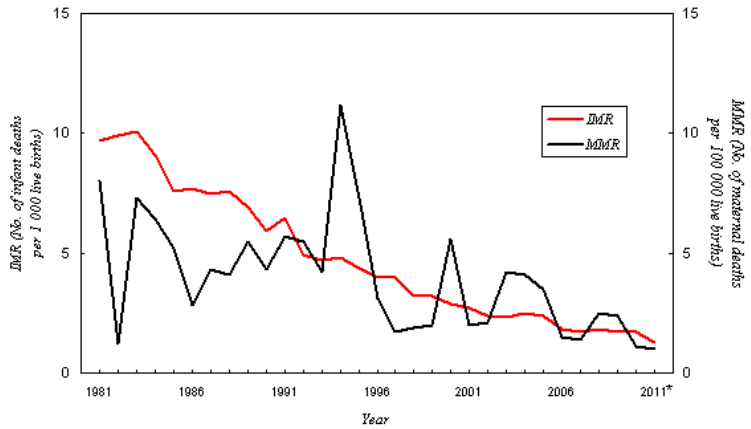
Rank 排名	Detailed List No. ICD 10th Revision 《疾病和有關健康問題的國際統計分類》第十次修訂本的詳細序號	Disease Group 疾病類別	Age-standardised death rate * (per 100 000 standard population†) 年齡標準化死亡率 * (按每十萬名標準人口計算†)				
			2005	2006	2007	2008	2009
1	C00-C97	Malignant neoplasms 惡性腫瘤	125.2	118.7	116.5	114.2	113.8
3	J12-J18	Pneumonia 肺炎	37.3	34.4	38.2	40.3	37.1
5	V01-Y89	External causes of morbidity and mortality ‡ 疾病和死亡的外因 ‡	25.1	22.2	20.4	19.3	20.8
6	J40-J47	Chronic lower respiratory diseases § 慢性下呼吸道疾病 §	20.5	16.5	16.9	16.4	14.5
7	N00-N07, N17-N19, N25-N27	Nephritis, nephrotic syndrome and nephrosis 腎炎，腎變病綜合症和腎變病	11.7	11.6	11.4	11.6	11.4
8	A40-A41	Septicaemia 敗血病	6.6	6.0	6.4	6.4	6.0
9	F01-F03	Dementia 癡呆	2.3	2.2	2.2	3.3	4.1

Risk factors:- **Outcome of exposure in early years**

1. Smoking, air pollution, drinking ⬆
2. Obesity and lack of physical activity ⬆
3. Unhealthy dietary habit ⬆
4. Psychological stress ⬆

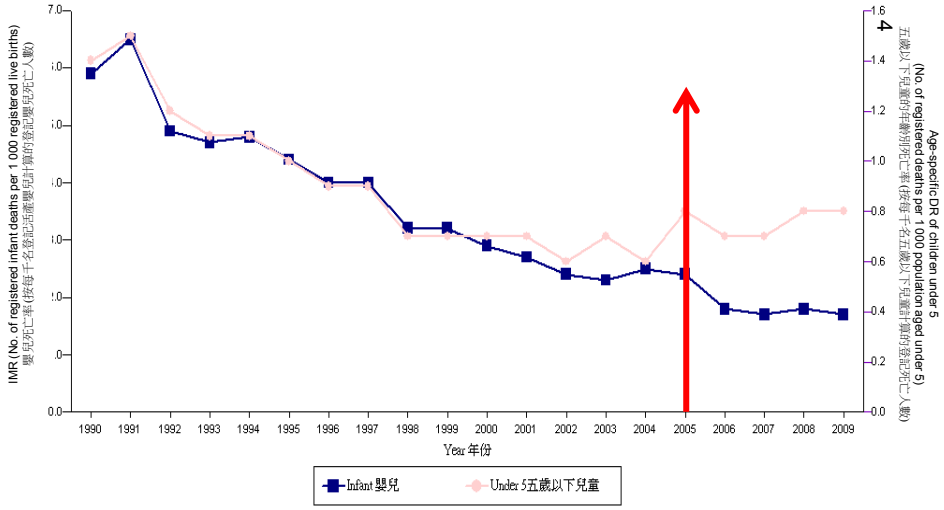
Infant Mortality Rate (IMR) and Maternal Mortality Ratio (MMR), 1981 - 2011

The infant mortality rate has decreased from 9.7 per 1 000 live births in 1981 to 1.3* in 2011 while the maternal mortality ratio has fluctuated between 1.0* and 11.2 per 100 000 live births in the past 31 years.



Notes:
The mortality and birth statistics are based on number of "registered" deaths and births.
* Provisional figure for year 2011

Infant Mortality Rate (IMR) and Age-specific Death Rate (DR) of **Children Under 5,** 1990 - 2009
1990 至 2009 年的的嬰兒死亡率與五歲以下兒童的年齡別死亡率



Note:
Age-specific death rates of children under 5 from 1996 onwards are compiled based on the population estimates under the "resident population" approach instead of the "extended defacto" approach. Also, the Population By-census conducted in July to August 2006 provides a benchmark for revising the population estimates compiled since the 2001 Population Census.

Number of Newborns		Mother's Residential Status							Row Total
		Hong Kong Residents	Marine Population	Vietnamese Migrants / Refugees	Illegal Immigrants	Tourist / Transients	Others	Unknown	
Birth Year	1995	57660	0	0	3027	4310	199	3404	**68600**
	1996	44426	0	0	2877	3918	37	12012	**63270**
	1997	41466	7	0	1880	3888	2	11985	**59228**
	1998	40489	5	0	1550	4912	1	5998	**52955**
	1999	43435	3	0	1401	6381	0	49	**51269**
	2000	45420	17	0	1116	7426	0	140	**54119**
	2001	40159	26	6	560	7426	0	41	**48218**
	2002	39181	5	4	317	8698	0	4	**48209**
	2003	36437	4	2	84	10337	0	98	**46962**
	2004	35455	18	0	57	13872	0	389	**49791**
	2005	36899	59	0	44	19898	0	194	**57094**
	2006	38592	55	0	52	26838	0	87	**65624**
	2007	42369	536	0	49	27708	0	213	**70875**
	2008	42505	16	0	19	34088	0	2129	**78757**
	2009	43543	513	0	9	37603	0	39	**81707**
	2010	46860	52	0	9	41609	2	41	**88573**
Column Total		**674896**	**1316**	**12**	**13051**	**258912**	**241**	**36823**	**985251**

Under-5 mortality in Hong Kong
(per 100,000 population)

Disease Group		2001	2002	2003	2004	2005	2006	2007	2008	2009
Congenital malformations, deformations and chromosomal abnormalities	Number of deaths	42	48	40	32	43	47	44	37	**52**
	Death rate (per 100 000 population)	15.4	19.1	16.9	14.1	19.4	22.1	20.5	16.8	**22.7**
Certain conditions originating in the perinatal period	Number of deaths	40	26	33	52	52	40	44	52	42
	Death rate (per 100 000 population)	14.7	10.3	13.9	22.8	23.5	18.8	20.5	23.6	18.3
External causes of morbidity and mortality	Number of deaths	14	15	14	2	16	3	4	6	14
	Death rate (per 100 000 population)	5.1	6.0	5.9	0.9	7.2	1.4	1.9	2.7	6.1
Septicaemia	Number of deaths	3	4	7	6	5	5	6	6	10
	Death rate (per 100 000 population)	1.1	1.6	2.9	2.6	2.3	2.3	2.8	2.7	4.4
Diseases of heart	Number of deaths	16	9	8	5	9	8	5	8	8
	Death rate (per 100 000 population)	5.9	3.6	3.4	2.2	4.1	3.8	2.3	3.6	3.5
All other causes	Number of deaths	74	53	54	45	50	51	48	62	54
	Death rate (per 100 000 population)	27.1	21.1	22.8	19.8	22.6	23.9	22.4	28.1	23.6
Total	Number of deaths	189	155	156	142	175	154	151	171	180
	Death rate (per 100 000 population)	69.3	61.6	65.7	62.4	79.1	72.3	70.4	77.4	78.5

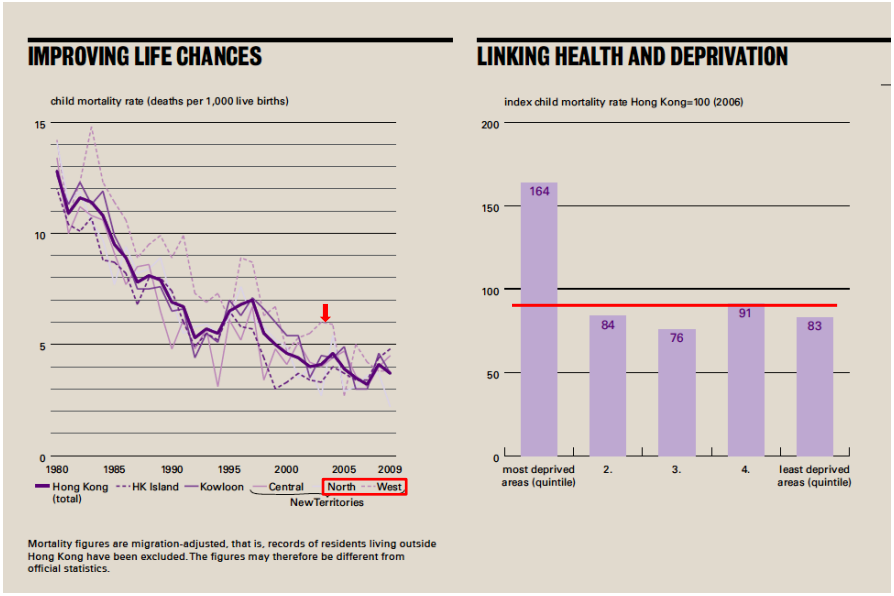
Number of Deaths due to Congenital malformations, deformations and chromosomal abnormalities in under-5 years		Year of Death Registration									Total	Main Total
		2001	2002	2003	2004	2005	2006	2007	2008	2009		
CNS	Anencephaly and similar malformations (Q00)	1	5	1	2	1	3	2	0	0	15	37
	Encephalocele (Q01)	0	0	0	1	0	0	1	0	0	2	
	Microcephaly (Q02)	1	0	0	0	0	1	0	0	0	2	
	Congenital hydrocephalus (Q03)	0	0	0	0	0	0	0	1	0	1	
	Other congenital malformations of brain (Q04)	0	1	4	2	3	2	3	0	2	17	
CVS	Congenital malformations of cardiac chambers and connections (Q20)	0	0	1	0	0	0	2	1	1	5	151
	Congenital malformations of cardiac septa (Q21)	0	4	2	2	1	4	4	4	1	22	
	Congenital malformations of pulmonary and tricuspid valves (Q22)	1	0	0	1	2	0	0	0	0	4	
	Congenital malformations of aortic and mitral valves (Q23)	3	5	2	3	3	2	1	2	1	22	
	Other congenital malformations of heart (Q24)	11	8	11	2	6	11	11	6	15	81	
	Congenital malformations of great arteries (Q25)	1	0	1	0	3	1	2	1	2	11	
	Congenital malformations of great veins (Q26)	0	0	0	0	2	0	0	2	0	4	
	Other congenital malformations of circulatory system (Q28)	0	0	1	0	0	1	0	0	0	2	
RESP	Congenital malformations of larynx (Q31)	0	0	0	0	0	0	0	1	0	1	35
	Congenital malformations of trachea and bronchus (Q32)	1	0	1	0	0	0	0	0	0	2	
	Congenital malformations of lung (Q33)	2	5	2	1	3	2	5	5	5	30	
	Congenital malformations of oesophagus (Q39)	0	0	0	1	0	0	0	0	0	1	
	Other congenital malformations of upper alimentary tract (Q40)	0	1	0	0	0	0	0	0	0	1	
GI	Congenital absence, atresia and stenosis of small intestine (Q41)	0	0	0	0	0	0	1	0	1	2	13
	Other congenital malformations of intestine (Q43)	1	0	0	0	2	0	0	0	2	5	
	Congenital malformations of gallbladder, bile ducts and liver (Q44)	2	1	0	1	0	0	0	1	0	5	
	Other congenital malformations of digestive system (Q45)	0	0	0	0	0	1	0	0	0	1	
GU	Renal agenesis and other reduction defects of kidney (Q60)	3	2	0	3	0	0	0	0	0	8	16
	Cystic kidney disease (Q61)	0	1	1	0	0	0	0	0	4	6	
	Other congenital malformations of kidney (Q63)	0	0	0	0	0	0	1	0	0	1	
	Other congenital malformations of urinary system (Q64)	0	0	0	1	0	0	0	0	0	1	
Misc	Congenital musculoskeletal deformities of head, face, spine and chest (Q67)	0	0	0	1	0	0	0	0	0	1	62
	Other congenital malformations of skull and face bones (Q75)	0	0	0	0	0	0	1	0	0	1	
	Osteochondrodysplasia with defects of growth of tubular bones and spine (Q77)	1	0	0	0	0	0	0	0	0	1	
	Other osteochondrodysplasias (Q78)	1	0	0	0	0	1	0	1	0	3	
	Congenital malformations of musculoskeletal system, not elsewhere classified (Q79)	2	4	1	2	2	2	0	4	4	21	
	Epidermolysis bullosa (Q81)	0	0	0	0	0	0	0	1	0	1	
	Other specified congenital malformation syndromes affecting multiple systems (Q87)	0	1	0	0	0	1	0	0	1	3	
	Other congenital malformations, not elsewhere classified (Q89)	2	2	4	4	3	6	4	1	5	31	
Chromo	Down's syndrome (Q90)	0	0	0	1	1	1	0	2	0	5	71
	Edwards' syndrome and Patau's syndrome (Q91)	9	6	8	4	11	7	6	4	5	60	
	Other chromosome abnormalities, not elsewhere classified (Q99)	0	2	0	0	0	1	0	0	3	6	
Column Total		42	48	40	32	43	47	44	37	52	385	

Number of Infant Deaths and Infant Mortality Rate by Five Leading Causes of Death, 2001 - 2009

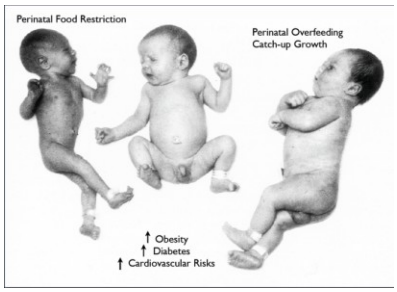
Disease Group		2001	2002	2003	2004	2005	2006	2007	2008	2009
Congenital malformations, deformations and chromosomal abnormalities	Number of deaths	37	44	36	29	41	39	40	34	48
	Infant mortality rate (per 1 000 registered live births)	0.8	0.9	0.8	0.6	0.7	0.6	0.6	0.4	0.6
Disorders relating to length of gestation and fetal growth	Number of deaths	17	5	4	12	11	16	9	14	12
	Infant mortality rate (per 1 000 registered live births)	0.3	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1
Diseases of the nervous system	Number of deaths	5	4	1	1	2	2	6	7	8
	Infant mortality rate (per 1 000 registered live births)	0.1	0.1	<0.05	<0.05	<0.05	<0.05	0.1	0.1	0.1
Other respiratory conditions of newborn	Number of deaths	4	5	1	8	6	3	5	6	8
	Infant mortality rate (per 1 000 registered live births)	0.1	0.1	<0.05	0.2	0.1	<0.05	0.1	0.1	0.1
Haemorrhagic and haematological disorders of fetus and newborn	Number of deaths	1	1	7	9	4	3	6	3	8
	Infant mortality rate (per 1 000 registered live births)	<0.05	<0.05	0.1	0.2	0.1	<0.05	0.1	<0.05	0.1
All other causes	Number of deaths	71	55	59	62	72	57	55	76	53
	Infant mortality rate (per 1 000 registered live births)	1.4	1.1	1.2	1.3	1.3	0.9	0.8	1.0	0.6
Total	**Number of deaths**	**135**	**114**	**108**	**121**	**136**	**120**	**121**	**140**	**137**
	Infant mortality rate (per 1 000 registered live births)	**2.7**	**2.4**	**2.3**	**2.5**	**2.4**	**1.8**	**1.7**	**1.8**	**1.7**

MORE INDEPTH STUDY WILL BE REQUIRED on congenital malformations especially CNS – ***Congenital malformation registry!***

Under-5 mortality disparity in Hong Kong = two-fold variation



Birth weights



- Extreme age of mother
- Maternal weight gains : J of Am Academy of Dietrician 2000 American
  - HONG KONG 2000
  - BMI < 19 : 13-16.7 kg
  - BMI 19-23.5: 11-16.4 kg kg
  - BMI >23.5 : 7.1-14.4 kg

TABLE 1 NEW RECOMMENDATIONS FOR TOTAL AND RATE OF WEIGHT GAIN DURING PREGNANCY, BY PREPREGNANCY BMI

Prepregnancy BMI	BMI* (kg/m²) (WHO)	Total Weight Gain Range (lbs)	Rates of Weight Gain* 2nd and 3rd Trimester (Mean Range in lbs/wk)
Underweight	<18.5	28–40	1 (1–1.3)
Normal weight	18.5-24.9	25–35	1 (0.8–1)
Overweight	25.0-29.9	15–25	0.6 (0.5–0.7)
Obese (includes all classes)	≥30.0	11–20	0.5 (0.4–0.6)

+ To calculate BMI go to www.nhlbisupport.com/bmi/
** Calculations assume a 0.5–2 kg (1.1–4.4 lbs) weight gain in the first trimester (based on Siega-Riz et al., 1994; Abrams et al., 1995; Carmichael et al., 1997)*

		2000			2001			2002			2003			2004			2005			2006			2007			2008			2009		
		Male	Female	Total*	Male	Female	Total*	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total*	Male	Female	Total	Male	Female	Total	Male	Female	Total*
Total known birth weight	Number of newborns	28,272	25,846	54,119	25,159	23,058	48,218	24,955	23,254	48,209	24,404	22,558	46,962	25,825	23,966	49,791	29,879	27,215	57,094	34,592	31,031	65,624	37,448	33,427	70,875	41,893	36,864	78,757	43,755	37,951	81,707
	Mean birth weight (kg)	3.24	3.14	3.19	3.24	3.14	3.19	3.23	3.12	3.18	3.22	3.12	3.17	3.23	3.12	3.18	3.22	3.12	3.17	3.21	3.11	3.16	3.20	3.10	3.16	3.21	3.11	3.16	3.21	3.10	3.16
	Standard deviation (kg)	0.49	0.47	0.48	0.49	0.47	0.48	0.48	0.47	0.48	0.48	0.47	0.48	0.49	0.47	0.49	0.48	0.46	0.47	0.46	0.45	0.46	0.47	0.46	0.47	0.47	0.45	0.46	0.46	0.45	0.46
	Median birth weight (kg)	3.30	3.10	3.20	3.20	3.20	3.20	3.20	3.10	3.20	3.20	3.10	3.20	3.20	3.10	3.20	3.20	3.10	3.20	3.20	3.10	3.20	3.20	3.10	3.20	3.20	3.10	3.20	3.20	3.10	3.20
Low birth weight less than 2.5 kg)	Number of newborns	1,295	1,489	2,785	1,242	1,348	2,590	1,198	1,366	2,564	1,185	1,407	2,592	1,288	1,491	2,779	1,390	1,599	2,989	1,542	1,810	3,353	1,836	1,969	3,805	1,923	2,189	4,112	1,941	2,320	4,262
	Percentage to total	4.6%	5.8%	5.1%	4.9%	5.8%	5.4%	4.8%	5.9%	5.3%	4.9%	6.2%	5.5%	5.0%	6.2%	5.6%	4.7%	5.9%	5.2%	4.5%	5.8%	5.1%	4.9%	5.9%	5.4%	4.6%	5.9%	5.2%	4.4%	6.1%	5.2%
	Mean birth weight (kg)	2.01	2.06	2.03	2.00	2.07	2.03	2.05	2.05	2.05	2.03	2.05	2.04	2.00	2.04	2.02	2.02	2.06	2.04	2.08	2.09	2.08	2.02	2.05	2.04	2.05	2.08	2.06	2.05	2.09	2.07
	Standard deviation (kg)	0.44	0.41	0.43	0.46	0.42	0.44	0.40	0.42	0.41	0.42	0.42	0.42	0.45	0.43	0.44	0.44	0.41	0.42	0.39	0.39	0.39	0.43	0.42	0.43	0.41	0.41	0.41	0.41	0.38	0.40
	Median birth weight (kg)	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20
Very low birth weight less than 1.5 kg)	Number of newborns	161	148	310	184	142	326	107	147	254	129	151	280	174	171	345	171	154	325	132	151	284	227	209	436	196	215	411	197	189	387
	Percentage to total	0.6%	0.6%	0.6%	0.7%	0.6%	0.7%	0.4%	0.6%	0.5%	0.5%	0.7%	0.6%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	0.4%	0.5%	0.4%	0.6%	0.6%	0.6%	0.5%	0.6%	0.5%	0.5%	0.5%	0.5%
	Mean birth weight (kg)	1.05	1.05	1.05	1.07	1.07	1.07	1.07	1.06	1.06	1.07	1.08	1.07	1.06	1.07	1.07	1.06	1.06	1.06	1.07	1.07	1.07	1.08	1.08	1.08	1.08	1.07	1.08	1.08	1.09	1.08
	Standard deviation (kg)	0.26	0.26	0.26	0.25	0.26	0.26	0.27	0.25	0.26	0.24	0.25	0.24	0.25	0.26	0.26	0.26	0.26	0.26	0.24	0.25	0.25	0.25	0.26	0.26	0.26	0.27	0.27	0.26	0.29	0.27
	Median birth weight (kg)	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.20	1.10
Over weight (4.0 kg and above)	Number of newborns	1,669	823	2,492	1,447	789	2,236	1,442	681	2,123	1,265	682	1,947	1,434	787	2,221	1,511	784	2,295	1,568	787	2,355	1,618	829	2,447	2,025	947	2,972	1,948	921	2,869
	Percentage to total	5.9%	3.2%	4.6%	5.8%	3.4%	4.6%	5.8%	2.9%	4.4%	5.2%	3.0%	4.1%	5.6%	3.3%	4.5%	5.1%	2.9%	4.0%	4.5%	2.5%	3.6%	4.3%	2.5%	3.5%	4.8%	2.6%	3.8%	4.5%	2.4%	3.5%
	Mean birth weight (kg)	4.18	4.16	4.17	4.18	4.16	4.17	4.16	4.16	4.16	4.18	4.15	4.17	4.18	4.16	4.17	4.17	4.16	4.16	4.16	4.16	4.16	4.17	4.17	4.17	4.16	4.17	4.16	4.17	4.16	4.16
	Standard deviation (kg)	0.21	0.21	0.21	0.22	0.19	0.21	0.20	0.20	0.20	0.21	0.20	0.21	0.20	0.19	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.20	0.21
	Median birth weight (kg)	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10

Number of Newborns		Mother's Age				Row Total
		Under 20 years	20 - 34 years	35 years and above	Unknown	
Birth Year	1995	1240	56731	10629	0	**68600**
	1996	1333	51338	10599	0	**63270**
	1997	1277	46987	10964	0	**59228**
	1998	1208	41314	10433	0	**52955**
	1999	1117	39645	10507	0	**51269**
	2000	1039	41616	11464	0	**54119**
	2001	935	36397	10886	0	**48218**
	2002	816	37027	10366	0	**48209**
	2003	762	36162	10038	0	**46962**
	2004	844	38659	10288	0	**49791**
	2005	828	44550	11716	0	**57094**
	2006	894	50920	13810	0	**65624**
	2007	871	53376	16628	0	**70875**
	2008	832	58080	19845	0	**78757**
	2009	762	59297	21648	0	**81707**
	2010	806	63402	24365	0	**88573**
Column Total		**15564**	**755501**	**214186**	**0**	**985251**

Number of Newborns		Mother's Age				Row Total	% under 20
		Under 20 years	20 - 34 years	35 years and above	Unknown		
Mother's Residential District	Central & Western	289	23836	10756	0	34881	0.83%
	Eastern (HK)	630	41109	16140	0	57879	1.09%
	Southern (HK)	424	20063	8864	0	29351	1.44%
	Wan Chai	187	12791	5927	0	18905	0.99%
	Kowloon City	546	27713	9841	0	38100	1.43%
	Kwun Tong	1001	38706	12096	0	51803	1.93%
	Sham Shui Po	620	24411	8938	0	33969	1.83%
	Wong Tai Sin	742	26443	8411	0	35596	2.08%
	Yau Tsim Mong	577	25778	8645	0	35000	1.65%
	Islands	206	8364	3432	0	12002	1.72%
	Kwai Tsing	963	32553	9698	0	43214	2.23%
	North	655	20361	6078	0	27094	2.42%
	Sai Kung	413	28368	10595	0	39376	1.05%
	Sha Tin	861	40702	14190	0	55753	1.54%
	Tai Po	633	20347	6427	0	27407	2.31%
	Tsuen Wan	394	23851	7636	0	31881	1.24%
	Tuen Mun	1280	38792	9654	0	49726	2.57%
	Yuen Long	1435	40705	10819	0	52959	2.71%
	Marine	11	864	441	0	1316	0.84%
	Outside Hong Kong	2888	230781	38547	0	272216	1.06%
	Unknown	809	28963	7051	0	36823	2.20%
Column Total		15564	755501	214186	0	985251	1.58%

Proportion of Low Birth Weight Newborns, Very Low Birth Weight

Newborns and Over Weight Newborns by Mother‘s Educational Level, 2006

Mother's educational level	All newborns with known birth weight	Birth weight < 2.5 kg		Birth weight < 1.5 kg		Birth weight >= 4.0 kg	
	Number	Number	(%)	Number	(%)	Number	(%)
No schooling/ Kindergarten	157	6	3.8%	1	0.6%	7	4.5%
Primary	7,445	293	3.9%	12	0.2%	330	4.4%
Secondary/ Matriculation	44,461	2,258	5.1%	174	0.4%	1,601	3.6%
Tertiary (non-degree)	3,512	183	5.2%	22	0.6%	121	3.4%
Tertiary (degree)	9,828	580	5.9%	57	0.6%	286	2.9%
Unknown	221	33	14.9%	18	8.1%	10	4.5%
Total	65,624	3,353	5.1%	284	0.4%	2,355	3.6%

Proportion of Low Birth Weight Newborns, Very Low Birth Weight Newborns and Over Weight Newborns by Mother's Educational Level, 2009

Mother's educational level	All newborns with known birth weight	Birth weight < 2.5 kg		Birth weight < 1.5 kg		Birth weight >= 4.0 kg	
	Number	Number	(%)	Number	(%)	Number	(%)
No schooling/ Kindergarten	125	10	8.0%	2	1.6%	7	5.6%
Primary	3,300	161	4.9%	15	0.5%	154	4.7%
Secondary/ Matriculation	41,800	2,215	5.3%	211	0.5%	1,491	3.6%
Tertiary (non-degree)	13,145	610	4.6%	47	0.4%	444	3.4%
Tertiary (degree)	21,934	1,138	5.2%	84	0.4%	727	3.3%
Unknown	1,403	128	9.1%	28	2.0%	46	3.3%
Total	81,707	4,262	5.2%	387	0.5%	2,869	3.5%

Working in late stages of pregnancy is as harmful to babies as smoking, study finds - Longer work 'lowers birth weight'

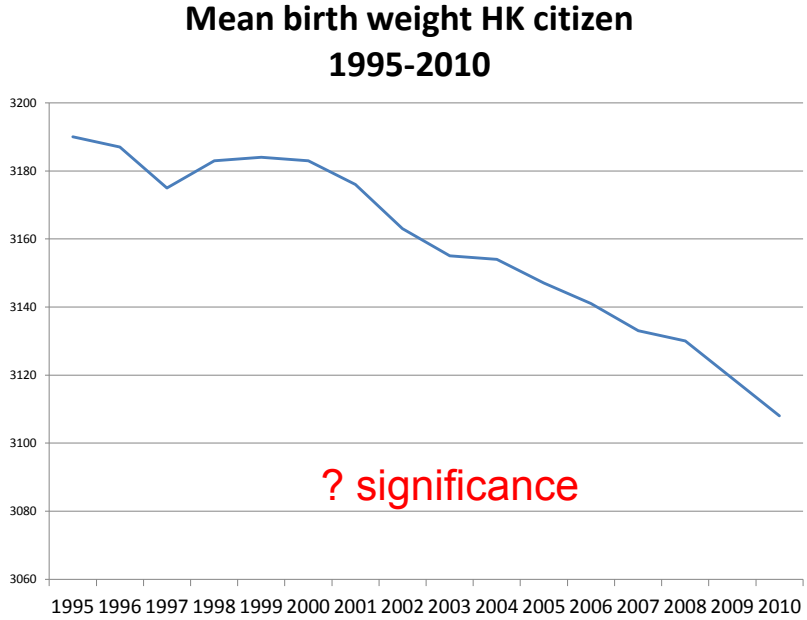
Del Bono, E., Ermisch, J. and Francesconi, M. (2012) Intrafamily resources allocations: A dynamic structural model of birth weight. Journal of Labour Economics, 30(4), pp. 657-706.

Mean Weight at Birth in Grams		Mother's Education Attainment						Average per Mother's Education Attainment
		No Schooling or Kindergarten	Primary	Secondary or Matriculation	Tertiary (Non-degree)	Tertiary (Degree)	Unknown	
Birth	1995	3225	3204	3192	3182	3228	2666	3193
Year	1996	3201	3219	3187	3197	3213	2796	3193
	1997	3164	3209	3178	3184	3206	2893	3182
	1998	3223	3223	3185	3200	3204	2950	3191
	1999	3197	3227	3191	3197	3203	2853	3194
	2000	3169	3230	3194	3184	3200	2892	3195
	2001	3213	3228	3188	3185	3181	2865	3189
	2002	3148	3217	3175	3164	3175	2883	3177
	2003	3205	3210	3174	3157	3149	2885	3173
	2004	3221	3222	3175	3154	3149	3043	3175
	2005	3199	3218	3178	3155	3142	2893	3174
	2006	3250	3202	3168	3136	3132	2890	3164
	2007	3184	3204	3164	3133	3126	3077	3156
	2008	3203	3194	3168	3169	3146	3108	3163
	2009	3119	3199	3164	3168	3153	3070	3162
	2010	3189	3197	3155	3174	3149	3121	3157
Average per Birth Year		3199	3214	3177	3170	3158	3024	3176

Proportion of Low Birth Weight Newborns, Very Low Birth Weight Newborns and Over Weight Newborns by Mother's Length of Stay in Hong Kong, 2006

Mother's length of stay in HK	All newborns with known birth weight	Birth weight < 2.5 kg		Birth weight < 1.5 kg		Birth weight >= 4.0 kg	
	Number	Number	(%)	Number	(%)	Number	(%)
Less than 7 years	35,888	1,388	3.9%	80	0.2%	1,536	4.3%
7 years and above	29,309	1,924	6.6%	186	0.6%	807	2.8%
Unknown	427	41	9.6%	18	4.2%	12	2.8%
Total	65,624	3,353	5.1%	284	0.4%	2,355	3.6%

Weight at Birth in Grams		Mother's Residential Status							Average per Mother's Residential Status
		Hong Kong Residents	Marine Population	Vietnamese Migrants / Refugees	Illegal Immigrants	Tourist / Transients	Others	Unknown	
Birth	**1995**	3190	---	---	3234	3224	3092	3176	**3193**
Year	**1996**	3187	---	---	3226	3228	3151	3194	**3193**
	1997	3175	3300	---	3234	3242	3200	3181	**3182**
	1998	3183	3120	---	3244	3251	3500	3182	**3191**
	1999	3184	3067	---	3276	3245	---	3155	**3194**
	2000	3183	3288	---	3262	3258	---	3170	**3195**
	2001	3176	3092	3017	3286	3256	---	3027	**3189**
	2002	3163	3440	2700	3278	3236	---	3100	**3177**
	2003	3155	3450	2700	3302	3234	---	3092	**3173**
	2004	3154	3133	---	3235	3230	---	3178	**3175**
	2005	3147	3056	---	3282	3226	---	3083	**3174**
	2006	3141	3147	---	3181	3197	---	3018	**3164**
	2007	3133	3093	---	3239	3194	---	3004	**3156**
	2008	3130	3219	---	3153	3205	---	3131	**3163**
	2009	3119	3137	---	3189	3211	---	3015	**3162**
	2010	3108	3021	---	3156	3212	3300	2883	**3157**
Average per Birth Year		**3159**	**3116**	**2858**	**3244**	**3216**	**3105**	**3179**	**3176**



Incidence of LBW & VLBW
O&G Audit 2004

	< 1500 gm	< 2500 gm
1994	0.66%	5.4 %
1999	0.77%	6.0%
2004	0.75% (0.7%)	6.5% (5.6%)
2009	(0.5%)	(5.2)

(x.xx%) – DH statistics

Obstetric Audit 2004

ANTENATAL COMPLICATIONS

	1994		1999		2004	
Diabetes mellitus (including IGT)	2047	3.0%	2945	6.1%	3108	6.3%
Anaemia	4249	6.3%	2745	5.7%	1956	4.0%
Thyroid diseases	389	0.6%	643	1.3%	635	1.3%
Cardiac diseases	489	0.7%	442	0.9%	379	0.8%
Respiratory diseases	191	0.3%	307	0.6%	316	0.6%
Surgical diseases	151	0.2%	267	0.6%	218	0.4%
Psychiatric diseases	177	0.3%	177	0.4%	260	0.5%
Immunological diseases	92	0.1%	144	0.3%	69	0.1%
Renal diseases	146	0.2%	131	0.3%	118	0.2%
Epilepsy	80	0.1%	64	0.1%	69	0.1%
Gastrointestinal /biliary tract diseases	57	0.08%	41	0.08%	32	0.07%
Liver diseases	38	0.06%	29	0.06%	26	0.05%

IGT= Impaired glucose tolerance

MORTALITY RATES

	1994	1999	2004
Stillbirths (per 1000 total births)	232 (3.0/1000)	169 (3.5/1000)	117 (2.4/1000)
No anomalies	*202 (0.3%)*	*161 (0.3%)*	*110 (0.2%)*
Birth weight > 1 kg	*156 (0.2%)*	*48 (0.1%)*	*74 (0.1%)*
Neonatal Deaths (per 1000 live births)	171 (3.0/1000)	72 (1.5/1000)	61 (1.2/1000)
No anomalies	*129 (0.2%)*	*63 (0.1%)*	*46 (0.09%)*
Birth weight > 1 kg	*108 (0.2%)*	*34 (0.07%)*	*31(0.06%)*
Perinatal Deaths (per 1000 total births)	359 (5.0/1000)	225 (4.6/1000)	167 (3.3/1000)
No anomalies	*279 (0.4%)*	*210 (0.4%)*	*145 (0.3%)*
Birth weight > 1 kg	*239 (0.4%)*	*75 (0.2%)*	*101 (0.2%)*

Missing data on fetal outcome in 164 (0.2%) in 1994 and 43 (0.1%) in 1999

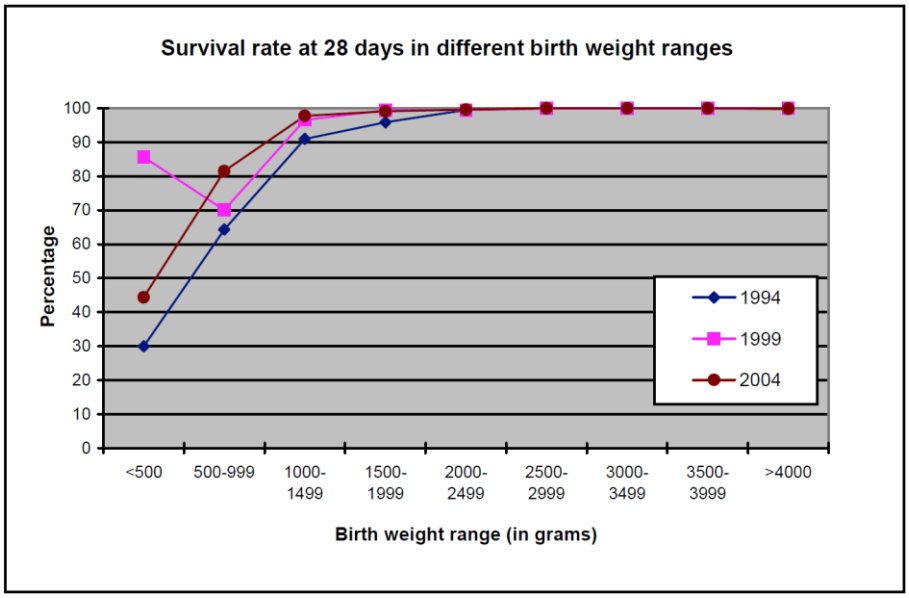
NEONATAL COMPLICATIONS

	1994		1999		2004	
Apgar score at 1 minutes						
0-3	379	0.6%	215	0.4%	250	0.50%
4-6	2373	3.5%	1633	3.4%	1298	2.6%
Apgar score at 5 minutes						
0-3	155	0.2%	46	0.1%	120	0.2%
4-6	242	0.4%	149	0.3%	123	0.3%
Admission to neonatal ICU	1429	2.1%	6241	12.8%	8953	18.0%
Major congenital abnormalities	655	1.0%	378	0.8%	241	0.5%
Respiratory distress syndrome	208	0.3%	86	0.2%	23	0.05%
Intraventricular haemorrhage	51	0.08%	36	0.07%	1	0.002%
Necrotising enterocolitis	26	0.04%	17	0.03%	5	0.01%
Birth trauma	330	0.5%	272	0.6%	194	0.4%
Major infection	278	0.4%	137	0.3%	22	0.04%

	1994			1999			2004		
Gestation in weeks	No.	% of total deliveries	Mean birth weight (gm)	No.	% of total deliveries	Mean birth weight (gm)	No.	% of total deliveries	Mean birth weight (gm)
> 42	899	1.3%	3343	256	0.5%	3264	244	0.5%	3280
42	2592	3.8%	3407	939	1.9%	3455	430	0.9%	3434
41	7924	11.6%	3392	202	10.6%	3452	4800	9.7%	3455
40	16943	24.9%	3301	11025	22.5%	3363	10468	21.2%	3362
39	18029	26.5%	3206	13142	26.9%	3249	13053	26.3%	3245
38	12975	19.1%	3090	10897	22.3%	3129	11942	24.1%	3124
37	4571	6.7%	2918	4018	8.2%	2947	4972	10.0%	2938
36	1626	2.4%	2714	1319	2.7%	2700	1526	3.1%	2723
35	682	1.0%	2483	605	1.2%	2497	696	1.4%	2464
34	446	0.7%	2257	363	0.7%	2497	415	0.8%	2262
33	257	0.4%	2031	212	0.4%	2064	238	0.5%	2046
32	175	0.3%	1850	139	0.3%	1840	177	0.4%	1867
31	110	0.2%	1658	97	0.2%	1684	111	0.2%	1632
30	120	0.2%	1520	83	0.2%	1613	98	0.2%	1562
29	74	0.1%	1405	69	0.1%	1450	63	0.1%	1308
28	80	0.1%	1348	48	0.1%	1323	64	0.1%	1234
27	59	0.1%	1111	44	0.1%	1130	50	0.1%	1091
26	45	0.1%	1135	27	0.1%	1017	47	0.1%	941
< 26	105	0.2%	480	156	0.3%	1118	84	0.2%	1001

Missing data on gestation in 351 (0.5%) in 1994, 277 (0.6%) in 1999 and 178 (0.4%) in 2004

Preterm labour – no increase



MAJOR CHILD HEALTH PROBLEMS

- Injuries – no 1 cause of mortality and morbidity : 2x that in childhood
- Developmental behaviour : SLD – 10-15%, ADHD 3-5%, Autism 0.1-1%
- Obesity – 16%→22% in school students, low breastfeeding rate, lack exercise 80%, poor eating habit 80%
- Violence – child maltreatment >60%, bullying in school : 66% 1-3 times per week; crime rate - low
- Addiction :- smoking 6-8%, substance abuse 3-4%, alcohol, gambling, internet addiction, lack sleep
- Reproductive health – teenage pregnancy, STDs, HIV
- Mental health –depression 20-40%, low self esteem 6%, eating disorder, suicide – no 1 cause of death in adolescents

MAJOR GAPS in information on incidence/prevalence AND awareness/diagnosis AND policy & service provision

45

Total external causes death rate for 2001-2009

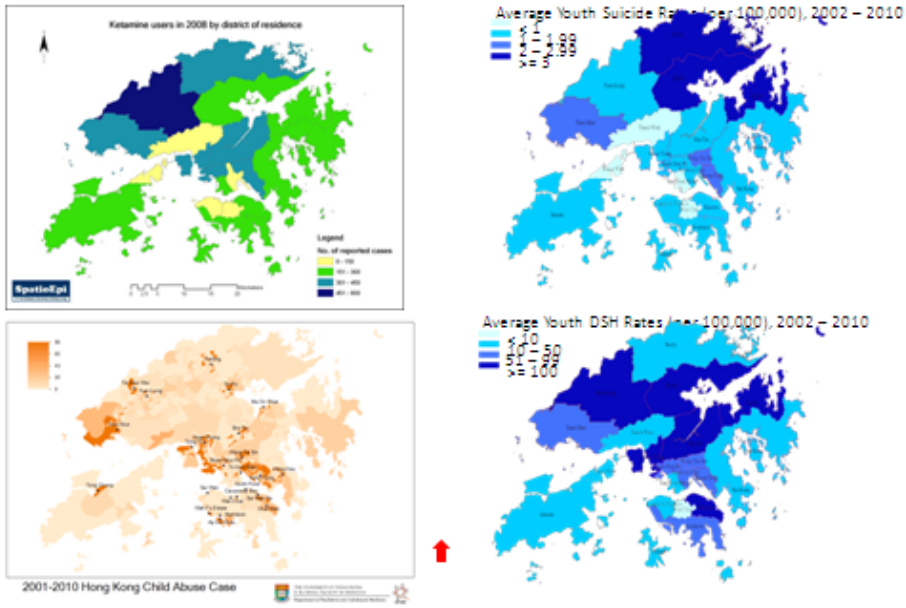
Death Rate (per 100000 0-19 yr population)	Residential District																	All Shown Residential District
	中西區 Central & Western	東區 Eastern (HK)	南區 Southern (HK)	灣仔 Wan Chai	九龍城 Kowloon City	觀塘 Kwun Tong	沙田 Sham Shui Po	黃大仙 Wong Tai Sin	油尖旺 Yau Tsim Mong	離島 Islands	葵青 Kwai Tsing	北區 North	西貢 Sai Kung	沙田 Sha Tin	大埔 Tai Po	荃灣 Tsuen Wan	屯門 Tuen Mun	元朗 Yuen Long	
2001	1.67	7.09	1.52	13.17	6.89	3.85	4.96	4.88	4.64	0.00	6.35	5.83	6.51	9.03	1.41	1.60	7.94	3.79	**6.09**
2002	3.64	2.20	0.00	5.67	6.14	7.07	5.02	4.00	6.41	0.00	2.72	10.88	10.00	2.84	8.81	1.66	6.23	13.40	**5.56**
2003	0.00	1.54	1.65	3.02	1.26	6.42	6.60	7.26	1.69	4.18	4.60	3.16	8.69	2.96	10.75	1.69	12.70	9.75	**5.44**
2004	1.96	2.39	1.71	9.24	2.61	3.30	4.01	3.25	3.31	3.88	1.89	6.56	3.48	5.39	6.35	0.00	7.56	7.18	**4.16**
2005	7.83	3.31	16.06	0.00	2.67	4.15	5.41	3.42	3.39	7.34	2.87	12.16	2.40	1.62	11.66	1.75	7.81	5.45	**5.27**
2006	7.99	2.55	0.00	6.44	2.76	1.70	2.72	2.35	7.12	14.56	1.91	5.33	2.46	3.28	8.50	3.46	2.98	10.28	**4.29**
2007	3.98	2.57	5.41	3.23	1.39	2.61	2.73	2.39	0.00	7.12	3.93	15.69	4.95	2.50	1.72	1.72	2.04	2.83	**3.52**
2008	3.92	2.60	1.84	0.00	1.43	7.13	2.81	3.68	0.00	0.00	5.00	5.19	4.96	5.08	3.55	3.48	5.15	4.76	**3.94**
2009	2.06	3.61	0.00	0.00	1.45	4.47	1.43	5.09	0.00	7.06	8.28	5.26	1.27	6.12	5.49	3.61	5.38	8.74	**4.43**
Average per Year of Death Registration	**3.63**	**3.14**	**3.07**	**4.76**	**3.08**	**4.54**	**4.01**	**4.08**	**3.01**	**5.12**	**4.14**	**7.73**	**4.94**	**4.36**	**6.48**	**2.09**	**6.54**	**7.40**	**4.78**
OR	1.7	1.5	1.5	2.3	1.5	2.2	1.9	2.0	1.4	2.4	2.0	3.7	2.4	2.1	3.1	1.0	3.1	3.5	2.3

75% of deaths can be avoided if all districts have the lowest death rate

External causes of death by age groups for 2001-2009

Number of Deaths	External Cause of Death								Row Total
	Transport accidents	Falls	Accidental drowning and submersion	Exposure to smoke, fire and flames	Accidental poisoning by and exposure to noxious substances	Intentional self-harm	Assault	All other external causes	
below 1 year	2	1	0	2	3	0	17	11	**36**
1 - 4 years	5	10	3	2	3	0	18	11	**52**
5 - 9 years	15	8	11	1	0	3	22	7	**67**
10 - 14 years	28	4	9	0	2	40	15	12	**110**
15 - 19 years	51	8	20	3	15	206	18	24	**345**
Total	**101**	**31**	**43**	**8**	**23**	**249**	**90**	**65**	**610**
Percent	**16.6%**	**5.1%**	**7.0%**	**1.3%**	**3.8%**	**40.8%**	**14.8%**	**10.7%**	

Geo-spatial distribution of injury



Diagnosis Prevalence List. AAP

Sort by Diagnosis		%	Sort by Prevalence	Patients in your practice of 10,000	Citation
Attention Deficit Hyperactivity Disorder	5%	9%	1/11	909	[Froehlich: 2007]
Asthma (Pediatric)	11%	5%	1/20	500	[McNamara,: 2005]
Depression		5%	1/20	500	
Speech Defects		2.6%	1/38	263	[Newacheck: 1992]
Intellectual Disability / Mental Retardation		2.5%	1/40	250	[Larson: 2001]
Substance Use Disorders (23% of 12th graders)		2.4%	1/42	238	[Harrison: 1998]
HPV infection (high-risk types, 18% of girls 14-19)		1.6%	1/63	159	[Dunne: 2007]
Tourette syndrome		1%	1/100	100	[Khalifa: 2005]
Autism Spectrum Disorder	0.1%	1%	1/110	91	[Autism: 2009]
Celiac Disease (all ages)		0.8%	1/133	75	[Fasano: 2003]
In Foster Care (national estimate)		0.6%	1/160	62	[Administration: 2011]
Traumatic Brain Injury (cum. incidence)		0.6%	1/168	60	[Schneier: 2006]
Seizure Disorder		0.4%	1/256	39	[Hirtz: 2007]
Hearing Impairment		0.3%	1/333	30	[Finitzo: 1998]
Congenital Heart Defects, all		0.3%	1/350	29	[Bernstein,: 2004]
Cerebral Palsy		0.2%	1/500	20	[Winter: 2002]
Familial Hypercholesterolemia (heterozygote)		0.2%	1/500	20	[Jorde: 2006]
Diabetes Mellitus, Type I, in children		0.2%	1/588	17	[Diabetes: 2005]
Ventricular Septal Defect		0.17%	1/593	17	[Bernstein,: 2004]
Down Syndrome		0.13%	1/733	14	[MMWR: 2006]
Neural Tube Defects		0.13%	1/760	13	[Utah: 2000]
Hearing impairment, congenital		0.11%	1/909	11	[Mehra: 2009]
Visual Impairment (worse than 20/70)		0.11%	1/935	11	[Mervis: 2002]
Hearing Impairment, serious (>40 db, bilat.)		0.11%	1/935	11	[Mervis: 2002]
Cleft Lip, with or without cleft palate		0.1%	1/954	10	[MMWR: 2006]
Club Foot		0.1%	1/1000	10	[Jorde: 2006]
Juvenile Arthritis		0.1%	1/1000	10	[von: 2001]
Stroke (>6/100,000/yr. x 16 yr.)		0.1%	1/1042	10	[Roach: 2000]
Idiopathic Thrombocytopenic Purpura (cum. incidence)		0.1%	1/1070	9	[Chu: 2000]
Fetal Alcohol Syndrome			1/1180	8	[Bertrand: 2005]
Hydrocephalus			1/1220	8	[Persson: 2005]
Inflammatory Bowel Disease			1/1408	7	[Kappelman: 2007]
Klinefelter Syndrome			1/2000	5	[Jorde: 2006]

Scope of the problem in Hong Kong

5-10 yrs 11-15 yrs	Mental disorders	10% (boys); 6% (girls) 13% (boys); 10% (girls)	Meltzer et al, 1999	UK
3-4 yrs	Preschool behavioral disorders	17.9% (mild); 4.6% (moderate); 0.75% (severe)	Luk et al, 1991	HK
6-12 yrs	ADHD	5%	So, Leung & Hung, 2002	HK
Form 1-7	Felt depressed & hopeless Suicidal idea Suicidal attempt	29% 11% 4%	Centre for Health Education and Health Promotion CUHK, 2003	HK
Grade 7-9	Any psychiatric disorders Any anxiety disorders Any depressive disorders ADHD ODD Conduct disorder	38.4% (16.4% + impairment criteria) 30.2% (6.9%) 1.7% (1.3%) 4.4% (3.9%) 8.7% (6.8) 2.6% (1.7%)	Leung et al, 2006	HK

A conservative estimation of the local rate of mental disorders among children and adolescents aged 3 to 18 years is 10%

Original Article

US from 1 in1000 → 1 in 100
Some believe in HK should be 1 in 160

Journal of Child Neurology
Volume 23 Number 1
January 2008 67-72

10.1177/0883073807308702
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Epidemiological Study of Autism Spectrum Disorder in China

Incidence 5.5/100,000
Prevalence: 16.1 / 100,000

Virginia C. N. Wong, MBBS, FHKAM, FHKC Paed, FRCPCH, FRCP, DCH, and Stella L. H. Hui, BSc, MMedSc

The object of this study was to investigate the epidemiologic pattern of autism spectrum disorder in Chinese children. An autism spectrum disorder registry has been established in Hong Kong since 1986 by collecting data in a single center (the only university-affiliated child assessment center in Hong Kong). Since 1997, inpatient data from all public hospitals under the Hospital Authority have been stored in a central computerized program and retrieved from the Clinical Data Analysis and Reporting System. Clinical data have also been retrieved through the Clinical Data Analysis and Reporting System to ensure the completion of the registry, and these suspected cases have undergone the same diagnostic evaluation for autism spectrum disorder, as some of the new autism cases might be hospitalized in the public hospital. The incidence and prevalence of autism spectrum disorder have been calculated for the period of 1986 to 2005 using the population statistics available in the government for children less than 15 years old in Hong Kong. This study has included 4 247 206 person-years from 1986 to 2005 for children less than 15 years old and 1 174 322 person-years for those less than 5 years old in Hong Kong. Altogether, 645 children 0 to 4 years old with diagnoses of autism spectrum disorder were identified from 1986 to 2005. The estimated incidence of autism spectrum disorder was 5.49 per 10 000. The prevalence was 16.1 per 10 000 for children less than 15 years old for the same period. The male to female ratio was 6.58:1. This is the first reported epidemiologic study of autism spectrum disorder in Chinese children. The incidence rate is similar to those reported in Australia and North America and is lower than Europeans.

Keywords: Chinese children; autism spectrum disorder; autism; incidence; prevalence

Incidence of ASD in HK

Table 2. Estimated 5-Year Incidence of Autism Spectrum Disorder in Hong Kong Chinese Children 0-4 Years Old

Year	Incidence Rate Per 10 000 Person-Years	95% Confidence Interval
1986-1990	5.19	4.43-5.94
1991-1995	4.46	3.73-5.18
1996-2000	5.25	4.42-6.09
2001-2005	7.86	6.68-9.05

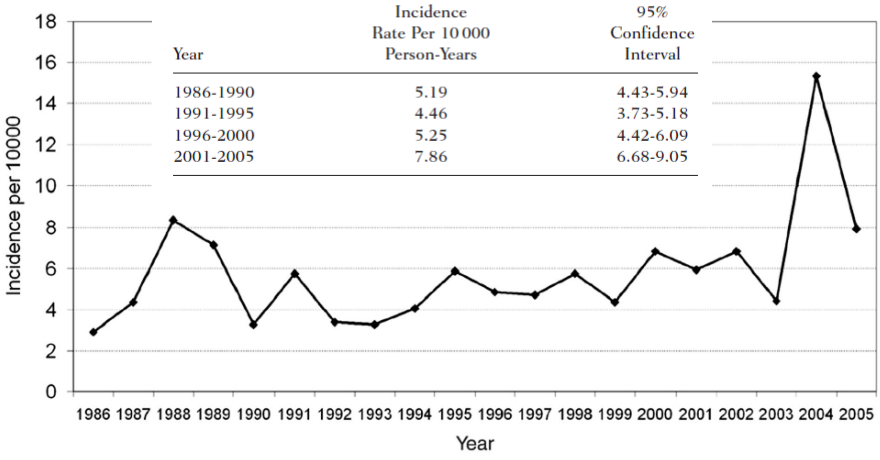


Figure 1. Annual incidence per 10 000 of autism spectrum disorder in Hong Kong Chinese children 0 to 4 years old from 1986 to 2005.

Annual Prevalence of ASD in HK

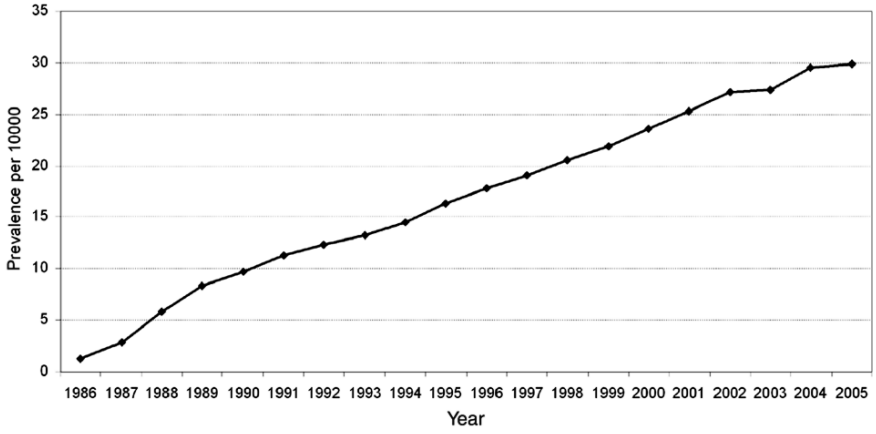


Figure 2. Annual prevalence of autism spectrum disorder in Hong Kong Chinese children 0 to 14 years old from 1986 to 2005.

1. Cannot conclude rising incidence
2. Risk factors and aetiological pattern need further study

(c) Specific Learning Difficulties and Attention Deficit/Hyperactivity Disorder

Age group	Specific Learning Difficulties			Attention Deficit/ Hyperactivity Disorder		
	No. of persons ('000)	%	Rate#	No. of persons ('000)	%	Rate#
< 15	5.8	59.0	0.6	3.9	70.5	0.4
15 – 17	1.2	12.0	0.5	0.4	7.4	0.2
< 18	7.0	71.0	0.6	4.3	77.8	0.4
≥ 18	2.9	29.0	§	1.2	22.2	§
Overall	**9.9**	**100.0**	**0.1**	**5.5**	**100.0**	**0.1**

Notes :

As a percentage of all persons in the respective age/sex groups. For example, among all persons aged below 15, 0.6% were persons with Specific Learning Difficulties.

§ Less than 0.05.

(b) Speech difficulty, mental illness/mood disorder and autism

Age group	Speech difficulty			Mental illness/ mood disorder			Autism		
	No. of persons ('000)	%	Rate#	No. of persons ('000)	%	Rate#	No. of persons ('000)	%	Rate#
< 15	3.0	10.6	0.3	0.9	1.1	0.1	2.5	67.6	0.3
15 – 17	0.5	1.8	0.2	0.5	0.5	0.2	#*	#*	#*
< 18	3.5	12.4	0.3	1.4	1.6	0.1	2.8	73.9	0.2
≥ 18	24.8	87.6	0.4	85.2	98.4	1.5	1.0	26.1	§
Overall	**28.4**	**100.0**	**0.4**	**86.6**	**100.0**	**1.3**	**3.8**	**100.0**	**0.1**

Notes :

As a percentage of all persons in the respective age/sex groups. For example, among all persons aged below 15, 0.3% were persons with speech difficulty.

* Estimates equal to or less than 200 (including zero figures) and related statistics derived based on such estimates (e.g. percentages and rates) are not released due to very large sampling errors.

§ Less than 0.05.

The Diagnosis and Prevalence of Hyperactivity in Chinese Schoolboys

PATRICK W. L. LEUNG, S. L. LUK, T. P. HO, ERIC TAYLOR, FELICE LIEH MAK and JOHN BACON-SHONE

Background. This study was undertaken to examine the validity of different diagnostic definitions of hyperactivity in a Chinese population. Estimates of the prevalence of hyperactivity were made according to these different diagnostic definitions.

Method. In a two-stage epidemiological study of hyperactivity in Hong Kong, 3069 Chinese schoolboys were screened by questionnaires; and a stratified sample of 611 of them entered a second stage for more detailed diagnostic assessment.

Results. Children with hyperkinetic disorder (ICD–10) or ADDH (DSM–III) both displayed significant hyperactive symptoms, but with somewhat different external correlates; hyperkinetic disorder tended to show more neurodevelopmental impairments, ADDH more cognitive and educational difficulties. These findings raise the possibility of heterogeneity in the disorders present with hyperactivity. The DSM–III–R category of ADHD was more common, and those extra cases, that did not overlap with ADDH or hyperkinetic disorder, included children with no obvious behavioural, cognitive or neurodevelopmental impairments. Hence ADHD may be an over-inclusive category. Prevalence rates for hyperkinetic disorder, ADDH and ADHD were respectively 0.78%, 6.1% and 8.9%.

Conclusions. A disorder of hyperactivity does exist in the Chinese culture, displaying the same kinds of symptomatology and external correlates as in the West. The prevalence rates of hyperkinetic disorder and ADDH in Chinese schoolboys are on the low side when compared to those reported in Western studies.

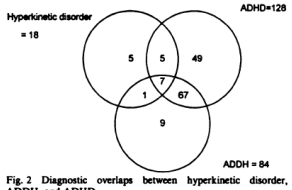


Fig. 2 Diagnostic overlaps between hyperkinetic disorder, ADDH, and ADHD.

Disorder	Preval
Hyperkinetic disorder	0.78%
Attention deficit with hyperactivity ADDH	6.1%
Attention deficit-hyperactivity ADHD	8.9%

Child Assessment Centre 2003-2009 total no. of patients diagnosed with the following conditions:

- AD/HD: 2583 patients (560 in 2009)
- Attention Deficit Disorder: 795 patients (193 in 2009)
- Hyperactive-Impulsive: 2611 patients (630 in 2009)
- Attention Problem : 2455 patients (490 in 2009)

Public awareness of AD/HD is still limited despite its high prevalence, implication on multiple aspects of life and availability of effective treatment (2008 Household Survey)

Attention-Deficit/ Hyperactivity Disorder (ADHD) Drug Prescription Trend Among School-aged Children and Adolescents in Hong Kong: a descriptive study - submitted for publication

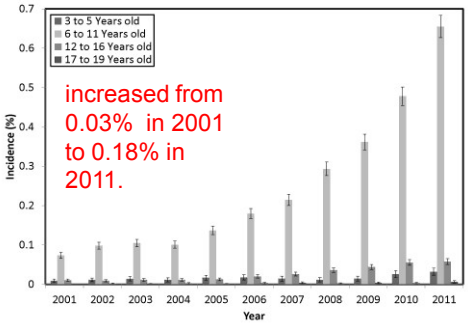
Observational study using Clinical Data Analysis & Reporting System (an electronic medical record database) - Number of children aged between 3 and 19 who are prescribed with either methylphenidate or atomoxetine within the study period (2001 to 2011), and the prevalence and incidence of children with ADHD drug prescription

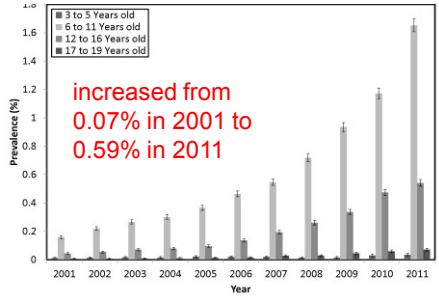
Results: Prevalence of ADHD drugs prescription increased from 0.07% in 2001 to 0.59% in 2011. Incidence increased from 0.03% to 0.18%. Both prevalence and incidence demonstrated an increasing trend throughout the study period.

Conclusion: The ADHD drug prescription prevalence in Hong Kong is lower than most western countries. The increase in ADHD drugs prescription implies a greater population of children who suffer from ADHD are being treated.

It is not sure whether this increase is due to actual increase in awareness and diagnosis or increase in number prescribed with ADHD drugs.

Close monitoring on adverse effects of drugs is needed – growth, tic, convulsion, suicide, sudden death.





Early adolescent outcome of attention-deficit hyperactivity disorder in a Chinese population: 5-year follow-up study

Hong Kong Med J Vol 16 No 4 ❁ August 2010

150 ADHD followed for 6 years (mean age 14 yrs) Adolescents with ADHD is more likely to

- Smoke
- Use illicit drugs
- Poorer academic attainment
- Being arrested
- Face more difficulty in family environment and social problem solving

Local Chinese children with attention-deficit hyperactivity disorder are at significant risk of **multiple forms of adolescent maladjustment**. Their outcome profile is similar to that reported in the West.

TABLE 2. Comparison of outcomes in adolescent ADHD and control subjects*

Adolescent outcomes	ADHD (n=150)		Controls (n=171)		χ^2 / t
	%	Mean (SD)	%	Mean (SD)	
Subject age (years)		13.9 (1.3)		13.9 (1.2)	-0.09
Single parent family	17		13		0.88
Large sibling size (>3)	3		4		0.12
Low income family	26		19		2.49
Adolescent psychopathology					
Total problem caseness	33		19		8.50§
Internalising caseness	18		8		8.21†
Externalising caseness	32		6		36.0§
DSM-IV ADHD counts (parent)		8.1 (4.4)		2.6 (3.5)	12.3‡
DSM-IV ADHD counts (youth)		4.8 (4.0)		4.2 (3.7)	1.48
Antisocial behaviour					
History of arrest	7		0		12.3‡
Self-reported Misconduct Score		8.1 (8.7)		8.4 (6.4)	-0.49
Substance use					
Ever smoked cigarettes	13		5		5.61§
Regular smoking	5		1		6.67†
Ever used illicit drugs	3		0		4.62§
Regular use of illicit drugs	1		0		1.15
HKAT mean percentile rank	HK attainment test				
Chinese		34.1 (27.9)		55.8 (19.2)	-4.44‡
English		40.7 (29.1)		59.4 (20.5)	-3.71‡
Mathematics		41.8 (32.1)		60.0 (24.2)	-3.20†
Grade repetition	28		11		14.8‡
CBCL competence total T-score		40.0 (12.6)		42.6 (9.7)	-2.04§
Rosenberg Self-Esteem		18.6 (3.9)		18.9 (4.3)	-0.76
C-Social Problem–Solving Inventory-R					
Positive problem solving		10.4 (4.7)		11.3 (4.5)	-1.79
Rational problem solving		9.0 (4.4)		10.1 (4.2)	-2.38§
Negative problem solving		5.7 (4.4)		6.4 (4.3)	-0.47
Avoidance style		6.4 (4.8)		6.2 (5.0)	-0.67
Impulsivity/carelessness		5.5 (3.6)		4.5 (3.3)	2.46§
Family Environment Scale					
Conflict scale		3.1 (2.0)		2.6 (2.1)	2.31§
Cohesion scale		6.1 (2.3)		6.8 (2.1)	-2.99†

* ADHD attention-deficit hyperactivity disorder, CBCL Child Behaviour Checklist, DSM-IV Diagnostic and Statistical Manual of Mental Disorders (4th edition HKAT Hong Kong Attainment Test, and SD standard deviation
† P<0.01; independent sample *t* test (2-tailed)
‡ P<0.001; independent sample *t* test (2-tailed)
§ P<0.05; independent sample *t* test (2-tailed)

POVERTY

Population of the Poor by Age Group

		2001	Mid of 2010	+/-
Children (aged 0-14)	Population ('000)	266.3	205.6	-22.8%
	Poverty Rate	24.3%	24.0%	
Youth (aged 15-24)	Population ('000)	144.0	176.2	+22.4%
	Poverty Rate	15.9%	20.1%	
Adult (aged 25-44)	Population ('000)	270.1	235.1	-13.0%
	Poverty Rate	11.1%	10.5%	
Middle Aged (aged 45-64)	Population ('000)	252.3	355.2	+40.8%
	Poverty Rate	17.5%	16.6%	
Elderly (aged 65 and >)	Population ('000)	253.9	290.0	+14.2%
	Poverty Rate	34.7%	33.9%	

Source: HKCSS

Facts

- Child poverty rate rose significantly – 25%
  - Family structure continues to be strongly related to whether or not children are poor
  - Single parents, new immigrants & ethnic disparities persists and increasing
  - Children are more vulnerable
- Consequences are serious, permanent and far reaching – *trans-generation*
  - Educational and cognitive outcomes
  - Social and emotional development
  - Economic outcomes as adults
  - Health outcomes – physical, mental and social
  - Risk behaviours and criminality
  - Inter-generational and affect genes :epigenetics
- Impacts on children are life-long and may not be reversed even after short period of exposure

Hong Kong Gini coefficient

- 1971 0.430
- 1976 0.429
- 1981 0.451
- 1986 0.453
- 1991 0.476
- 1996 0.518
- 2001 0.525
- 2006 0.53
- 2011 0.533

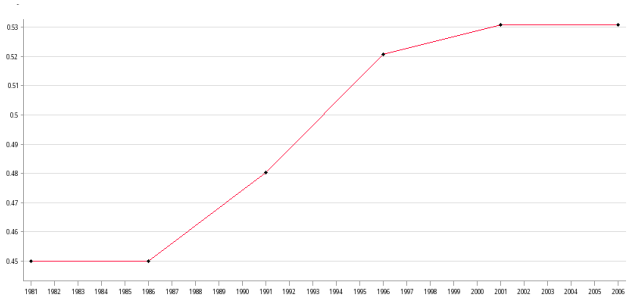
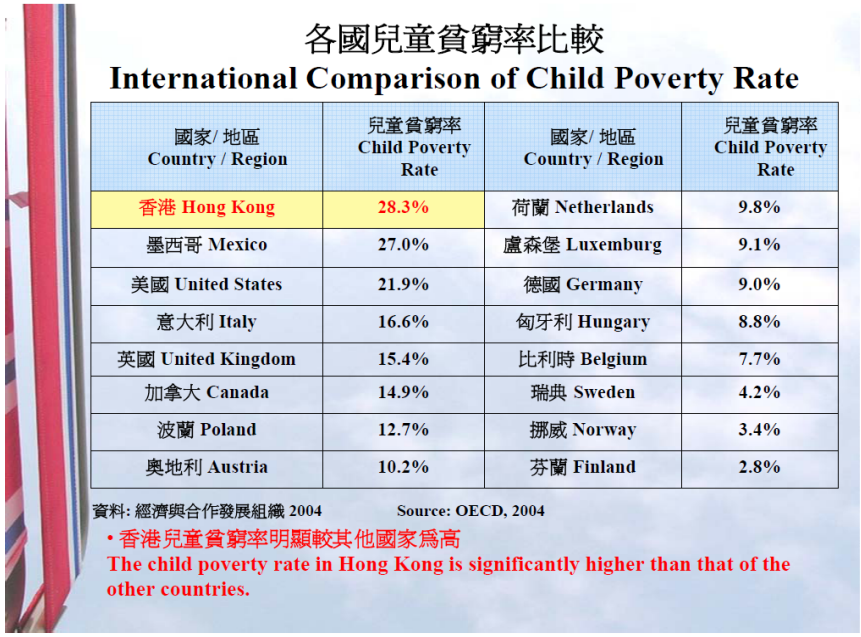


Table : Gini Coefficients for 2001, 2006 and 2011

	All Domestic Households			Economically Active Households		
	2001	2006	2011	2001	2006	2011
Original Household Income	0.525	0.533 (+0.008)	0.537 (+0.004)	0.488	0.490 (+0.002)	0.489 (-0.001)
Post-tax Household Income	0.515 (-0.010)	0.521 (+0.006) (-0.012)	0.521 (-) (-0.016)	0.476 (-0.012)	0.477 (+0.001) (-0.013)	0.470 (-0.007) (-0.019)
Post-tax Post-social Transfer Household Income	0.470 (-0.055)	0.475 (+0.005) (-0.058)	0.475 (-) (-0.062)	0.436 (-0.052)	0.436 (-) (-0.054)	0.430 (-0.006) (-0.059)
Post-tax Post-social Transfer Per Capita Household Income	0.421 (-0.104)	0.427 (+0.006) (-0.106)	0.431 (+0.004) (-0.106)	0.412 (-0.076)	0.412 (-) (-0.078)	0.413 (+0.001) (-0.076)
Post-tax Post-social Transfer (Including the One-off Government Relief Measures in 2011) Per Capita Household Income	- -	- -	0.414 (-0.123)	- -	- -	0.399 (-0.090)

Note: Figures in brackets refer to reduction compared with Gini Coefficient based on original household income.



Economy Statistics > Child poverty (most recent) by country

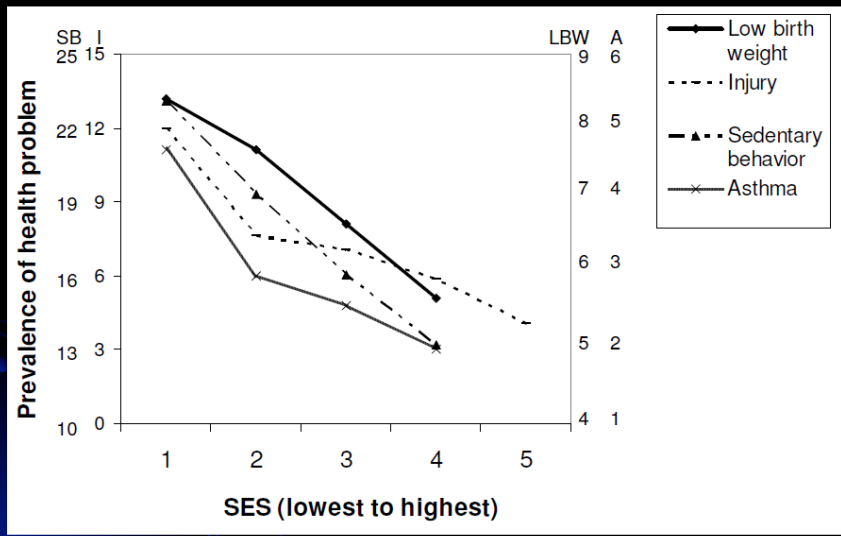
HK GDP - 14

Showing latest available data.

Rank	Countries	Amount
# 23	Sweden:	2.6
# 22	Norway:	3.9
# 21	Finland:	4.3
# 20	Belgium:	4.4
# 19	Luxembourg:	4.5
# 18	Denmark:	5.1
# 17	Czech Republic:	5.9
# 16	Netherlands:	7.7
# 15	France:	7.9
# 14	Hungary:	10.3
# 13	Germany:	10.7
# 12	Japan:	12.2
= 10	Spain:	12.3
= 10	Greece:	12.3
# 9	Australia:	12.6
# 8	Poland:	15.4
# 7	Canada:	15.5
# 6	Ireland:	16.8
# 5	Turkey:	19.7
# 4	United Kingdom:	19.8
# 3	Italy:	20.5
# 2	United States:	22.4
# 1	Mexico:	26.2
	Weighted average:	11.9

HK – 28%

SES & Childhood Health



(Chen et al., Psych Bull, 2002)

A study of the livelihood of children living in poverty 2002 CB Chow

- Living environment – 30% bad environment
- Social life – 25% never play with friends after school, 40% never engage with social activities with parents, 60% deprived of using community facilities
- Nutrition – slightly below standard, normal growth
- Education resources - deprived
- Self-esteem - low

Child Poverty in HK 2010

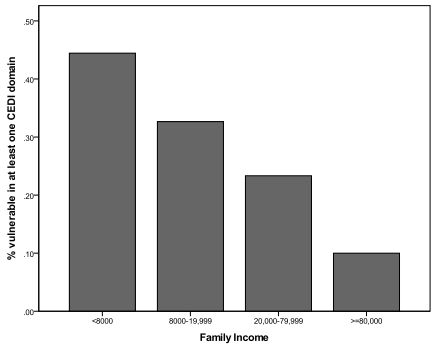
BGCA

1. More than 210,000 (24.3%) children aged below 14 living in poor (24.3% of the total children population) (2010)
2. 53.4% of children having negative feeling to themselves
3. 72.7% of children with low self esteem
4. 40% of children having social anxiety problems
5. 21.5% of children attributing low resilience
6. Less than 24.0% and 25.2% not attending the "musical and drawing classes" and the "sport or ball games training" respectively
7. 37.5% of children failed in their English Test or Examination (37.5%)
8. 31.5% of children without computer and internet access at home
9. 17.9% and 13.9% of children having not enough food and less than 3 meals every day
10. 20.4% of children perceiving themselves "unhealthy"
11. 26.7% of children unwilling to have social contact with others
12. 15.4% of children being underweighting (higher 1.4% than the normal)
13. 45% of children not participating extra-curriculum activities,
14. More than 24.6% of children having dental problems (higher 10% than the normal)
15. 14.7% of children having frequent injured at home

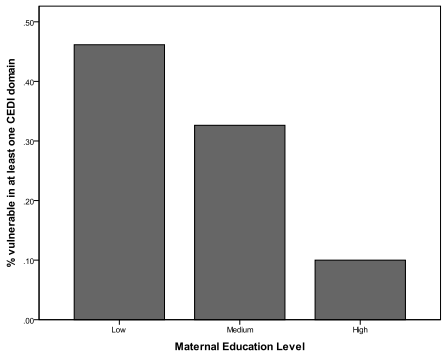
The Early Development of Children from Different Socioeconomic Backgrounds in Hong Kong

Patrick Ip, 2012 *under preparation*

Developmental Vulnerability vs. Family Income



Developmental Vulnerability vs. Maternal Education



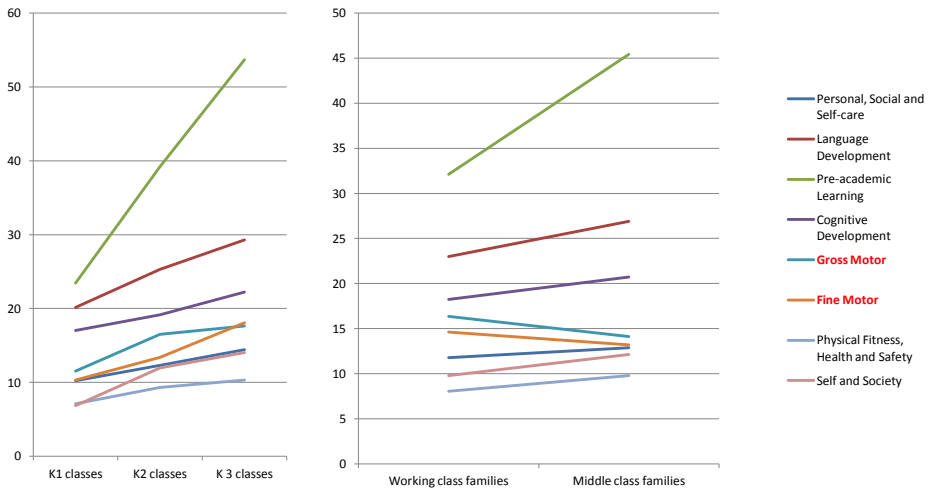
Mediating effects of family and Kindergarten

- Mediating effect of **family processes** (i.e. frequency of parent-child interactions and management of child digital use at home) in explaining socioeconomic gradients in child developmental outcomes
- **kindergarten level** variables (annual school fees, teacher education background and working experience) as important mediators which accounted for significant proportion of variance in the total CEDI score

Double jeopardy !!

The Hong Kong Early Child Development Scale: A Validation Study

N Rao et al 2012 *in press*



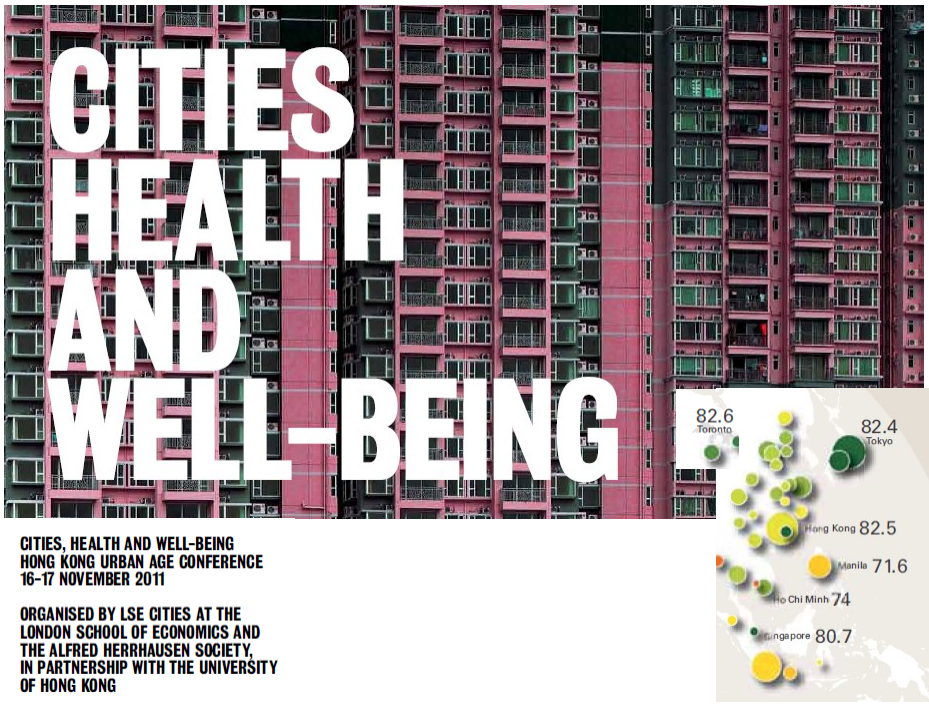
Survey on the Impact of Soaring Food Prices on Poor Families in Hong Kong 2011

- One in every 6 poor families with children is trapped in hunger
- Nearly 80% of respondents spend more on food, but get less
- 72% of poor children eat leftover foods while 15% even eat expired foods
-

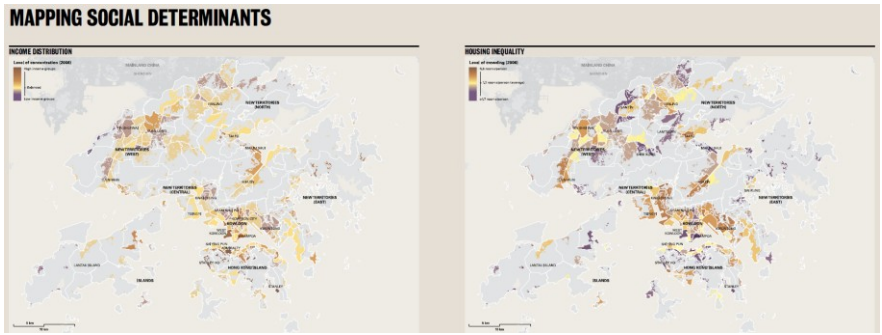
Food Security

6.7 In the past 12 months, about 44.6% of parents indicate that they could not afford to eat balanced meals and about 40.5% of parents worried about running out of food.

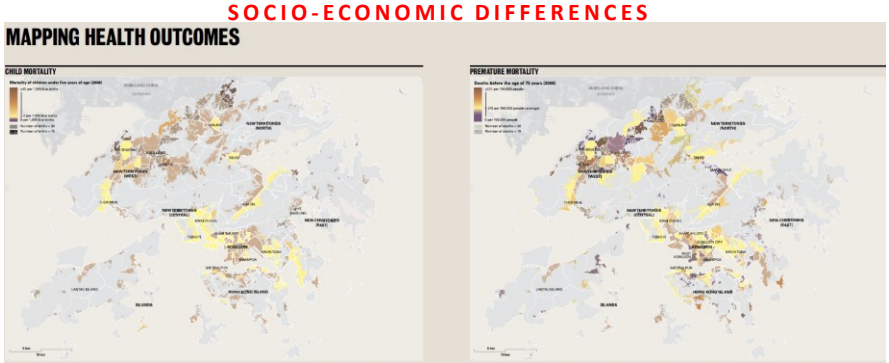
%	Never	Always/ Sometimes
Household items:		
Worried food would run out	59.5	40.5
Food bought just didn't last	62.0	38.0
Couldn¡t afford to eat balanced meals	55.4	44.6
Adults:		
Adult(s) cut or skipped meals	81.4	18.6
Adult(s) cut or skipped meals (frequency)	19.4 (Once every two to three months, once every three months or more)	80.6 (Once every few days, once a week, once every two to three weeks, almost every month)
You ate less than you felt you should	74.7	25.3
You were hungry but didn¡t eat	90.6	9.4
You lost weight because there was not enough food	90.9	9.1
Adult(s) did not eat for whole day	94.7	5.3
Adult(s) did not eat for whole day (frequency)	36.3 (Once every two to three months, once every three months or more)	63.7 (Once every few days, once a week, once every two to three weeks, almost every month)
Children:		
Few kinds of low-cost food for children	61.3	38.7
Couldn¡t feed children a balanced meal	61.2	38.8
Children were not eating enough	73.8	26.2
Cut size of children¡s meals	94.5	5.5
Children skipped meals	92.9	7.1
Children skipped meals (frequency)	59.6 (Once every two to three months, once every three months or more)	40.4 (Once every few days, once a week, once every two to three weeks, almost every month)
Children felt hungry	96.1	3.9
Children did not eat for whole day	98.7	1.3



	Current population in the city (millions) GIS-BASED	Current population in metropolitan region (millions)	Central area density (people per km²) GIS-BASED	Projected growth 2010-2025 (people per hour)	Percentage of the country's population residing in each city	GDP per capita (US$)	Percentage of national GDP produced by each city	Average annual growth of GVA 1993-2010	Life expectancy (years)	Metropolitan Health Index
HONG KONG	7.0	7.0	22,193	7	–	45,090	–	3.6	82.5	0.88
NEW YORK	8.1	18.8	15,353	9	2.8	55,693	3.3	2.8	77.6	0.78
SHANGHAI	15.5	15.5	23,227	26	1.0	8,237	5.0	11.8	81	0.62
LONDON	7.6	7.6	8,326	1	12.4	60,831	3.4	2.9	79.2	0.79
MEXICO CITY	8.6	19.2	12,880	10	8.4	18,321	21.5	2.9	75.9	0.64
JOHANNESBURG	3.2	3.9	2,203	3	8.1	9,229	14.8	3.7	51	0.30
MUMBAI	11.7	19.3	45,021	44	0.9	1,871	2.9	6.7	68.1	0.54
SÃO PAULO	10.4	19.2	10,376	11	5.8	12,021	11.9	3.2	70.8	0.58
ISTANBUL	12.7	12.7	20,128	12	17.8	9,368	22.0	3.1	72.4	0.57



SOCIO-ECONOMIC DIFFERENCES



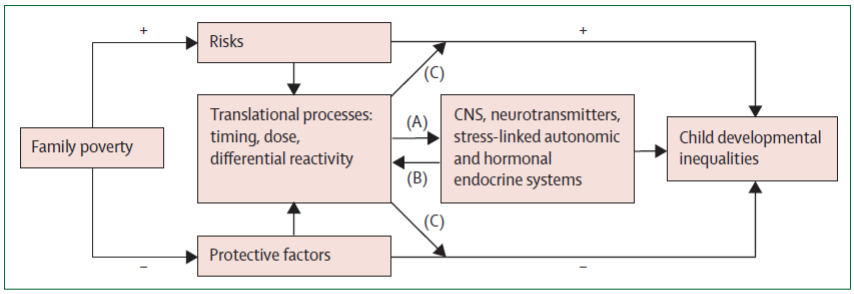
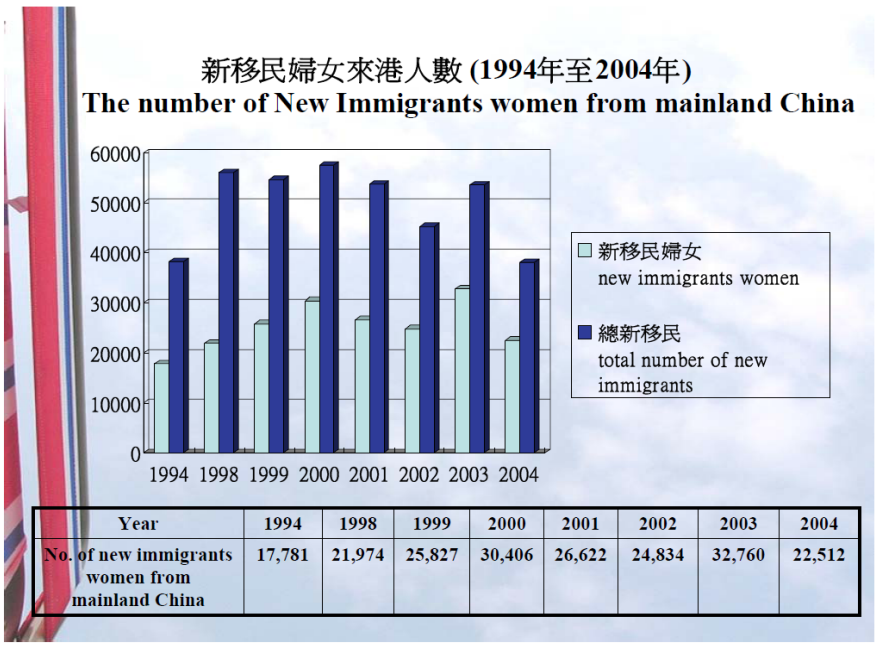


Figure 1: **Pathways linking poverty to developmental inequities**
(A) Timing, dose, and differential reactivity influence how individual exposure to risk and protective factors translate into individual differences in brain function and structure. (B) Brain structure and function influence the degree of differential reactivity shown. (C) Timing and dose of exposure, and differential reactivity moderate the effect of risk and protective factors upon child development.

Food insecurity
Expectation to move upwards
Learning opportunities
Role modeling
Stress from financial problems
Domestic conflicts

NEW IMMIGRANT AND CROSS-BORDER CHILDREN

Number of Newborns		Mother's Residential Status							Row Total
		Hong Kong Residents	Marine Population	Vietnamese Migrants / Refugees	Illegal Immigrants	Tourist / Transients	Others	Unknown	
Birth Year	1995	57660	0	0	3027	4310	199	3404	**68600**
	1996	44426	0	0	2877	3918	37	12012	**63270**
	1997	41466	7	0	1880	3888	2	11985	**59228**
	1998	40489	5	0	1550	4912	1	5998	**52955**
	1999	43435	3	0	1401	6381	0	49	**51269**
	2000	45420	17	0	1116	7426	0	140	**54119**
	2001	40159	26	6	560	7426	0	41	**48218**
	2002	39181	5	4	317	8698	0	4	**48209**
	2003	36437	4	2	84	10337	0	98	**46962**
	2004	35455	18	0	57	13872	0	389	**49791**
	2005	36899	59	0	44	19898	0	194	**57094**
	2006	38592	55	0	52	26838	0	87	**65624**
	2007	42369	536	0	49	27708	0	213	**70875**
	2008	42505	16	0	19	34088	0	2129	**78757**
	2009	43543	513	0	9	37603	0	39	**81707**
	2010	46860	52	0	9	41609	2	41	**88573**
Column Total		**674896**	**1316**	**12**	**13051**	**258912**	**241**	**36823**	**985251**



Year	1994	1998	1999	2000	2001	2002	2003	2004
No. of new immigrants women from mainland China	17,781	21,974	25,827	30,406	26,622	24,834	32,760	22,512

Familial Effect on Child Poverty in Hong Kong Immigrant Families (Soc Indic Res 2012 DOI 10.1007/s11205-012-0088-7)

Table 1 A summary description of the characteristics of children in immigrant and local families (N = 25,362)

	Immigrant	Local	Chi-square test value
First-generation immigrant	19.3 %	–	
Second-generation immigrant	80.7 %	–	
Single-parent family	9.5 %	11.8 %	34.82***
First-generation immigrant in single-parent family	11.1 %	–	
Second-generation immigrant in single-parent family	9.1 %	–	
Family size	4.34 (SD = 1.21)	4.31 (SD = 1.21)	−2.03*
Young children in poverty	36.2 %	12.1 %	2,012.17***
Both parents are immigrants	41.9 %		
Mother			
College graduate	7.9 %	19.5 %	717.73***
Cantonese as usual language spoken at home	88.8 %	94.8 %	297.95***
English as other language spoken	23.7 %	64.8 %	4,340.14***
Father			
College graduate	10.5 %	24.9 %	897.63***
Cantonese as usual language spoken at home	85.9 %	90.8 %	143.44***
English as other language spoken	26.4 %	59.1 %	2,769.07***
N	12,609	12,753	

Using 2006 bicensus data: 12,609 and 12,753 children of immigrant and local families

Implications:-

1. Poverty
2. Family context – more single parents, parents less educated
3. Language
4. Intergenerational effect

Demographics changing rapidly
-Poor for reunion to
-Rich for security

Studies

- CPU – Mobility and Welfare Dec 2011: - Parents mostly having 2 children; relatively well educated with higher occupational status; in middle or upper middle class; mostly having at least 1 child born in Mainland and child born in HK being the second or third child. Reasons to have children in HK – evade "one child" policy, acquire HK citizenship, enjoy quality maternity services. Half have no definite plan and many consider to take child to HK for primary education = mobile population group.
- A Study of Cross Border Student in Hong Kong:
  World Academy of Science, Engineering and Technology. 2012, 64: 297

TABLE III
THE NUMBER OF CROSS BORDER STUDENTS FROM THE SCHOOL YEAR 2004/05 – 2010/11

School Year	Kindergarten	Primary	Secondary	Total
2004/05	733	2589	481	3083
2005/06	962	2998	538	4498
2006/07	797	2878	799	4474
2007/08	1456	3466	937	5859
2008/09	1780	3910	1078	6768
2009/10	2681	4090	1267	8038
2010/11	3786	4575	1538	9899

Source: Information Services Department (15 June 2011)

Challenges and opportunities:-

1. New young manpower
2. Safety and transportation
3. Integration issue & identity problems
4. Educational support
5. Social support
6. Planning problem

- Census and Statistics Department, “Babies Born in Hong Kong to Mainland Women”, *Hong Kong Monthly Digest of Statistics, September,* The Government of the Hong Kong Special Administrative Region, 2011.

Inter-generational poverty

- Case in TSW & SSP

Approach

- Public health – with current data, targets and accountability
- Life cycle – proactive and dynamic
- Proportionate universalism
- Comprehensive & integrated

Problems

- Balance of community & housing mix and jobs and schools
- Social capital
- Facility and service provisions – major time lag

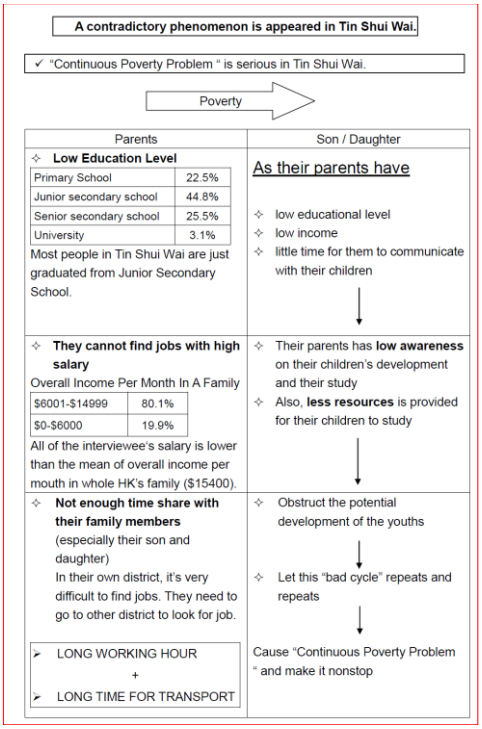
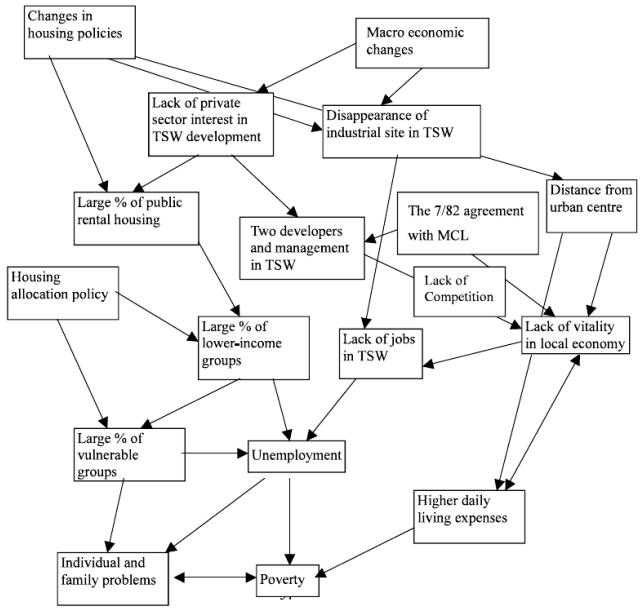
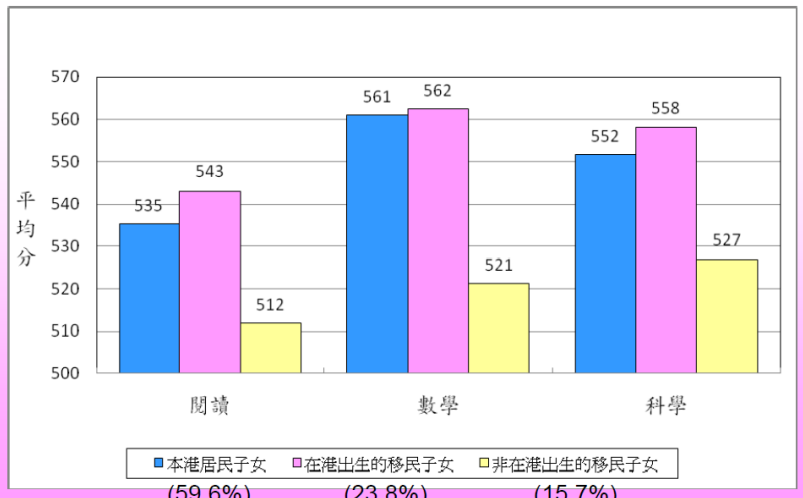


Figure 6.1: Factors causing the social and economic problems in Tin Shui Wai



不同移民身份學生
在PISA 2009的閱讀表現

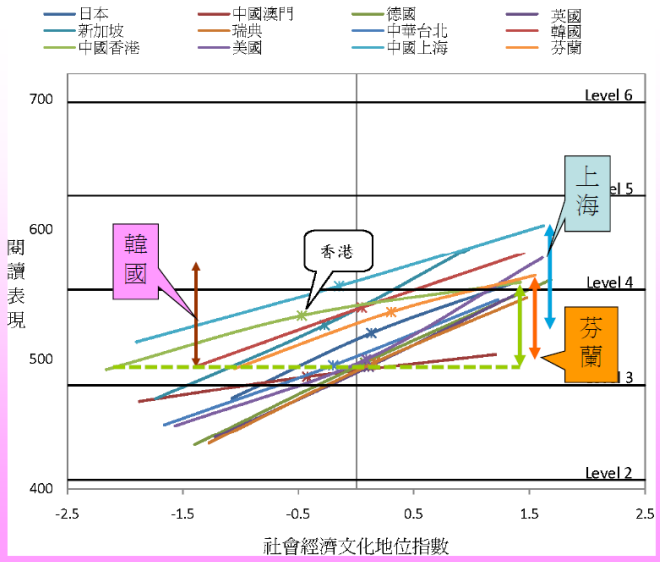


(59.6%) (23.8%) (15.7%)

17

Equality in basic education

基礎教育的均等程度



Socio-economic background index

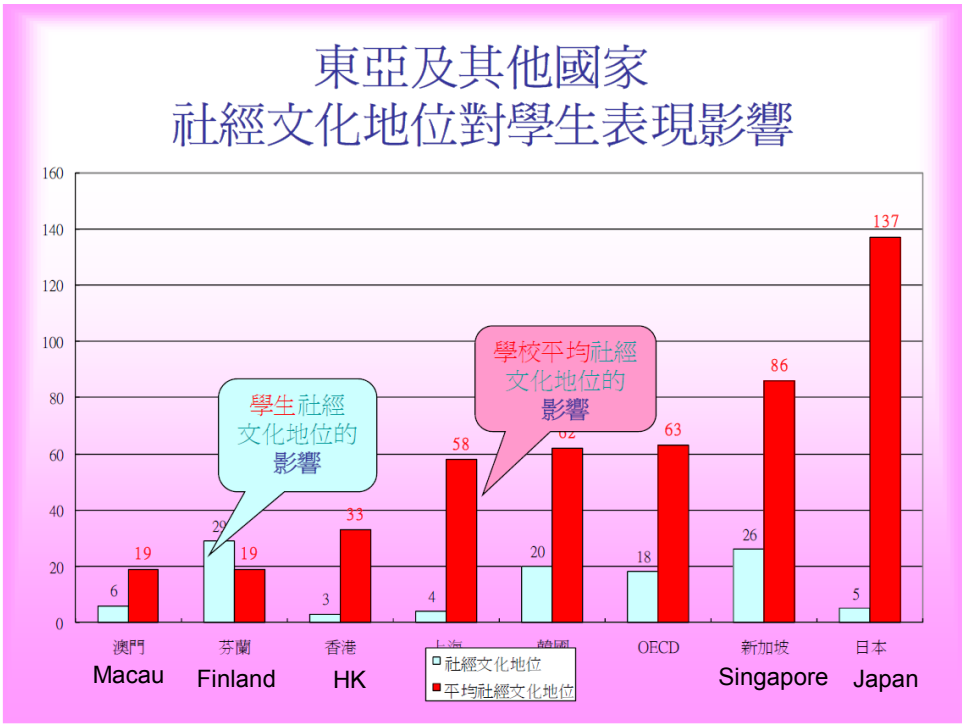
22

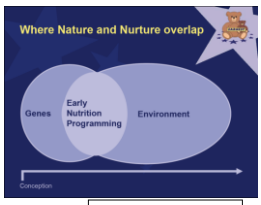
社經文化地位對學生表現影響

	校內社經文化地位影響[2]		校間社經文化地位影響[3]	
	SES of student 與每單位學生社經文化地位相關的分數	標準差	SES of school 與每單位學校平均社經文化地位相關的分數	標準差
2000	6	(1.3)	71	(11.8)
2009	3	(1.4)	32 ↓	(14.2)
差距	-3.4	(2.2)	-39.0	(21.1)

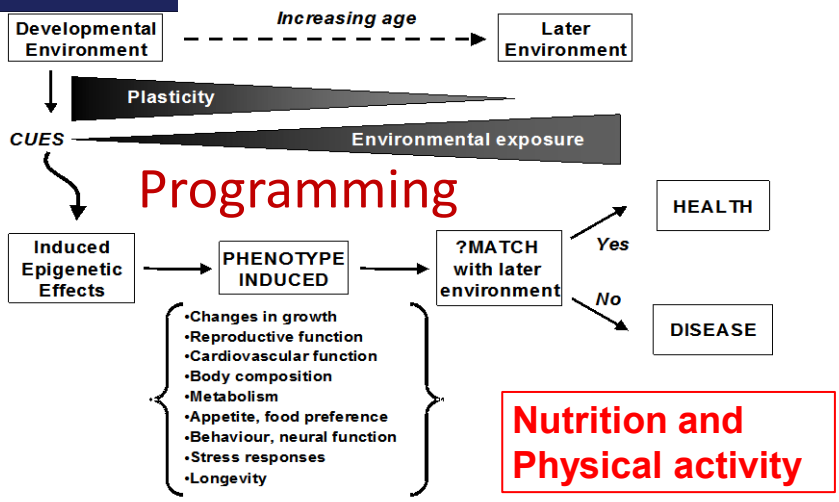
社經文化地位影響減少了，基礎教育制度比以前更均等!

20

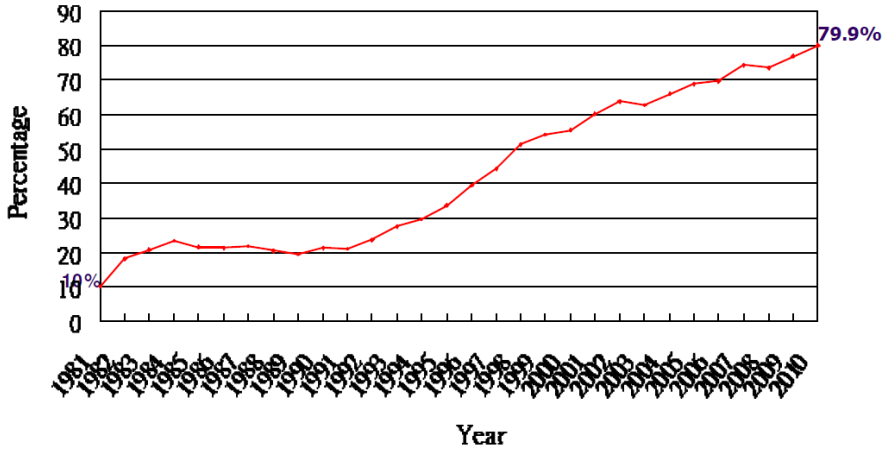




Life course choices: The concept of developmental mismatch between the And later environment

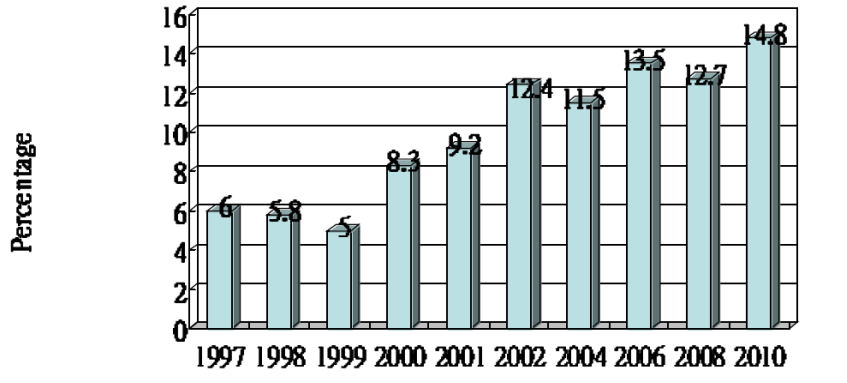


Percentages of Newborns Ever Breastfed on Discharge from Hospitals, 1981-2010



Source: regular reports from all maternity units in public and private hospitals in Hong Kong.

Percentage of Surveyed Babies with Exclusive Breastfeeding for over 4-6 months, 1997-2010



Source: FHS, DH

Lifestyle and socioeconomic correlates of **breakfast skipping** in Hong Kong primary 4 schoolchildren

Preventive Medicine, 2011, v. 52 n. 3-4, p. 250-253

- Of 68 606 primary 4 participants, 3 598 subjects (5.2%) usually skipped breakfast in 2000.
- Breakfast skipping was associated with being overweight (Odds ratio=1.59, 95% CI: 1.46 to 1.73) and obese (2.06, 1.80 to 2.36), and unhealthy dietary habits including more frequent junk food (1.23, 1.14 to 1.33) but less frequent fruit/vegetable (1.23, 1.13 to 1.34) and milk (1.98, 1.80 to 2.16) intake.
- Breakfast skippers tended to skip lunch, do less extra-curricular physical activity, watch more television and
- **have less educated parents.**

COHORT PROFILE

Cohort Profile: 'Children of 1997': a Hong Kong Chinese birth cohort

C Mary Schooling, Lai Ling Hui, Lai Ming Ho, Tai-Hing Lam*† and Gabriel M Leung†

Life Course and Lifestyle Epidemiology Group, School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong SAR, People's Republic of China

*Corresponding author. School of Public Health, Li Ka Shing Faculty of Medicine, 21 Sassoon Road, Pokfulam, Hong Kong SAR, People's Republic of China. E-mail: hrmrlth@hkucc.hku.hk

International Journal of Epidemiology 2012;41:611–620

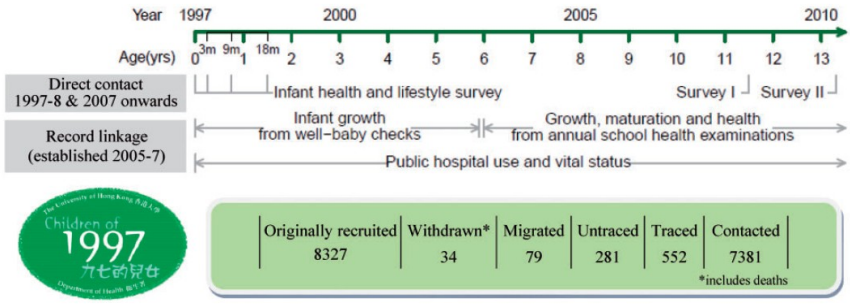


Figure 2 Hong Kong's 'Children of 1997' birth cohort study outline

- **Second-hand smoke exposure – significant harm** and that the effect may be reduced by smokers keeping at a distance (at least 3 m) from the baby.
- **breastfeeding initiation** rate was adversely impacted by caesarean delivery and parental smoking.
- **breastfeeding** protected against doctor consultations, it also increased health services use due to jaundice in the first 3 months of life
- Both **breastfeeding and childhood body mass index** are less strongly socially patterned than in many Western populations.→ not associated with childhood body mass index or **childhood infections**
- The study also highlighted the rising rate of caesarean deliveries, and that almost 50% of the deliveries in private hospitals were caesareans.
- Infants with **lower gestational age and lower birth rank** gained weight faster in infancy → high risk of obesity.
- **Paternal smoking** was associated with higher body mass index, but not shorter height

2005 HK Child Household Survey

				Odd Ratio in passive smoke exposure for				
	Smokers	Smoke at home	Home Exposure	LRTI	Bronchiolitis	Wheeze	Asthma	Become smoker
Mother	3.8%	72%	2.7%	1.58	2.51	1.72	1.91*	
Father	23.7%	68.6%	16.3%	1.22			1.34	
Other household			2.7%	1.54		1.37	1.02	
Total			**21.7%**					90%

Table 1 Hong Kong's 'Children of 1997' birth cohort—data

Topic	Source
Socio-economic position	
Parental education	Self-report
Parental occupation	Self-report
Neighbourhood of residence	Geo-coding
Type of housing	Self-report
Family history of	
Disease	Self-report
Maturation (maternal age of menarche)	Recalled self-report
Economic transition	Self-report
Prenatal exposures	
Maternal smoking	Self-report
Maternal second-hand smoking	Self-report
Gestational diabetes	Recalled self-report
Birth characteristics	
Birth weight	Self-report and Clinical record (from MCHC)
Gestational age	Self-report and Clinical record (from MCHC)
Mode of delivery	Self-report and Clinical record (from MCHC)
Infant exposures	
Second-hand smoke	Self-report
Breastfeeding	Self-report
Potential allergens	Self-report
Anthropometrics	
Parental	Self-report
Infant (0, 3, 9 and 12 months).	Clinically measured (from MCHC)
Child (2, 3 years then annual from 6 years)	Clinically measured (from MCHC and SHS)
Type of child care	Recalled self-report
Diet (food frequency at 11 years)	Self-report
Physical activity at 11 years	Self-report
Daily activities at 11 years	Self-report
Substance use at 12/13 years	Self-report
Health status	
Infant health service use	Self-report
Lifetime public hospital use by cause[a]	Clinically assessed (from HA)
Self-rated health at 11 years	Self-report
Blood pressure (bi-annual from 10 years)	Clinically measured (from SHS)
Pubertal status (bi-annual from 8 years)	Clinically assessed (from SHS)
Psychological health at 13 years	Self-report
Planned health check at 13/14 years	
Body composition	Dual-energy X-ray absorptiometry scan
Lung function	Spirometry
Lipids, glucose, hormones, immune function	Fasting blood
Epigenetic markers	Fat biopsy
Diet and physical activity	Diary

[a]Based on the hospital discharge record.

Results

- Environmental smoke - ETS exposure through the mother in utero was positively associated with higher consultation (adjusted odds ratio (OR) 1.26) and hospitalisation (OR 1.18) due to any illness = 662 extra hospitalisations consuming $0.90 million
- Overall, household SHS exposure within 3 metres in early life was associated with a higher risk of admission for infectious illness up until 8 years of age (hazard ratio 1.14, 95% CI 1.00 to 1.31) *Tobacco Control 2008*
- Paternal smoking was associated with greater childhood BMI. *(Pediatrics Vol. 126 No. 1 July 1, 2010 pp. e46 -e56)*
- Early growth Rapid infant growth was associated with earlier pubertal onset, largely mediated through childhood height, particularly among boys. (*Ann Epidemiol 2012;22:43–50.)*
- Informal child care - In a developed, non-Western setting, informal child care was associated with childhood obesity *(International Journal of Epidemiology 2011;40:1238–1246)*

The Effects of Air Pollution on Mortality in Socially Deprived Urban Areas in Hong Kong, China

Chit-Ming Wong,[1] Chun-Quan Ou,[1,2] King-Pan Chan,[1] Yuen-Kwan Chau,[1] Thuan-Quoc Thach,[1] Lin Yang,[1] Roger Yat-Nork Chung,[1] Graham Neil Thomas,[1] Joseph Sriyal Malik Peiris,[3] Tze-Wai Wong,[4] Anthony Johnson Hedley,[1] and Tai-Hing Lam[1]

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Environmental Health Perspectives • VOLUME 116 | NUMBER 9 | September 2008

BACKGROUND: Poverty is a major determinant of population health, but little is known about its role in modifying air pollution effects.

OBJECTIVES: We set out to examine whether people residing in socially deprived communities are at higher mortality risk from ambient air pollution.

METHODS: This study included 209 tertiary planning units (TPUs), the smallest units for town planning in the Special Administrative Region of Hong Kong, China. The socioeconomic status of each TPU was measured by a social deprivation index (SDI) derived from the proportions of the population with *a*) unemployment, *b*) monthly household income < US$250, *c*) no schooling at all, *d*) one-person household, *e*) never-married status, and *f*) subtenancy, from the 2001 Population Census. TPUs were classified into three levels of SDI: low, middle, and high. We performed time-series analysis with Poisson regression to examine the association between changes in daily concentrations of ambient air pollution and daily number of deaths in each SDI group for the period from January 1996 to December 2002. We evaluated the differences in pollution effects between different SDI groups using a case-only approach with logistic regression.

RESULTS: We found significant associations of nitrogen dioxide, sulfur dioxide, particulate matter with aerodynamic diameter < 10 μm, and ozone with all nonaccidental and cardiovascular mortality in areas of middle or high SDI ($p < 0.05$). Health outcomes, measured as all nonaccidental, cardiovascular, and respiratory mortality, in people residing in high SDI areas were more strongly associated with SO_2 and NO_2 compared with those in middle or low SDI areas.

CONCLUSIONS: Neighborhood socioeconomic deprivation increases mortality risks associated with air pollution.

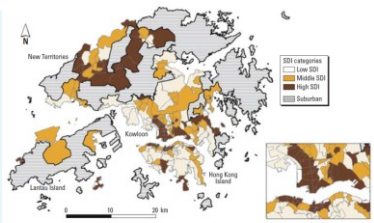


Figure 1. SDI in three levels for Hong Kong, 2001, excluding suburban areas.

Conclusions

This study provides evidence that neighborhood socioeconomic status plays a role in the association between ambient air pollution and mortality. Residence in areas of high social deprivation may increase the mortality risks associated with air pollution. These findings should promote discussion among scientists, policy makers, and the public about social inequities in health when considering environmental protection and management in the context of economic, urban, and infrastructural development.

Impact of Air Pollution on Cardiopulmonary Fitness in Schoolchildren

Pollution adversely affect cardiopulmonary fitness → more exercise might have no benefit

Ignatius T. S. Yu, MBBS, MPH
Tze Wai Wong, MBBS, MSc
Hong Jie Liu, MB, PhD

We studied the association between air pollution and cardiopulmonary fitness among 821 schoolchildren aged 8 to 12 from two districts with different air quality in Hong Kong. Their parents completed a respiratory questionnaire, and the maximum oxygen uptake (VO_2max) of the children was assessed using the multistage fitness test. After adjusting for potential confounding factors, children in the high pollution district had a significantly lower VO_2max than those in the low pollution district (27.9 $mL \cdot kg^{-1} \cdot min^{-1}$ vs. 29.8 $mL \cdot kg^{-1} \cdot min^{-1}$). Habitual physical exercise was associated with a higher VO_2max in the low-pollution district but not in the high-pollution district. Air pollution adversely affected the VO_2max in children, and physical exercise in a polluted environment might not have beneficial effect on cardiopulmonary fitness. (J Occup Environ Med. *2004;46:946–952*)

Health benefits of air pollution reduction for children in HK

- Reduction in air pollution with result in annual decrease (total population 1 M < 16 yr)

Children 1-16 years	Cost (HK$)
post-neonatal mortality	$15.3 million
Reduced asthma hospitalizations	$4 - 9 million
Reduced AED visits	$0.3 – 1.2 million
Reduced school absences	$142 - 365 million
Reduced low birth weights	$ 47 million
Total	$507 million

***Environ Health Perspect 112:226–232* (2004).**

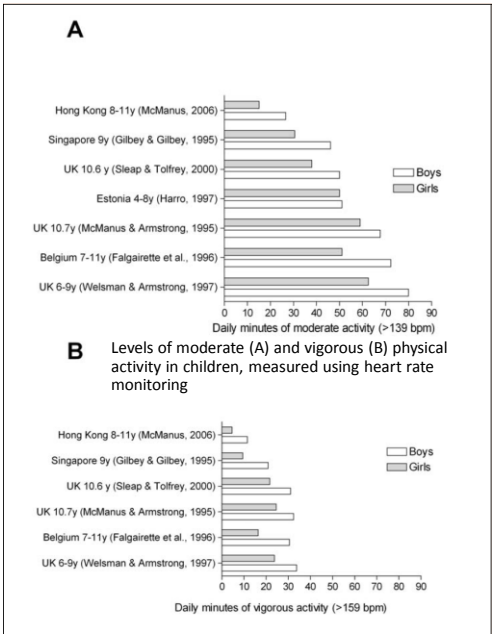
Research Findings in Hong Kong: Lack of leisure time and activities with families

- Families with low socio-economic status, especially working-women, need to spend more time in handling family duties / hassles
- Due to lack of resources and heavy family duties, families from medium-low to low socio-economic status have insufficient time and are less motivated at organizing family leisure activities

(Lau, Y.K. & Ma, J.L.C (In Press), 25 March 2011.)

Physical activity – a neat solution to an impending crisis

Alison M. McManus. Journal of Sports Science and Medicine (2007) 6, 368-373



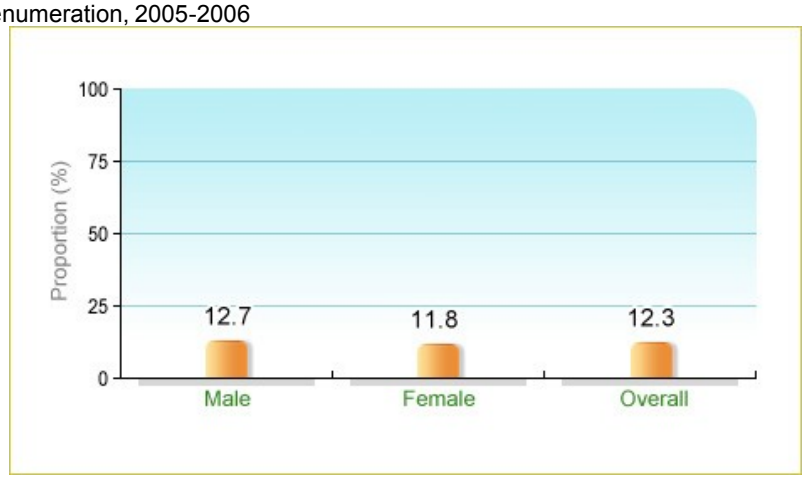
Levels of moderate (A) and vigorous (B) physical activity in children, measured using heart rate monitoring

Preventing weight gain needs on average only 150 kcal per day, this could easily be accomplished by adding incidental movement or NEAT to a child's daily routine.

Suggestions : Converting the sedentary screen time enemy into a NEAT ally is a feasible, and likely appealing, way of adding activity back into the otherwise sedentary lives of children.

Levels of Physical Activity among Children and Adolescents

Proportion of children aged 5-14 who had participated at least 5 days of moderate-intensity physical activity a week outside school hours in the 4 weeks preceding enumeration, 2005-2006



Base: 5 880 community-dwelling children aged 5-14.
Source: Child Health Survey 2005-2006. Hong Kong SAR: Department of Health.

Prevalence of exercise and non-exercise physical activity in Chinese adolescents

Mak et al. International Journal of Behavioral Nutrition and Physical Activity 2011, 8:3

Table 3 Prevalence of having 60 minutes of either exercise or non-exercise physical activity in school days and holidays

	Boys (n = 14,274) %	Girls (n = 17,731) %	*P
School days			
Age group			
12 or below	74.4	73.6	0.51
13	74.7	71.0	0.003
14	75.7	71.4	<0.001
15	76.6	71.6	<0.001
16	76.0	69.1	<0.001
17	76.4	65.9	<0.001
18 or above	70.9	64.2	<0.001
All	75.1	70.3	<0.001
P for trend	0.68	<0.001	
Holidays			
Age group			
12 or below	81.5	81.7	0.87
13	80.4	81.9	0.18
14	81.1	80.2	0.40
15	82.8	81.9	0.43
16	82.5	78.5	0.001
17	83.4	78.8	0.002
18 or above	82.1	78.4	0.015
All	81.8	80.5	0.003
P for trend	0.04	<0.001	

* P-value for the level of significance of sex differences determined by Pearson's Chi-square test.

- Sixty-four percent of the boys and 40% of the girls achieved the recommended 60 minutes of exercise daily after school (5 days) in Hong Kong.

Preschool factors

- Play space
  - Outdoor space for pre-school – Australia 5m^2 , Taiwan 3m^2(mandated), Hong Kong 2m^2 (1999)

TABLE IV Children's Activity Ratings Scale Scores in Two School Environments in Hong Kong

Percent of observations	*Activity Level 5*	*Activity Level 4*	*Activity Level 3*	*Activity Level 2*	*Activity Level 1*
School A (rural)	1	14.6	34.8	38.3	11.3
School B and School C (urban)	0	9.2	36.6	45.0	9.2

Note: CARS (Puhl *et al.*, 1990) scoring system: Level 5, high and very high, strenuous, and very strenuous; Level 4, medium to high, somewhat strenuous; Level 3, medium, moderate; Level 2, low, easy; Level 1, resting.

- Hong Kong Government needs to change the present preschool establishment standards to prescribe **larger indoor and outdoor play areas.**

L Louie, E Chan. The use of pedometry to evaluate the physical activity levels among preschool children in Hong Kong. Early Child Develop & Care 2003; 173:97-107

The contribution of preschool playground factors in explaining children's physical activity during recess

Table 2: Univariate multi-level analyses of the associations between playground factors and step counts per minute (square root transformed).

Factors	Univariate multi-level analyses β (SE)	
	Boys	Girls
Children/m^2	- 4.635 (2.104)*	- 5.411 (2.163)**
Supervising teachers	- 0.347 (0.235)	- 0.526 (0.239)*
Aiming equipment	0.106(0.152)	0.010 (0.016)
Playing equipment	- 0.056 (0.084)	- 0.255 (0.418)
Recess duration	- 0.001 (0.000)****	- 0.001 (0.000)***
Ground Surface	- 0.687 (0.369)(*)	- 0.601 (0.392)
Markings	0.613 (0.384)	0.424 (0.412)
Vegetation	- 0.044(0.390)	- 0.386 (0.403)
Height differences	0.614 (0.380)	0.459 (0.401)
Toys	- 0.150 (0.392)	- 0.035 (0.089)

(*) $p \leq 0.07$, *: $p \leq 0.05$, ** $p \leq 0.001$, ***:$p \leq 0.001$

More recess

International Journal of Behavioral Nutrition and Physical Activity 2008, ***5:11***
doi:10.1186/1479-5868-5-11

Physical activity and sedentary behaviours in Hong Kong primary school children: Prevalence and gender differences

Preventive Medicine 51 (2010) 96–97

Population estimates of prevalence (%) and mean and median (min/week) of physical and sedentary activities by gender and grade (Hong Kong, 2006–2007).

Outcome variable		Gender		Grade		
		Boys	Girls	Grade 4	Grade 5	Grade 6
Moderate-to-vigorous physical activity (MVPA)						
Outside-school MVPA	Prevalence (95% CI)	65 (61, 63)	67 (63, 71)	63 (58, 68)[a5]	66 (62, 71)	71 (65, 76)[a4]
	Mean (SD)	229 (291)	212 (271)	197 (258)[c6]	213 (275)[b6]	274 (324)[c4,b5]
	Median (IQR)	120 (342)	125 (280)	120 (270)	120 (306)	180 (420)
In-school MVPA	Prevalence (95% CI)	99 (99, 100)	100 (99, 100)	99 (98, 100)	99 (98, 100)	100 (100, 100)
	Mean (SD)	160 (160)	163 (160)	169 (170)	150 (142)	169 (171)
	Median (IQR)	90 (120)	90 (147)	90 (160)	90 (120)	70 (139)
Total MVPA	Mean (SD)	389 (371)	375 (353)	366 (335)[b6]	363 (349)[b6]	443 (420)[b4,5]
	Median (IQR)	285 (420)	260 (424)	250 (420)	255 (389)	330 (480)
Sedentary activities						
TV/video viewing	Prevalence (95% CI)	90 (88, 93)	91 (89, 94)	87 (83, 90)[c6,a5]	92 (89, 94) [a4,c5]	97 (94, 99)[c4,5]
	Mean (SD)	453 (375)	476 (404)	411 (369)[c6,a5]	474 (397)[a4]	534 (398)[c4]
	Median (IQR)	360 (420)	360 (510)	300 (458)	360 (451)	425 (534)
Homework/educational activities	Prevalence (95% CI)	79 (75, 82)	89 (86, 92)[c]	84 (81, 88)	80 (76, 84)	88 (85, 92)
	Mean (SD)	201 (220)	259 (271)[c]	228 (254)	231 (249)	228 (233)
	Median (IQR)	140 (245)	180 (240)	180 (240)	170 (270)	180 (240)
Computer use	Prevalence (95% CI)	91 (88, 93)	84 (81, 87)[c]	85 (82, 89)[b6]	87 (83, 90)[b6]	93 (89, 96)[b4,5]
	Mean (SD)	243 (267)	201 (255)[b]	201 (249)[c6]	220 (269)	262 (267)[c4]
	Median (IQR)	150 (300)	120 (195)	120 (215)	120 (240)	180 (270)
Electronic sedentary games	Prevalence (95% CI)	83 (79, 86)	68 (64, 72)[c]	74 (70, 78)[a5]	74 (70, 78)	82 (76, 85)[a4]
	Mean (SD)	171 (214)	114 (194)[c]	133 (196)	152 (222)	148 (195)
	Median (IQR)	119 (210)	60 (143)	72 (176)	79 (200)	90 (175)
Non-electronic sedentary games	Prevalence (95% CI)	55 (51, 59)	47 (43, 52)[a]	57 (52, 62)[b5]	46 (41, 51)[b4]	51 (45, 57)
	Mean (SD)	75 (129)	63 (135)	84 (135)[a5]	59 (132)[a4]	63 (128)
	Median (IQR)	30 (90)	0 (70)	30 (120)	0 (63)	15 (0)
Total sedentary activities	Mean (SD)	1104 (774)	1064 (845)	1019 (813)[b6]	1090 (825)	1186 (764)[b4]
	Median (IQR)	930 (995)	840 (850)	815 (870)	900 (880)	1020 (975)

Note. Population estimates computed using post-sampling weights based on gender, age and highest educational attainment in household. IQR = interquartile range; SD = standard deviation; [a]$p<.05$; [b]$p<.01$; [c]$p<.001$; superscripts 4, 5, and 6 denote significant differences between specific grades (e.g., [a4] in the first row means that Grade 6 students significantly differed from Grade 4 students on prevalence of outside-school MVPA at a probability level of 0.05).

Hong Kong children tend to adopt a sedentary lifestyle. In particular, the level of television watching in Hong Kong children was higher than children from Mainland China but lower than that observed in western countries (Koezuka et al., 2006; Shi et al., 2006). The prevalence of SB associated **with electronic media** use is very high, with Hong Kong children spending nearly twice the time on such activities than on MVPA. Intervention should focus on the reduction of SB related to the use of electronic media.

Prevalence of exercise and non-exercise physical activity in Chinese adolescents

Mak et al. International Journal of Behavioral Nutrition and Physical Activity 2011, 8:3

Table 3 Prevalence of having 60 minutes of either exercise or non-exercise physical activity in school days and holidays

	Boys (n = 14,274) %	Girls (n = 17,731) %	*P
School days			
Age group			
12 or below	74.4	73.6	0.51
13	74.7	71.0	0.003
14	75.7	71.4	<0.001
15	76.6	71.6	<0.001
16	76.0	69.1	<0.001
17	76.4	65.9	<0.001
18 or above	70.9	64.2	<0.001
All	75.1	70.3	<0.001
P for trend	0.68	<0.001	
Holidays			
Age group			
12 or below	81.5	81.7	0.87
13	80.4	81.9	0.18
14	81.1	80.2	0.40
15	82.8	81.9	0.43
16	82.5	78.5	0.001
17	83.4	78.8	0.002
18 or above	82.1	78.4	0.015
All	81.8	80.5	0.003
P for trend	0.04	<0.001	

* P-value for the level of significance of sex differences determined by Pearson's Chi-square test.

- Sixty-four percent of the boys and 40% of the girls achieved the recommended 60 minutes of exercise daily after school (5 days) in Hong Kong.

Table 1 Prevalence of having 60 minutes of exercise in school days and holidays

	Boys (n = 14,274) %	Girls (n = 17,731) %	*P
School days			
Age group			
12 or below	66.8	52.5	<0.001
13	66.4	44.9	<0.001
14	65.4	41.6	<0.001
15	64.2	38.4	<0.001
16	64.1	33.6	<0.001
17	59.5	28.1	<0.001
18 or above	53.0	26.1	<0.001
All	63.8	39.6	<0.001
P for trend	<0.001	<0.001	
Holidays			
Age group			
12 or below	80.3	70.6	<0.001
13	79.4	65.1	<0.001
14	79.8	61.9	<0.001
15	79.0	58.7	<0.001
16	77.9	53.8	<0.001
17	76.6	49.9	<0.001
18 or above	74.6	50.3	<0.001
All	78.7	60.0	<0.001
P for trend	<0.001	<0.001	

* P-value for the level of significance of sex differences determined by Pearson's Chi-square test.

Girls less active

Table 2 Prevalence of having 60 minutes of non-exercise physical activity in school days and holidays

	Boys (n = 14,274) %	Girls (n = 17,731) %	*P
School days			
Age group			
12 or below	73.1	72.3	0.53
13	72.0	69.3	0.04
14	74.5	69.8	<0.001
15	72.0	68.5	0.01
16	72.1	66.6	<0.001
17	71.9	63.4	<0.001
18 or above	67.5	61.0	<0.001
All	72.2	68.0	<0.001
P for trend	0.005	<0.001	
Holidays			
Age group			
12 or below	80.5	82.7	0.047
13	79.4	81.2	0.11
14	80.7	79.1	0.16
15	79.5	80.7	0.29
16	81.8	77.1	<0.001
17	81.5	76.5	0.002
18 or above	78.4	74.9	0.03
All	80.3	79.4	0.053
P for trend	0.95	<0.001	

* P-value for the level of significance of sex differences determined by Pearson's Chi-square test.

Comparison of perceived support for physical activity and physical activity related practices of children and young adolescents in Hong Kong and Australia

EUROPEAN PHYSICAL EDUCATION REVIEW [DOI: 10.1177/1356336X09345219] Volume15(2):155–173:345219

Table 2 Reported total time spent in moderate physical activity per week (outside of school-time) for Hong Kong and Australian children

Amount of active time (hours per week)		Country					
		Hong Kong		Australia		Total	
		n	%	*n*	%	*n*	%
Male	≤1	135	31.9	22	5.8	157	19.5
	2–3	144	34.0	116	30.4	260	32.3
	4–6	76	18.0	123	32.3	199	24.8
	≥7	68	16.1	120	31.5	188	23.4
	total	*423*	*100.0*	*381*	*100.0*	*804*	*100.0*
Female	≤1	227	61.2	23	6.6	250	34.8
	2–3	97	26.1	158	45.4	255	35.5
	4–6	30	8.1	119	34.2	149	20.7
	≥7	17	4.6	48	13.8	65	9.0
	total	*371*	*100.0*	*348*	*100.0*	*719*	*100.0*

* 6 boys and 9 girls did not complete this question

Hong Kong boys and girls had significantly less physical activity

Also significantly less perceived support for activity from parents, teachers and peers

School Factors

- 42 primary schools 2003-2004
- 9 – 12 years
- SOFIT instrument to observe – student activity, lesson context and teacher behaviour

Characteristics	Type	p value
Lesson location	Covered-outdoor-combined	0.005
Weather	Sunny-cloudy-rainy	0.345
Temperature	Hot-warm-mild	0.001
PE Class size	Small - medium - large	0.817
Lesson configuration	Single vs double	0.007
Active lesson content	High – medium – low	0.000
Active lesson context	High – medium – low	0.003
Active teacher behaviour	High – medium – low	0.000
Teacher gender	Male vs female	0.588

BC Chow, T McKenzie, L Louie. Journal of Teaching in Physical Education, 2008;27, 38-50

PARENTAL INFLUENCE ON CHILDREN'S PRTICIAPTION IN PHYSICAL ACTIVITY (2009)

1. There was no relationship between children's expectation on the positive outcome or negative outcome and their participation in physical activity.
2. The results indicated that **role modeling** was the most influential type of parental influence
3. There was a relationship between **parent's belief** and children's participation in physical activity.
4. There was a relationship between **parent's expectation** and children's participation in physical activity.
5. There was no relationship between father encouragement and whether their children of male like to participate with them
6. There was no relationship between father encouragement and whether their children of female like to participate with them
7. There was no relationship between mother encouragement and whether their children of male like to participate with them
8. There was no relationship between mother encouragement and whether their children of female like to participate with them

Physical activity in the lives of Hong Kong Chinese children

Amy S. Ha et al. Sport, Education and Society, 2010;15:3, 331-346

- parents valued physical activity as a factor which contributed to their children's physical and mental health, enhanced team skills, and increased family and social bonds
- regarded physical activity as a means to valued ends
- Junior students (aged 912) expressed their interest in physical activities. However, when they entered secondary school, they either thought or were told that academic achievement was the most important aspect of their life.

Association of after-school physical activity levels and organized physical activity participation in Hong Kong children

Peggy PY Cheung. European Physical Education Review 2012 18: 182

- Children engaged substantial time in light intensity PA during the afterschool period.
- Children who participated in organized PA programmes spent fewer time blocks on light intensity PA and more time blocks in vigorous PA.
- The boys spent more time blocks on high intensity PA than the girls.
- Conclusion: A structured PA programme during the after-school period is a potential intervention strategy to increase children's PA participation without using up the time intended for children's homework.

Adolescents' physical activity: Competition between perceived neighborhood sport facilities and home media resources

International Journal of Pediatric Obesity, 2010; 5: 169–176

- Perceived availability of sport facilities was positively (Orboys 1.17; Orgirls 1.26), and that of computer/Internet negatively (Orboys 0.48; Orgirls 0.41), associated with being sufficiently active.
- A significant positive association between video game console and being sufficiently active was found in girls (Orgirls 1.19) but not in boys.

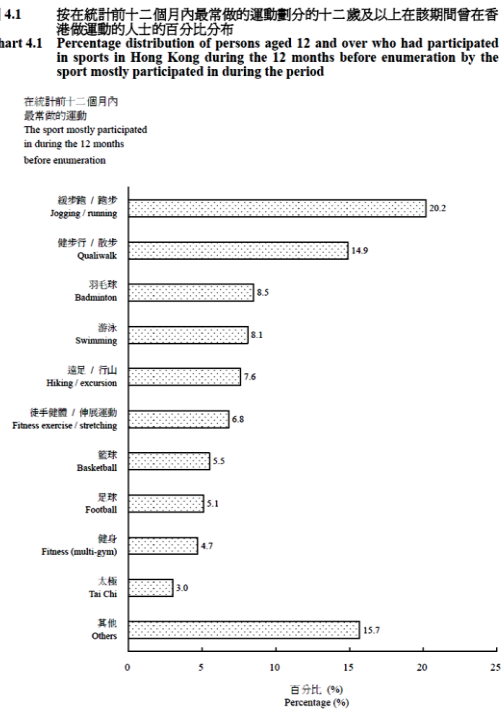
- **Conclusions**. Perceived availability of sport facilities in the neighborhood may positively impact on adolescents' level of physical activity.
- However, having computer/Internet may cancel out the effects of active opportunities in the neighborhood.

主題性住戶統計調查
第四十七號報告書
Thematic Household Survey Report No. 47

公眾對教育改革的意見
Public Views on Education Reform

公眾對提供運動設施的意見
Public Views on the Provision of Sports Facilities

二零一一年三月出版
Published in March 2011



Obesity (Survey of infant feeding in HK 2012)

Children of six age groups (6-7 months, 9-10 months, 12-13 months, 18-19 months, 24 months and 48 months) were recruited from Maternal and Child Health Centres (MCHCs) from **January to September 2010**.

Table 3.6: Weight status of children with reference to WHO BMI for age z-score[1] (n= 1,272)

Age group (months)	Male			Female			Overall		
	Normal	Possible risk of overweight	Overweight or obese	Normal	Possible risk of overweight	Overweight or obese	Normal	Possible risk of overweight	Overweight or obese
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
6	71 (77.2)	14 (15.2)	4 (4.3)	72 (84.7)	11 (12.9)	0 (0.0)	143 (80.8)	25 (14.1)	4 (2.3)
9	75 (85.2)	11 (12.5)	1 (1.1)	62 (81.6)	9 (11.8)	3 (3.9)	137 (83.5)	20 (12.2)	4 (2.4)
12	68 (78.2)	15 (17.2)	2 (2.3)	76 (90.5)	7 (8.3)	0 (0.0)	144 (84.2)	22 (12.9)	2 (1.2)
18	67 (75.3)	19 (21.3)	1 (1.1)	123 (85.4)	18 (12.5)	3 (2.1)	190 (81.5)	37 (15.9)	4 (1.7)
24	148 (83.1)	18 (10.1)	8 (4.5)	113 (83.1)	17 (12.5)	4 (2.9)	261 (83.1)	35 (11.1)	12 (3.8)
48	93 (83.0)	13 (11.6)	5 (4.5)	88 (87.1)	10 (9.9)	3 (3.0)	181 (85.0)	23 (10.8)	8 (3.8)
All ages	522 (80.8)	90 (13.9)	21 (3.3)	534 (85.3)	72 (11.5)	13 (2.1)	1,056(83.0)	162 (12.7)	34 (2.7)

[1]Normal: BMI for age z-score ≥ -2 and ≤ 1; Possible risk of overweight: BMI for age z-score > 1 and ≤ 2; Overweight or obese: BMI for age z-score > 2

Table 3.7: Proportion of children with underweight, stunting and wasting with reference to WHO Child Growth Standard[1] (n= 1,272)

Age group (months)	Male			Female			Overall		
	Underweight	Stunting	Wasting	Underweight	Stunting	Wasting	Underweight	Stunting	Wasting
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
6	2 (2.2)	2 (2.2)	3 (3.3)	0 (0.0)	0 (0.0)	2 (2.4)	2(1.1)	2 (1.1)	5 (2.8)
9	1 (1.2)	3 (3.5)	1 (1.1)	0 (0.0)	2 (2.5)	2 (2.6)	1 (0.6)	5 (3.0)	3 (1.8)
12	4 (4.9)	5 (6.1)	2 (2.3)	1 (1.1)	1 (1.1)	1 (1.2)	4 (2.9)	6 (3.5)	3 (1.8)
18	4 (4.8)	5 (6.0)	2 (2.2)	0 (0.0)	4 (2.7)	0 (0.0)	5 (1.7)	9 (3.9)	2 (0.9)
24	1 (0.6)	4 (2.3)	4 (2.2)	1 (0.7)	2 (1.4)	2 (1.5)	2 (0.6)	6 (1.9)	6 (1.9)
48	3 (2.8)	5 (4.7)	1 (0.9)	0 (0.0)	2 (1.9)	0 (0.0)	3 (1.4)	7 (3.3)	1 (0.5)
All ages	15(2.4)	24 (3.9)	13(2.0)	2 (0.3)	11 (1.7)	7 (1.1)	17 (1.3)	35 (2.8)	20 (1.6)

[1]Underweight: Weight for age z-score < -2; Stunting: Height or Length for age z-score < -2; Wasting: BMI for age z-score < -2

Childhood Obesity in Hong Kong: A Developmental Perspective and Review, 1986–2005

Patrick W.C. Lau[1], Toby C.Y. Yip[2]

Departments of [1]Physical Education and [2]Social Work, Hong Kong Baptist University, HONG KONG SAR

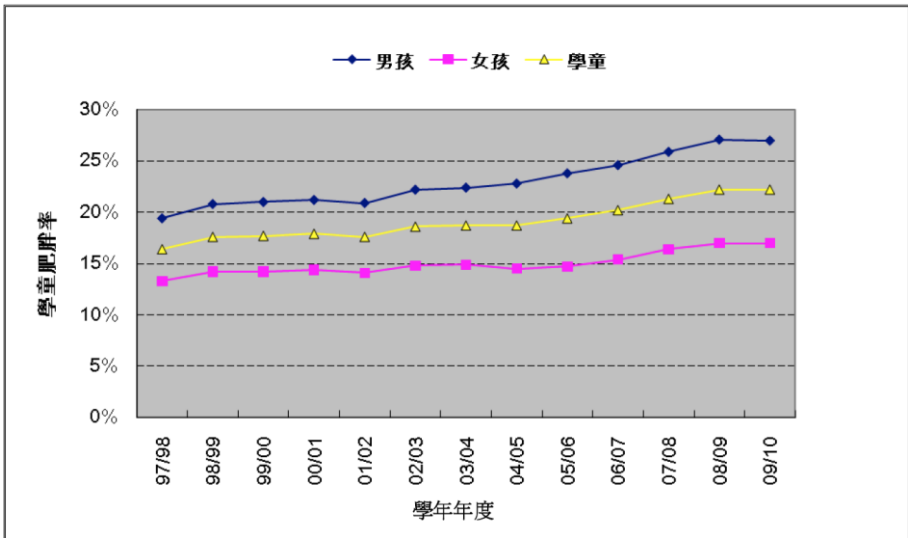
Table 2. Detection rates of childhood obesity* in primary and secondary schools in the Student Health Service of the Department of Health, Hong Kong (2005)

School year	Obesity rate (%)		Overall obesity rate (%)
	Primary school students (P.1 – P.6)	Secondary school students (F.1 – F.3)	
1995/96	16.1	N/A	16.1
1996/97	15.9	13.2	15.0
1997/98	16.4	13.6	15.7
1998/99	17.6	14.8	16.9
1999/00	17.7	15.1	17.1
2000/01	17.9	15.4	17.3
2001/02	17.6	15.2	17.0
2002/03	18.6	15.6	17.8
2003/04	18.7	15.8	17.9
2004/05	18.7	15.8	17.8

*Obesity defined as body weight > 120% of the median weight for height. N/A = not available.

J Exerc Sci Fit • Vol 4 • No 2 • 2006

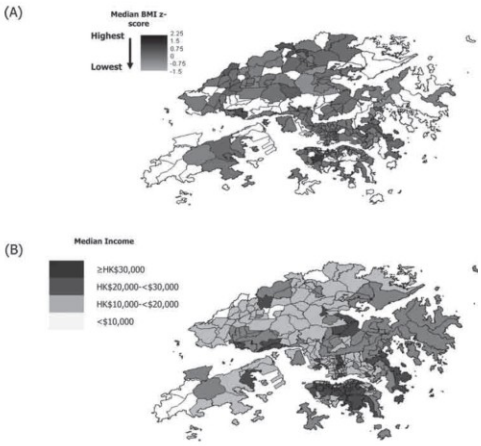
Data from Student Health Services



Socio-economic disparities of childhood body mass index in a newly developed population: evidence from Hong Kong's 'Children of 1997' birth cohort

C Mary Schooling, Cynthia Yau, Benjamin J Cowling, Tai Hing Lam, Gabriel M Leung

Arch Dis Child 2010;**95**:437–443. doi:10.1136/adc.2009.168542



Results In 7108 (85 % successful follow-up) children, boys were more adipose than girls. The association of parental education with BMI z-score varied with mother's birthplace (p value for interaction 0.001). In children of Hong Kong-born mothers, parental education was negatively associated with BMI z-score (mean difference –0.15, 95% CI –0.25 to –0.05 for highest compared with lowest). However, in children of mainland China-born mothers, parental education was positively associated with BMI z-score (0.18, 95% CI 0.02 to 0.34 in the same comparison). Neighbourhood had no association with BMI z-score.

Conclusions In this recently developed Chinese population, there was no consistent association between socio-economic characteristics and childhood BMI. Other factors, such as experience of economic transition, as proxied by mother's place of birth, exerted a modifying impact. The cultural and biological mechanisms underlying these socio-historical intergenerational influences need to be determined, so that effective interventions can be implemented in China and elsewhere.

Overweight, family history of diabetes and attending schools of lower academic grading are independent predictors for metabolic syndrome in Hong Kong Chinese adolescents

Risa Ozaki, Qing Qiao, Gary W K Wong, Michael H M Chan, Wing-Yee So, Peter C Y Tong, C S Ho, Gary Tin-Choi Ko, Alice P S Kong, Christopher W K Lam, Jaakko Tuomilehto, Juliana C N Chan

Arch Dis Child 2007;**92**:224–228. doi: 10.1136/adc.2006.100453

Cross-sectional study. Random sample from 53 secondary schools aged 12-20 years. Total 2115 Chinese students recruited.

Findings

MES – 2.4%

- Hypertension – 32.3%
- Raised TG – 10.9%
- Central obesity 9.0%
- Impaired OGT – 0.4%
- 41.8% harour at least 1 component of the syndrome. Both families and schools should be alerted to this growing epidemic

What is already known on this topic

- Overweight and metabolic syndrome are emerging in both adult and paediatric populations.

What this study adds

- The prevalence of metabolic syndrome in Chinese adolescent girls (2.0%) was similar to that in US girls (2.1%), but lower in Chinese boys (2.9%) than in boys in the US (6.1%).
- Overweight, a positive family history of diabetes and studying at schools of lower academic grading were independent risk factors for the metabolic syndrome in Chinese adolescents.

Table 3 Associations of metabolic syndrome with obesity, school districts, school banding, paternal occupations, family history of diabetes and perinatal history in Hong Kong adolescents

	Total number ofparticipants	Percentage of participants with MES	OR (95% CI)	p Value
Sex				
Male	960	2.9	0.6 (0.3 to 1.2)	0.136
Female	1155	2.0	1.0	
District				
NT region	1333	2.9	1.0 (0.6 to 1.6)	0.996
Non-NT region	782	1.5	1.0	
Academic grading of school				
Higher grading	955	0.8	1.0	
Lower grading	1160	3.7	5.5 (2.2 to 13.7)	<0.001
Father in professional or managerial grade				
Yes	164	1.8	0.7 (0.2 to 2.6)	0.723
No	1951	2.5	1.0	
Mother as housewife				
Yes	874	2.6	1.0	
No	1241	2.3	1.3 (0.7 to 2.6)	0.368
Family history of diabetes				
Yes	37	13.5	4.3 (1.3 to 14.1)	0.017
No	2078	2.2	1.0	
At least 4 weeks of breast feeding				
Yes	578	2.2	1.0	
No	1468	2.5	0.9 (0.5 to 1.9)	0.823
Body mass index				
≥85th centile	133	24.8	32.2 (13.2 to 78.4)	<0.001
<85th centile	1982	0.9	1.0	

MES, metabolic syndrome; NT, New Territories.
Logistic regression analysis using age, sex, school regions, body mass index, family history of diabetes, breast feeding, parental occupation, low birth weight and school grading as independent variables.

Risk factors for childhood overweight in 6- to 7-y-old Hong Kong children.

Int J Obes Relat Metab Disord. 2003 Nov;27(11):1411-8.
Hui LL, Nelson EA, Yu LM, Li AM, Fok TF.
Department of Paediatrics, The Chinese University of Hong Kong, Prince of Wales Hospital, Shatin, Hong Kong.

Abstract

OBJECTIVE:

To identify risk factors for overweight in Hong Kong children aged 6-7 y.

DESIGN:

Case-control study.

SETTING:

Student Health Service Centres, Hong Kong.

SUBJECTS:

A total of 343 Hong Kong Chinese children aged 6-7 y old categorised into three groups, an overweight group (> or =92 nd centile for BMI), a normal middle-weight group (45th-55th centile for BMI) and a normal low-weight group (< or =8th centile for BMI).

MEASUREMENTS:

Subjects and their parents/caregivers were interviewed at home. Data on lifestyle habits, dietary habits, family structure and demographic background were collected by questionnaire. A 3-day dietary record was administrated by the parents/caregivers to assess dietary intake of the children.

RESULTS:

Logistic regression analyses (overweight group compared with middle-weight plus low-weight groups) showed that childhood overweight was significantly associated with parental obesity (BMI > or =25 kg/m(2), Asian reference) (paternal: OR=2.66, 95% CI=1.51-4.70; maternal: 5.07, 2.62-9.79) but not parental overweight (BMI=23-25 kg/m(2)). After adjustment for parental obesity, the odds ratio for childhood overweight was increased by birth weight (<3.0 kg as reference, 3.0-3.5 kg: 2.13, 1.18-3.84; > or =3.5 kg: 4.89, 2.49-9.60) and decreased by sleeping duration (<9 h/day as reference, 9-11 h/day: 0.54, 0.30-0.97; > or =11 h/day: 0.31, 0.11-0.87). Childhood overweight was also significantly associated with higher energy consumption (2.62, 1.20-5.74) and having a father who was a current smoker (2.08, 1.25-3.46).

CONCLUSIONS:

Although healthy diet and regular exercise will remain the cornerstones of obesity management in children, our data support the view that education about maintaining a healthy weight could be introduced much earlier in those families with high-risk children, as indicated by high parental BMI or high birth weight. The utility and practicality of such an approach should be carefully evaluated before becoming part of any public health policy. Further study of the role of short sleeping duration and parental smoking on childhood obesity development is warranted.

Risk factors

1. Parental obesity (OR F - 2.66, M-5.1)
2. Father current smoker (OR 2.08)
3. Birth weight > 3 kg (OR >2 →4)
4. Sleep > 9 hr (OR 0.5→0.3)
5. Higher energy consumption

→ More targeted approach and early education

Not associated with early solid, TV watching, skipping breakfast, breastfeeding

Is increased television viewing related to obesity among primary school children in Hong Kong? : a cross-sectional study

- Chiu, Wai-man Degree: M.Sc.Year:2006
- Subject: Hong Kong Polytechnic University – Dissertations http://library.polyu.edu.hk/record=b1926760 URI: http://theses.lib.polyu.edu.hk/handle/200/1210Abstract:
- Childhood obesity has becoming a serious health problem in Hong Kong (HK), especially among the primary school children. This study explored the relationship between television (TV) viewing and obesity among primary school children in HK by the cross sectional approach. A total of 409, 6- to 13 year olds (221 girls, 188 boys) children recruited from two local primary schools. Obesity status determined by applying the age- and sex-specific 90th percentile of local reference for body mass index (BMI). Parents of the subjects were required to complete a questionnaire to collect data on demographic background, TV viewing habit, dietary habit and physical activity level of the subjects. Weight and height of the subjects were also measured. By calculating the independent t-test, there was significant difference between obese and non-obese group in TV viewing hour in weekday (3.2 +- 1.9 vs 2.5 +-1.2 hours/day, p = .000) and weekend (4.2 +- 2.4 vs 2.9 +- 1.4 hours/day, p = .000). By calculating the Pearson product-moment correlations, significant correlation between children's BMI and TV viewing hours in weekday (r = .27, p= .000) and weekend (r = .26, p= .000) was found. This correlation was still significant even other variables in parental BMI, dietary habit and physical activity were controlled in the multiple regression. Numbers of day participating in physical activity that was long enough to work up a sweat also significantly correlated with TV viewing hours in weekday negatively (r = -.14, p= .005). Besides, children's BMI was strongly correlated with maternal BMI (r = .21, p = .000) and paternal BMI (r = .13, p = .017). This study provides evidence supporting the positive correlation between TV viewing and childhood obesity. Limiting the time of watching TV should be included in the strategy for treating and preventing childhood obesity.

Significant correlation between TV viewing hours in weekday and weekend with BMI even controlled for parental BMI, dietary habit and physical activity

The Epidemic of Type 1 & 2 Diabetes Mellitus in Adolescents in Hong Kong

Table 3 Prevalende of overweight and obesity in Hong Kong

	1993	2005/2006
Boys		
Overweight*	10.4%	15.8%
Obesity*	3.4%	5.1%
Girls		
Overweight*	7.7%	10.1%
Obesity*	1.8%	2.4%
Total		
Overweight*	9.3%	13%
Obesity*	2.6%	3.7%

*IOTF cutoffs

Adapted from So et al, BMC Public Health, 2008;8:320[33]

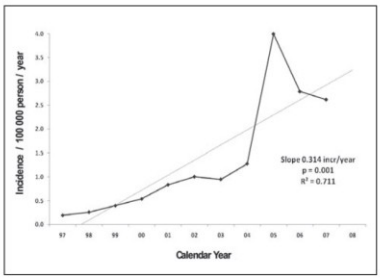


Figure 3 Time trends in incidence of type 2 diabetes for 0-18 year-old in Hong Kong from 1997 to 2007.

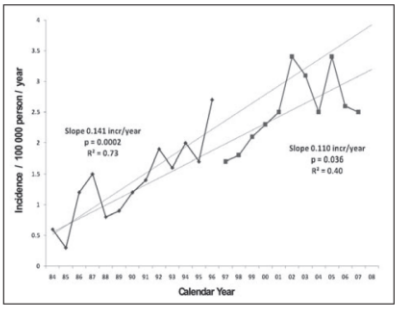


Figure 1 Time trends in incidence of type 1 diabetes for 0-14 year-old in Hong Kong from 1984 to 1996 and 1997 to 2007.

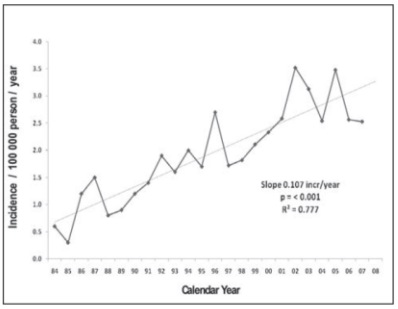


Figure 2 Time trends in incidence of type 1 diabetes for 0-14 year-old in Hong Kong from 1984 to 2007.

Table 1 Population-based incidence of childhood type 2 diabetes mellitus

Country	Years	Age	Incidence (10^{-5})
United Kingdom[9]	2004-2005		
Asians		0-17	3.9
Whites		0-17	0.35
Sweden[10]	1998-2001	0-14	2.4
Finland[11]	1992-1996	15-19	0.5
Austria[12]	1999-2007	0-15	0.25
Australia[13]	2001-2006	0-19	2.5
New Zealand[14]	1999-2002	0-14	0.84
Japan[3,7]	1974-2004	6-15	2.55-3.0
Isreal[15]	1997	<18	0.05
	2000	<18	0.17
United States			
Non-Hispanic White[16]	2002-2003	10-14	3.0
		15-19	5.6
Asian-Pacific Islanders[17]	2002-2003	10-19	12.1
African Americans[18]	2002-2003	10-14	22.3
		15-19	19.4
American Indians[19]	2002-2003	10-14	25.3
		15-19	49.4
Hispanic	2002-2003		
Males[20]		0-14	4.8
Females		0-14	6.9
Hong Kong[6,21]	1984-1996	0-14	0.1
	1997-2007	10-14	2.3
		15-18	2.0

FAMILIES

Situation in Hong Kong

- Long working hours
  - 33.9% >10 hours per day (Lau, Y.K. & Ma, J.L.C (In Press), 25 March 2011)
  - Jobs for low-skill workers are always low paid jobs with long and irregular working hours (Lau Y.K., 2003)
  - Long working hours of men in Hong Kong (Au, Li, & Ng, 2005) made women more fully engaged at home as mothers
- Increasing number of single parent families
  - Divorce decrees granted each year has nearly doubled in a decade, from 9473 in 1996 to 17,771 in 2008 (Census and Statistics Department, 2007, p. 9, 2009, p. 4)
- Increasing number of New Arrivals
  - Form 2.6% in 1991 to 4% in 2001 and mainly comprising women and children (Census and Statistics Department, 2001)

Research Findings in Hong Kong: Socio-economic Background

	Educational Attainment				Household Income			
	Primary	Secondary	Tertiary	*F-ratio**	<10k	10k – 30k	>30k	*F-ratio**
Parenting Stress Index	2.60	2.49	2.38	*22.17*	2.58	2.49	2.41	*18.03*
Perceived Family Functioning Index	2.29	2.14	2.01	*40.33*	2.26	2.15	2.03	*39.85*

Source: A telephone survey with 1,002 families supported by Hong Kong Institute of Asia-Pacific Studies, CUHK in Nov 2008
*P<0.001.

(Ma J. L. C., Wong T. K. Y., Lau Y.K. & Lau L. Y., 2011)

Research Findings in Hong Kong: Socio-economic Background

- **Low-income and less-educated parents** reported:-
  - Stronger feelings of incompetence
  - Less likely to have available persons to whom they could turn for help
  - More family financial problems in parenting

(Ma J. L. C., Wong T. K. Y., Lau Y.K. & Lau L. Y., 2011)

Research Findings in Hong Kong: Family Structure

	Nuclear family	Extended Family	Single-parent Family	*F-ratio**
Parenting Stress Index	2.47	2.43	2.66	*8.98*
Perceived Family Functioning Index	2.11	2.11	2.36	*16.44*

Source: A telephone survey with 1,002 families supported by Hong Kong Institute of Asia-Pacific Studies, CUHK in Nov 2008
*p<0.001.

(Ma J. L. C., Wong T. K. Y., Lau Y.K. & Lau L. Y., 2011)

Recommendations

- Work-Life Balance
  - It is recommended that necessary steps should be taken to promote family-friendly policy among employers on a continuous basis
- Strengthen Parent Education
  - It is recommended that steps should be taken to strengthen the education of family life and personal development for parents and children.
- Promotion of family-related activities
  - It is recommended that action should be taken to promote the family-related activities or programmes through different channels.

父母真心話調查：只想子女健康快樂！

- 雖然香港的虎媽「望子成龍」，愛催谷女子入名校、十項全能，但一項調查卻發現子女多希望能實現大學夢，但對父母來說，孩子能活得健康快樂及過有意義生活卻比一切來得重要。
  由家長匯習2012年進行的「父母對子女十大期望及子女對自己的十大期望」調查中，調查了3000名家長及5至18歲的子女。結果最多家長希望子成為健康快樂的人、其次是有自己的理想、每天多與自己傾談等，然後才是希望他們努力讀書、考入大學及成為成功的人等等。
  而受父母壓力影響，子女對自己的最大期望首先是努力讀書、考入大學，然後才是活得健康快樂及追求理想。有趣的是，父母渴望子女多與自己傾談，但子女對多與父母溝通的期望只排名第七位。
  機構發言人認為報告反映今天父母較重視子女的健康和心理素質，而子女則重學業，認為這是不少父母為子女安排密集式的補習或課外活動，並重視入讀名校的風氣所致。

父母真心話調查：只想子女健康快樂！

- 雖然香港的虎媽「望子成龍」，愛催谷女子入名校、十項全能，但一項調查谷 說，孩子能
  活得健康快
  由家長匯習 對自己的十
  大期望」調 。結果最多
  家長希望子 每天多與自
  己傾談等， 為成功的人
  等等。
  而受父母壓 讀書、考入
  大學，然後 父母渴望子
  女多與自己 第七位。
  機構發言人 心理素質，
  而子女則重 的補習或課
  外活動，並

十大願望

港爸媽 VS 港孩

1	成為健康快樂的人	1	努力讀書
2	有自己理想	2	考入大學
3	每天多與我傾談	3	成為健康快樂的人
4	努力讀書	4	有自己理想
5	考入大學	5	供養父母
6	成為專業人仕	6	成為專業人仕
7	供養父母	7	每天多與我傾談
8	成為政府官員	8	成為政府官員
9	成為巨星	9	成為巨星
10	做特首	10	做特首

資料來源：「家長匯習」

Family connectedness

- "Parent-child connectedness can be defined as the degree of closeness/warmth experienced in the relationships that children have with their parents."

Family connectedness

BENEFITS

- Intrinsic motivation
- Self-esteem
- Identity development
- Role- taking skills
- Successful school transitions

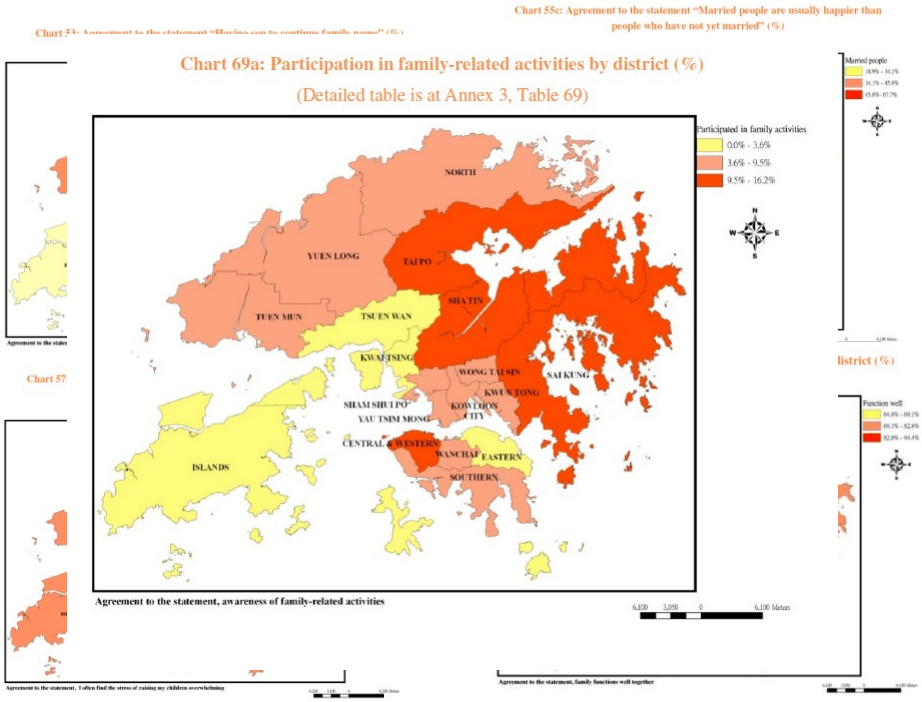
ACTIONS

- Close family relationships
  - talk with each other about family values and customs
  - talk about sensitive issues
- Family members are nurturing and supportive of each other
  - spend time engaged in enjoyable activities
  - make decisions and be involved in their communities together
- Education is valued

Home Affair Bureau Family Survey 2011

Prepared by Policy 21 Ltd May 2012

- Traditional family values – most were still prevalent though not strong
- Attitudes towards ideal family – varied
- 69% willing to live with parents and 85% agree to support parents
- 66% marriage is necessary and 59% child bearing is important in marriage, 44% accepted cohabitation
- Majority accepted divorce, 48% accepted marring a divorced person
- Most valued contribution and help of grandparents
- 50% not aware of family programme from NGOs or Govt
- Raising children is stressful in 62%
- 51% of non-parents had no intention to have children
- Most (88%) agreed to set role models for children
- Parenting methods were on the whole gentle – 28% spanked their children
- Family function (CFAI) – 79% very well
- 81% satisfied or very satisfied with family life
- 84% family relationships close – 95% with partners, 90% with children
- Time spent with parents was limited – 40% for <30 min in a week
- 45% find stress in balancing work and family
- Majority would seek help or advice from close friends or spouses



主題性住戶統計調查
第四十四號報告書
Thematic Household Survey
Report No. 44

二零一零年五月出版
Published in May 2010

家人之間的關係
Relationships among Family Members

與子女的關係	Relationship with children	
• 十八歲及以上而有子女的人士數目	• Number of persons aged 18 and over with children	3 687 200
• 十八歲及以上而有子女的人士佔所有十八歲及以上人士的百分比	• Percentage of persons aged 18 and over with children among all persons aged 18 and over	66.5%
• 按與子女關係的滿意程度劃分的十八歲及以上而有子女的人士的百分比	• Percentage of persons aged 18 and over with children by level of satisfaction with their relationship with children	
- 非常滿意	- Very satisfied	17.2%
- 滿意	- Satisfied	73.3%
- 普通	- Average	8.6%

表 3.10b 按與子女一起消閒娛樂的頻繁程度及是否與子女同住劃分的十八歲及以上而有子女的人士數目

Table 3.10b Number of persons aged 18 and over with children by frequency of these persons and their children accompanying each other in leisure activities and whether living with their children

一起消閒娛樂的頻繁程度 Frequency of accompanying each other in leisure activities	有與子女同住 Living with children				沒有與任何子女同住 Not living with any children		合計 Overall	
	有與十八歲以下子女同住 Living with children aged below 18		只與十八歲及以上子女同住 Living with children aged 18 and above only					
	人數 No. of persons ('000)	百分比 %	人數 No. of persons ('000)	百分比 %	人數 No. of persons ('000)	百分比 %	人數 No. of persons ('000)	百分比 %
很經常 Very often	196.6	10.8	23.7	1.8	2.8	0.5	223.1	6.1
經常 Often	861.4	47.3	298.6	22.1	69.2	13.5	1 229.2	33.3
間中 Occasionally	500.2	27.5	476.3	35.2	164.7	32.1	1 141.3	31.0
很少 Rarely	222.5	12.2	466.0	34.4	203.7	39.7	892.3	24.2
完全沒有 Never	39.6	2.2	88.4	6.5	72.4	14.1	200.5	5.4
沒有作答* No answer*	§	§	§	§	§	§	§	§
總計 Total	1 821.2	100.0	1 353.0	100.0	512.9	100.0	3 687.2	100.0

註釋： * 包括拒答及忘記。

Note : * Including refusals and having forgotten.

58% very often or often accompanying each other in leisure activities

表 3.10c 按與子女一起出席親友聚會或活動的頻繁程度及是否與子女同住劃分的十八歲及以上而有子女的人士數目

Table 3.10c Number of persons aged 18 and over with children by frequency of going with their children to gatherings or activities with relatives or friends and whether living with their children

與子女一起出席親友聚會或活動的頻繁程度 Frequency of going with their children to gatherings or activities with relatives or friends	有與子女同住 Living with children				沒有與任何子女同住 Not living with any children		合計 Overall	
	有與十八歲以下子女同住 Living with children aged below 18		只與十八歲及以上子女同住 Living with children aged 18 and above only					
	人數 No. of persons ('000)	百分比 %	人數 No. of persons ('000)	百分比 %	人數 No. of persons ('000)	百分比 %	人數 No. of persons ('000)	百分比 %
很經常 Very often	120.8	6.6	18.8	1.4	2.6	0.5	142.2	3.9
經常 Often	696.0	38.2	274.6	20.3	73.5	14.3	1 044.1	28.3
間中 Occasionally	621.6	34.1	561.3	41.5	184.3	35.9	1 367.2	37.1
很少 Rarely	310.5	17.0	414.6	30.6	189.2	36.9	914.4	24.8
完全沒有 Never	71.5	3.9	83.3	6.2	63.2	12.3	218.0	5.9
沒有作答* No answer*	§	§	§	§	§	§	1.3	0.0
總計 Total	1 821.2	100.0	1 353.0	100.0	512.9	100.0	3 687.2	100.0

註釋： * 包括拒答及忘記。

Note : * Including refusals and having forgotten.

45% often or very often going with children to gatherings or activities with relatives or friends

表 3.10d 按與子女一起參加他們的學校活動的頻繁程度及是否與他們同住劃分的十八歲及以上而有子女的人士數目

Table 3.10d Number of persons aged 18 and over with children by frequency of going with their children to their school activities and whether living with them

一起參加子女的學校活動的頻繁程度 Frequency of going with their children to their school activities	有與子女同住 Living with children				沒有與任何子女同住 Not living with any children		合計 Overall	
	有與十八歲以下子女同住 Living with children aged below 18		只與十八歲及以上子女同住 Living with children aged 18 and above only					
	人數 No. of persons ('000)	百分比 %	人數 No. of persons ('000)	百分比 %	人數 No. of persons ('000)	百分比 %	人數 No. of persons ('000)	百分比 %
很經常 Very often	95.4	5.2	3.0	0.2	1.1	0.2	99.5	2.7
經常 Often	442.6	24.3	31.7	2.3	6.7	1.3	480.9	13.0
間中 Occasionally	458.9	25.2	44.6	3.3	20.5	4.0	524.0	14.2
很少 Rarely	494.7	27.2	74.5	5.5	23.5	4.6	592.7	16.1
完全沒有 Never	189.5	10.4	226.5	16.7	74.2	14.5	490.1	13.3
沒有作答* No answer*	§	§	§	§	1.3	0.3	2.0	0.1
不適用# Not applicable#	139.5	7.7	972.7	71.9	385.6	75.2	1 497.9	40.6
總計 Total	1 821.2	100.0	1 353.0	100.0	512.9	100.0	3 687.2	100.0

註釋： * 包括拒答及忘記。

沒有在學子女。

Notes : * Including refusals and having forgotten.

Did not have any children studying at school.

29.5% very often or often going with their children to school activities

表 3.10e 按與子女一起參加社區活動的頻繁程度及是否與他們同住劃分的十八歲及以上而有子女的人士數目

Table 3.10e Number of persons aged 18 and over with children by frequency of taking part in community activities with their children and whether living with them

與子女一起參加社區活動的頻繁程度 Frequency of taking part in community activities with their children	有與子女同住 Living with children				沒有與任何子女同住 Not living with any children		合計 Overall	
	有與十八歲以下子女同住 Living with children aged below 18		只與十八歲及以上子女同住 Living with children aged 18 and above only					
	人數 No. of persons ('000)	百分比 %	人數 No. of persons ('000)	百分比 %	人數 No. of persons ('000)	百分比 %	人數 No. of persons ('000)	百分比 %
很經常 Very often	30.9	1.7	7.7	0.6	1.4	0.3	40.0	1.1
經常 Often	225.8	12.4	52.7	3.9	17.0	3.3	295.4	8.0
間中 Occasionally	326.3	17.9	140.3	10.4	43.9	8.6	510.5	13.8
很少 Rarely	550.7	30.2	378.7	28.0	128.3	25.0	1 057.6	28.7
完全沒有 Never	683.7	37.5	768.1	56.8	318.9	62.2	1 770.8	48.0
沒有作答* No answer*	3.9	0.2	5.6	0.4	3.4	0.7	12.9	0.3
總計 Total	1 821.2	100.0	1 353.0	100.0	512.9	100.0	3 687.2	100.0

註釋： * 包括拒答及忘記。

Note : * Including refusals and having forgotten.

14% very often or often taking part in community activities with their children

表 3.11a 按與子女關係的滿意程度及是否與他們同住劃分的十八歲及以上而有子女的人士數目

Table 3.11a Number of persons aged 18 and over with children by level of satisfaction with their relationship with children and whether living with them

與子女關係的滿意程度 Level of satisfaction with their relationship with children	有與子女同住 Living with children				沒有與任何子女同住 Not living with any children		合計 Overall	
	有與十八歲以下子女同住 Living with children aged below 18		只與十八歲及以上子女同住 Living with children aged 18 and above only					
	人數 No. of persons ('000)	百分比 %	人數 No. of persons ('000)	百分比 %	人數 No. of persons ('000)	百分比 %	人數 No. of persons ('000)	百分比 %
非常滿意 Very satisfied	436.5	24.0	151.2	11.2	45.7	8.9	633.4	17.2
滿意 Satisfied	1 289.9	70.8	1 036.2	76.6	376.5	73.4	2 702.6	73.3
普通 Average	81.5	4.5	157.2	11.6	76.7	15.0	315.4	8.6
不滿意 Not satisfied	8.7	0.5	8.0	0.6	10.1	2.0	26.8	0.7
非常不滿意 Very dissatisfied	2.5	0.1	§	§	1.2	0.2	4.2	0.1
沒有作答* No answer*	2.1	0.1	§	§	2.6	0.5	4.7	0.1
總計 Total	1 821.2	100.0	1 353.0	100.0	512.9	100.0	3 687.2	100.0

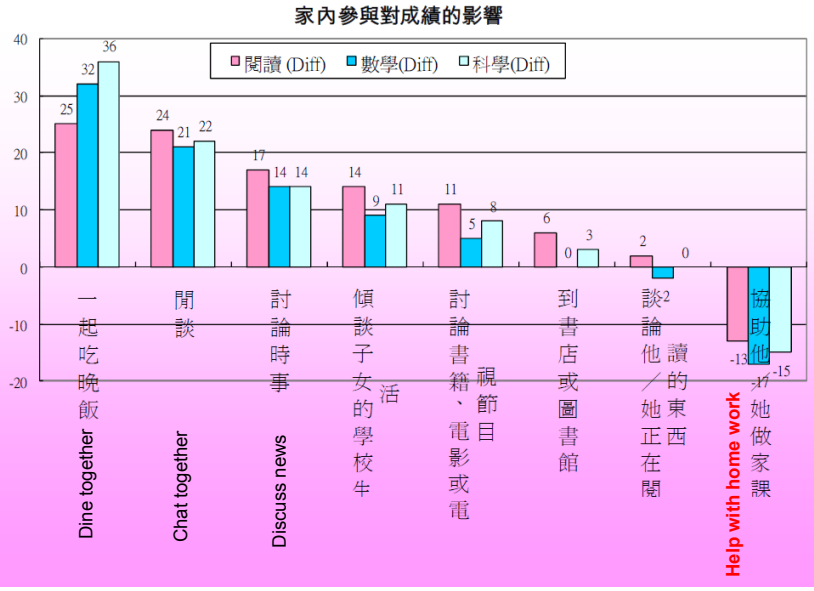
註釋： * 包括拒答、忘記及無意見。

Note : * Including refusals, having forgotten and no comment.

95% very satisfied or satisfied with their relationship with children

Performance and family involvement

能力表現與家庭參與的關係



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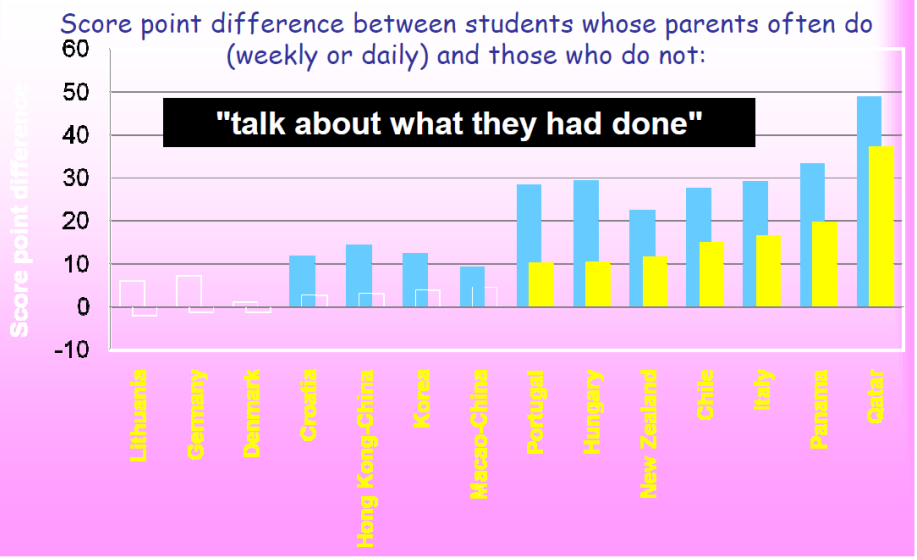
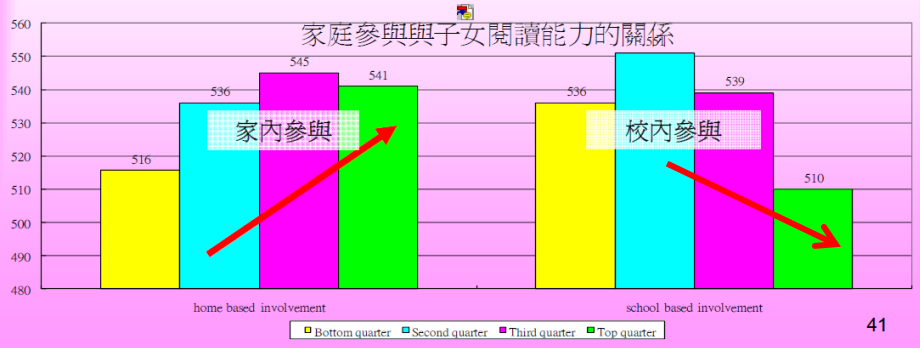
家庭參與:在孩子踏入小學時



家長參與的影響

家長在家裡的參與跟子女閱讀能力表現呈正相關 — 家長越積極參與子女在家裡的學習（例如:與子女談論時事、電影、電視節目、書刊或學校生活等），子女的閱讀能力越強；

然而，家長參與學校義務工作或家長活動的情況，卻與子女學習表現呈負相關



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Prevalence from child protection registry

	UK	US	Canada	Australia	Hong Kong
Year	2007	2006	2003	2003	2007
Investigated	1.5%%	4.78%	3.34%	3.34%	0.16%
Substantiated	0.3%	1.21%	0.68%	0.68%	0.08%
Neglect	44%	60%	38%	34%	12.1%
Physical abuse	15%	10%	23%	28%	52.9%
Multiple	10%	12%			4.3%
Psychological	23%	11%	23%	34%	2.1%
Sexual	7%	7%	9%	10%	29.6%

Self-reported incidence

Yearly rate	Severe Physical abuse	Psychological abuse	Sexual	Neglect	Witness IPV
UK, US, NZ, Finland, Italy, Portugal	3.7 – 16.3%	10.3% (US) 4-9% (UK, Sweden)	Cumulative Girls – 15-30% Boys – 5-10%	1.4 – 15.4%	10-20%
Macedonia, Moklova, Lativa, Lithuania	12.2-29.7%	12.5-33.3%	World wide Any sexual abuse boy – 8.7% girls – 25.3% Noncontact:- boy – 3.2% girls – 6.8% Contact boy – 3.7% girl – 13.2% Penetrative boys – 1.9% girls 5.3%		
Siberia, Russia & Romania	24-29%				
Hong Kong	**6.1%**	**57.6%**	**0.3% sexual harassed 0.1% forced sex**	**27.4%**	**Physical violence- 8%, Psy viol 28%**

Changing pattern

	2011 (Jan-Mar)	2010	2003	1995	1979
Male	31.7%	37.3%	37.0%	44.4%	55.6%
0-6 yr			21%	16.8	27.1
7-12 yr			41%	49.7	52.5
> 13 yr			38%	33.5	20.4
Father as abuser				41.7	22.1
Mother abuser				39.7	64.0
Physical abuse	43.3	48.8	58	62.4	56.0
Gross neglect	16.1	11.3	4.0	5.7	--
Sexual abuse	34.8	33.4	31	17.9	4.2
Psychological abuse	1.3	1.8	1	4.2	--
Multiple abuse	4	4.8	6	9.8	--
Living with 1 parent				23.0	8.9
Living with both parent				68.5	58.3

Adverse Childhood Experience* ACE Categories (Birth to 18)	Impact of Trauma and Health Risk Behaviors to Ease the Pain	Long-Term Consequences of Unaddressed Trauma (ACEs)
Abuse of Child ▪ Emotional abuse ▪ [illegible] ▪ [illegible] ▪ [illegible] ▪ [illegible] ▪ [illegible] ▪ [illegible] ▪ [illegible] ▪ [illegible] ▪ Physical neglect ▪ Emotional neglect * Above types of ACEs are the "heavy end" of abuse. *1 type = ACE score of 1	*Neurobiologic Effects of Trauma* ▪ Disrupted neuro-development ▪ Repetition of original trauma ▪ Self Injury ▪ Eating disorders ▪ Perpetrate interpersonal violence	*Disease and Disability* ▪ Ischemic heart disease ▪ Altered systems of meaning ▪ Intergenerational trauma ▪ Long-term use of multiple human service systems

Prevalence of ACE

- Abuse
1. emotional – recurrent threats, humiliation (11%)
2. physical - beating, not spanking (28%)
3. contact sexual abuse (28% women, 16% men; 22% overall)

- Household dysfunction
1. mother treated violently (13%)
2. household member was alcoholic or drug user (27%)
3. household member was imprisoned (6%)
4. household member was chronically depressed, suicidal, mentally ill, or in psychiatric hospital (17%)
5. not raised by both biological parents (23%)

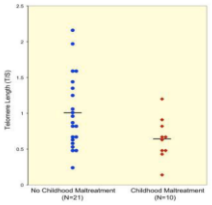
- Neglect
1. physical (10%)
2. emotional (15%)

5. Child abuse – 40%

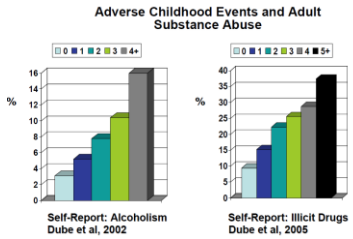
TABLE 1 Outcomes Frequently Associated with Child Maltreatment

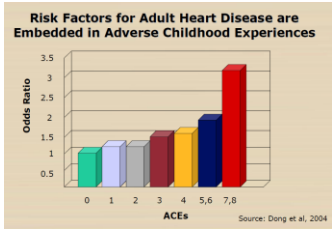
Neurological/ Medical	Cognitive/ Intellectual	Social/ Behavioral	Psychological/ Emotional
• Brain damage • Neurobiological effects • Mental retardation • Speech defects • Physical handicaps • Physical health problems • Death • Increased health care use	• Lowered IQ • Inattention • Learning disorders • Poor reading • Poor school performance • School drop-out	• Aggression • Truancy • Running away • Delinquency • Prostitution • Teenage pregnancy • Problem drinking • Drug use • Crime and violence • Partner violence • Child abuse • Unemployment	• Anxiety • Depression • Dysthymia • Low self-esteem • Poor coping skills • Hostility • Suicide and Attempts • Posttraumatic stress disorder • Dissociation • Borderline personality disorder • Antisocial personality disorder

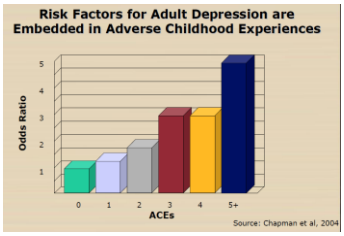
Telomeres are shorter in those with childhood maltreatment



Tyrka et al, 2010







Adverse experiences – child abuse, domestic violence, conflicts, loss….dviorce

If all of these experiences could be eliminated

- Drug abuse would drop by an estimated 50%,
- Current depression by 54%,
- Alcoholism by 65%
- Suicide attempts by 67%, and
- Intravenous drug use by 78%

- (Chapman et al., 2004; Dube et al., 2003).

Sensitive periods and delayed effects

3-5 yr : hippocampal volume – memory consolidation and retrieval, PTSD or depression, borderline personality or dissociative identity disorder

9-10 yr: corpus callosum – information super-highway between left and right hemisphere causing dramatic shifts in mood and personality

14-16 yr : prefrontal cortex – attention, executive function, working memory, motivation and behavioural inhibition

Epidemiology of Child Abuse and Its Geographic Distribution in Hong Kong (2001-2010)

Epidemiology of Child Abuse and Its Geographic Distribution in Hong Kong:
An Important Social Indicator of Different Districts and Communities
(A Central Policy Unit Commissioned Report)

Table 8. SWD only data – diagnosis comparisons (inpatient) by type of abuse (n=947)

Any diagnosis (ICD-10)		Physical abuse (n=253)	Child neglect (n=166)	Sexual abuse (n=458)	Psychological abuse (n=28)	Multiple abuse (n=42)	p-value
X60 to X84	History of suicidal attempt	5 (1.98%)	1 (0.6%)	24 (5.24%)	0 (0%)	1 (2.38%)	0.0223
X60 to X84/ S00 to T98	History of Injury	70 (27.67%)	38 (22.89%)	101 (22.05%)	5 (17.86%)	12 (28.57%)	0.4138
F00 to F99	Mental health problems	32 (12.65%)	10 (6.02%)	70 (15.28%)	3 (10.71%)	5 (11.9%)	0.0333
Q00 to Q99	Congenital Malformations /Chromosomal Abnormalities	13 (5.14%)	19 (11.45%)	28 (6.11%)	1 (3.57%)	4 (9.52%)	0.1043

Association of history of abuse with hospital admission for

Table 6 SWD only data – diagnosis comparisons (inpatient) by type of abuse (N=947)

Any diagnosis (ICD-10)		Physical abuse n=251	Child neglect n=167	Sexual abuse n=460	Psychological abuse n=28	Multiple abuse n=41
X60 to X84	History of suicidal attempt	5 (1.99%)	1 (0.60%)	24 (5.22%)	0 (0%)	1 (2.44%)
X60 to X84/ S00 to T98	History of Injury	68 (27.09%)	39 (23.35%)	102 (22.17%)	5 (17.86%)	12 (29.27%)
F00 to F99	Mental health problems	31 (12.35%)	11 (6.59%)	70 (15.22%)	3 (10.71%)	5 (12.20%)
Q00 to Q99	Congenital Malformations/ Chromosomal Abnormalities	13 (5.18%)	19 (11.38%)	29 (6.30%)	1 (3.57%)	3 (7.32%)

Figure 6. Distribution of SWD child abuse cases by district for 2001 to 2010

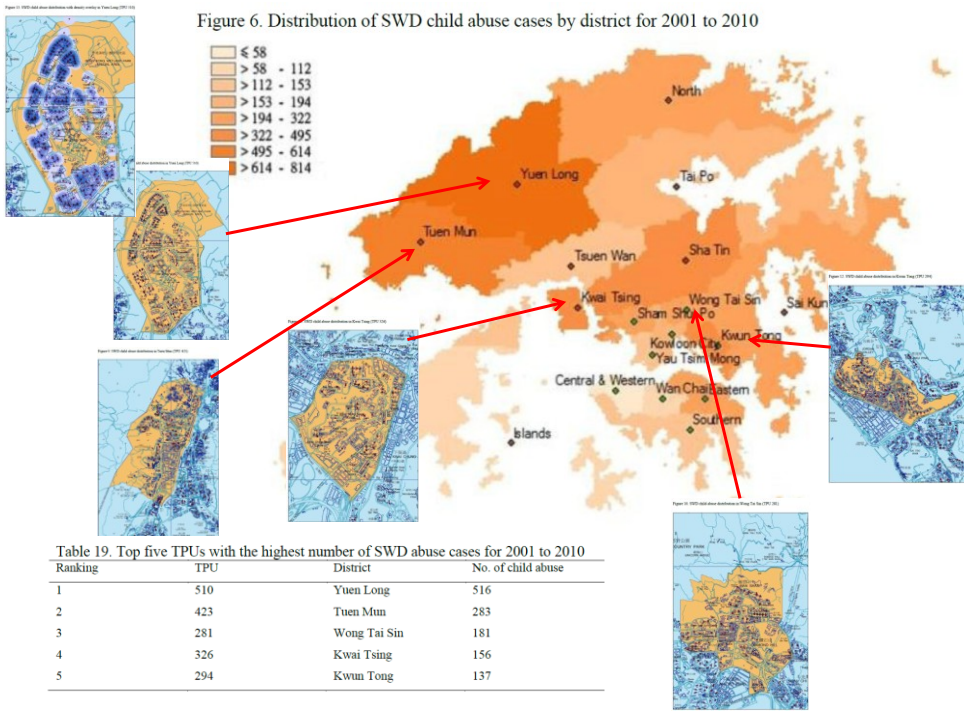


Table 19. Top five TPUs with the highest number of SWD abuse cases for 2001 to 2010

Ranking	TPU	District	No. of child abuse
1	510	Yuen Long	516
2	423	Tuen Mun	283
3	281	Wong Tai Sin	181
4	326	Kwai Tsing	156
5	294	Kwun Tong	137

Parental Perspectives on Child Neglect in Hong Kong 2011 (CPU study)

- 10.4% parents reported neglect of their children
- Most parents expect basic needs of children be met : food & clothing 4.52; respect & recognition 4.54; care & concern 4.70; protection 4.64; education 4.59; medical care 4.73 over 5
- Parents have high awareness on physical neglect but low in emotional neglect

Recommendations

- Family as basic unit of care
- Public and family education as main strategy to promote positive and responsive parenting
- Multi-party endeavours to assist neglect families
- Collaborative efforts of relatives, friends, neighbours, social workers and police officers to meet children with neglect
- Closer collaboration among government departments and NGOs

Family structure, parent-child conversation time and substance use among Chinese adolescents

Mak et al. BMC Public Health 2010, 10:503

- Adjusting for sex, age, type of housing, parental smoking and school, adolescents from **non-intact families** were significantly more likely to be current smokers (OR = 1.62), weekly drinkers (OR = 1.72) and ever drug users (OR = 1.72), with significant linear increases in ORs from maternal, paternal to no-parent families compared with intact families
- Current smoking (OR = 1.41) and weekly drinking (OR = 1.46) were significantly more common among adolescents from paternal than maternal families
- After adjusting for parent-child conversation time, the ORs for non-intact families remained significant compared with intact families, but the paternal-maternal differences were no longer significant.

Conclusions: Non-intact families were associated with substance use among Hong Kong Chinese adolescents. The apparently stronger associations with substance use in paternal than maternal families were probably mediated by the **poorer communication with the father**.

Table 2 Parent-child conversation time by family structure

	Intact (n = 30749)	Maternal (n = 1598)	Paternal (n = 360)
	n (%)	n (%)	n (%)
Average conversation time (min) with mother/day			
None	4.1	7.4	-
< 1	4.5	6.1	-
1-4	9.4	13.6	-
5-9	11.9	12.0	-
10-19	16.0	16.9	-
20-29	13.4	10.7	-
30 or above	40.7	33.2	-
Average conversation time (min) with father/day			
None	9.3	-	19.8
< 1	12.0	-	13.6
1-4	17.4	-	18.7
5-9	15.3	-	11.0
10-19	15.8	-	15.3
20-29	9.0	-	7.1
30 or above	21.3	-	14.7

18% < 5 min/day

27% < 5 min/day

39% < 5 min/day

52% < 5 min/day

Family 愛+人

Press Conference
26th September, 2010

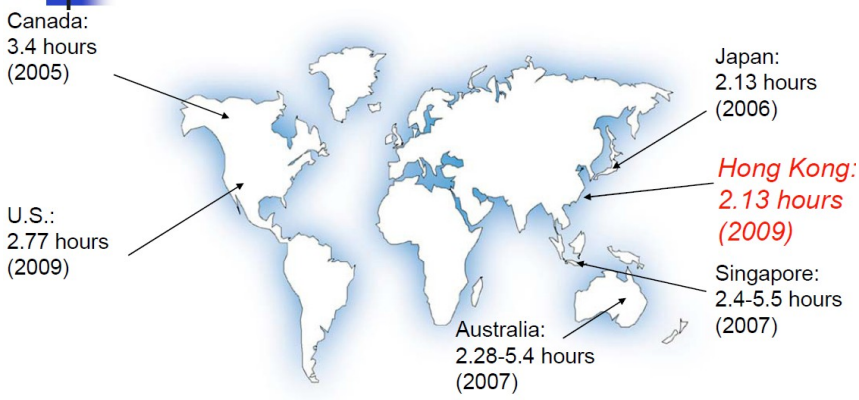
Family Communication Patterns in Hong Kong

Average time spent with family

"In the past 7 days, how much time did you communicate / chat with your family members on average per day?"

Item	Mean	Median
Overall time spent	128 min. (2.13 hrs)	90 min. (1.5 hrs)

Average hours per day spent with family: an international overview



Note: Other countries measured the time spent with family including parenting, child care, household maintenance and management, shopping with family. Hong Kong data only measured the time spent in communicating/chatting with family members.

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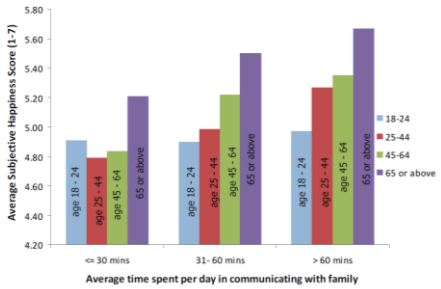
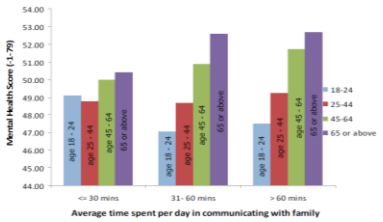
Time spent with family was associated with happiness, especially for age 25+



Time spent with family was associated with mental health, especially for age 25+



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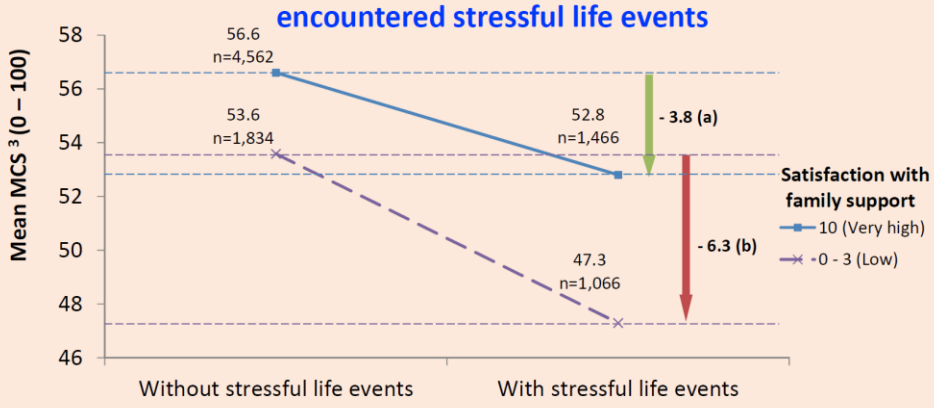
SCHOOL OF PUBLIC HEALTH
THE UNIVERSITY OF HONG KONG
香港大學公共衛生學院

Family 愛+人

香港賽馬會慈善信託基金
The Hong Kong Jockey Club Charities Trust

Health · Happiness · Harmony 家有康和樂 - 健康 · 和諧 · 快樂 3Hs – Health · Happiness · Harmony 家有康和樂 - 健

Very high family support[1] buffered 39.7%[2] for decrease in Mental Health-Related Quality of Life (MCS) when encountered stressful life events



[1] As compare with low family support
[2] 39.7% = [(b-a)/b]*100% = [(6.3 - 3.8) / 6.3]*100%
[3] Mean MCS were presented after adjusting for age, sex, physical activity level, neighborhood cohesion score, number of chronic diseases and household size.

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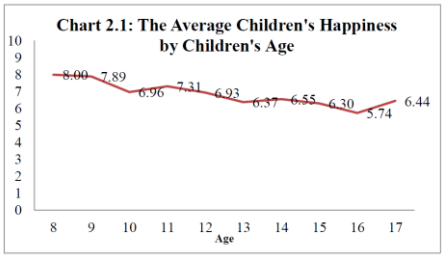
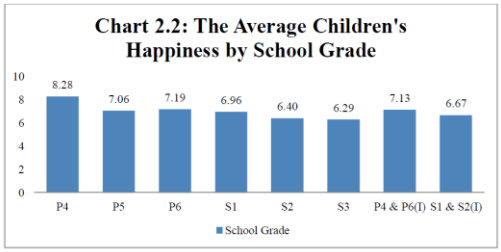
Section 2 Overview: Happiness of Children and that of Parents

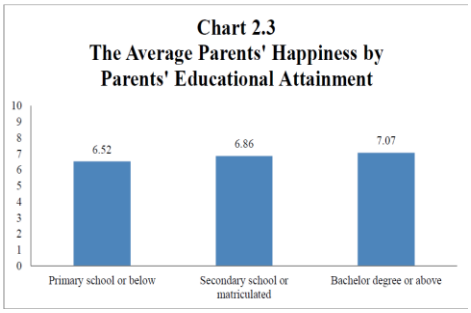
Pattern:

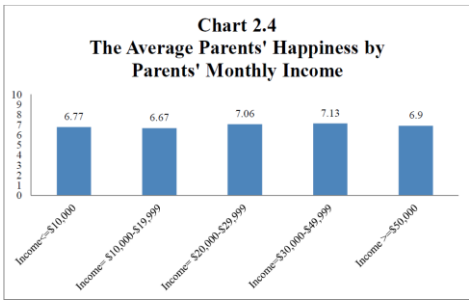


Section 2 Overview: Happiness of Children and that of Parents



Survey on Happiness in children in Hong Kong
Results will be released 27 September 2012





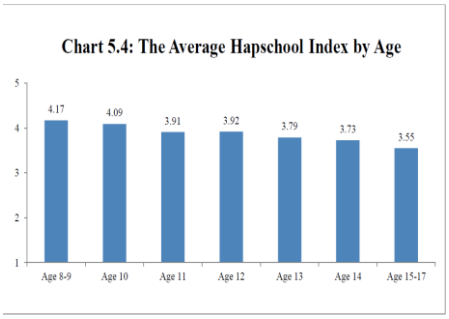


Chart 5.4: The Average Hapschool Index by Age
4.17
4.09
3.91
3.92
3.79
3.73
3.55
Age 8-9
Age 10
Age 11
Age 12
Age 13
Age 14
Age 15-17

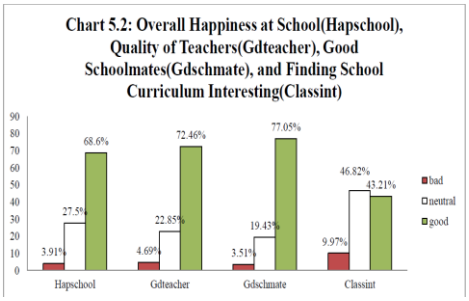


Chart 5.2: Overall Happiness at School(Hapschool), Quality of Teachers(Gdteacher), Good Schoolmates(Gdschmate), and Finding School Curriculum Interesting(Classint)
3.91%
27.5%
68.6%
4.69%
22.85%
72.46%
3.51%
19.43%
77.05%
9.97%
46.82%
43.21%
bad
neutral
good
Hapschool
Gdteacher
Gdschmate
Classint

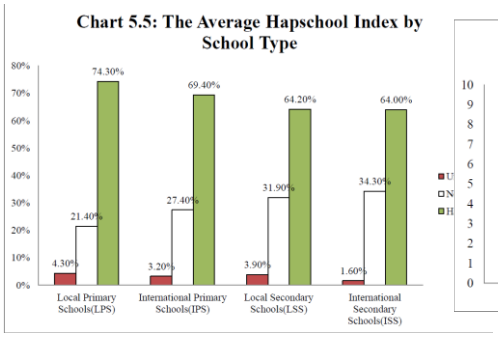


Chart 5.5: The Average Hapschool Index by School Type
4.30%
21.40%
74.30%
3.20%
27.40%
69.40%
3.90%
31.90%
64.20%
1.60%
34.30%
64.00%
Local Primary Schools(LPS)
International Primary Schools(IPS)
Local Secondary Schools(LSS)
International Secondary Schools(ISS)

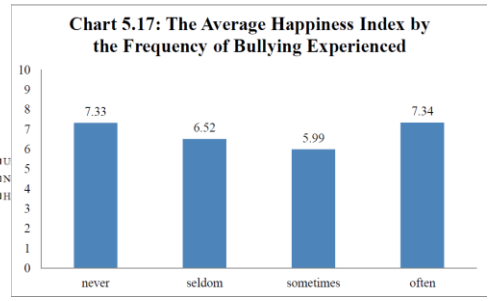


Chart 5.17: The Average Happiness Index by the Frequency of Bullying Experienced
7.33
6.52
5.99
7.34
never
seldom
sometimes
often


1960
THESE GRADES ARE TERRIBLE!!
2010
THESE GRADES ARE TERRIBLE!!


BULLYING
teasing
rumors
leaving somebody out
hitting
kicking
name-calling
pushing
damaging property
stealing
mean words
threats
gossiping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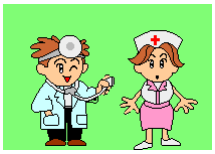
IAN BAKER.
"WE'RE PREPARING HIM FOR SCHOOL, EARLY."

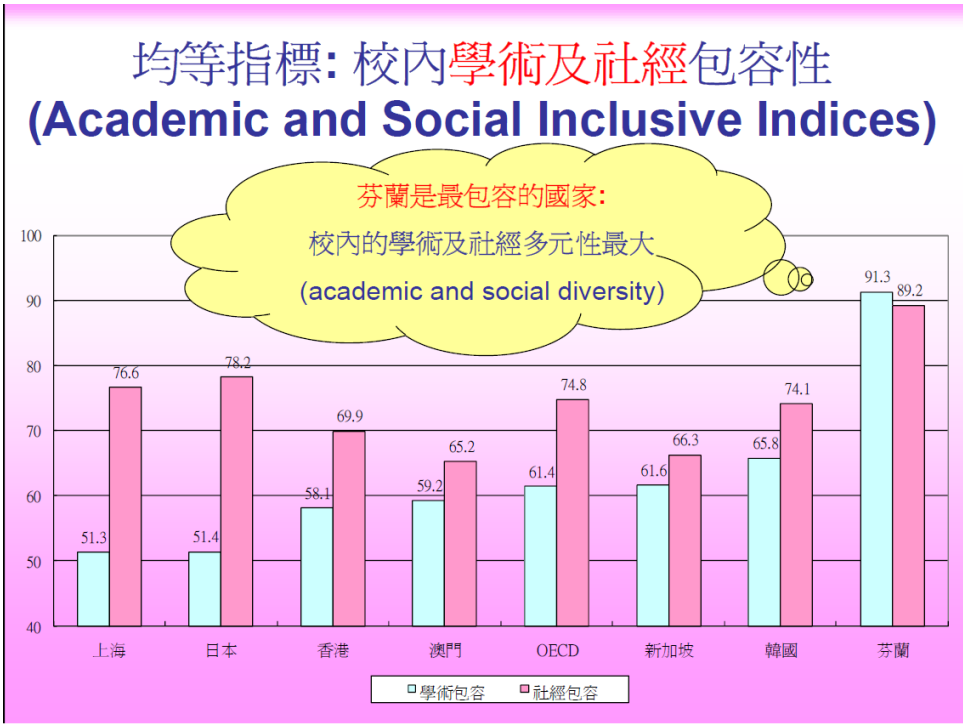

NO! KIDS!! DON'T LISSEN TO HIM!
HE'S TRYIN' TO INDOCTRINIZATE YOUR BRAINS!
COVER YOUR EARS!
NOTZEE
HE'S A SOSHULIST!
RUN!
DON'T LOOK INTO HIS EYES!!
...AND THIS IS WHY IT'S SO IMPORTANT TO GET A GOOD EDUCATION.

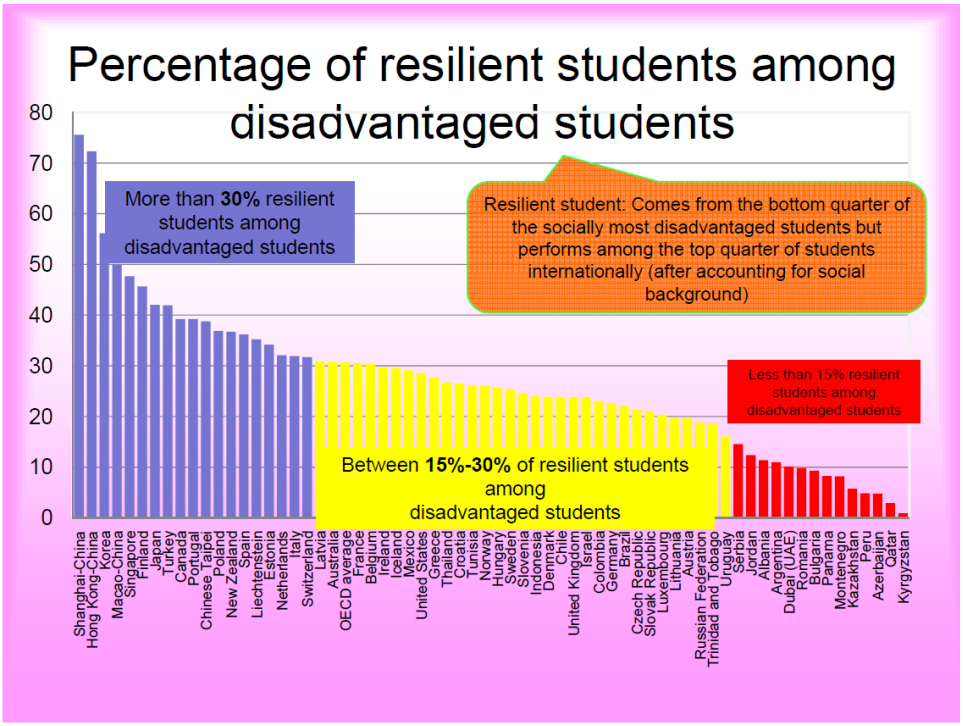
Schools

School health problems

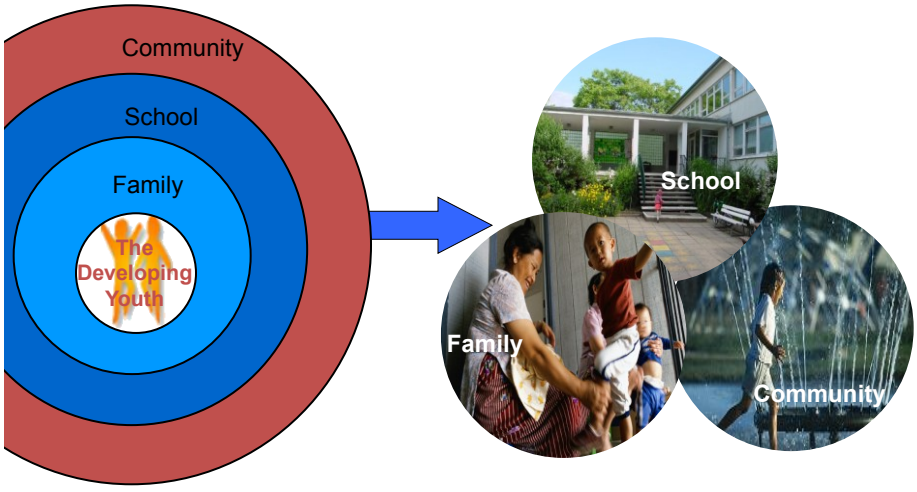
- 100,000 non-engaged youths
  - 50% have specific learning disorder
  - 60% have depression/mental health problems
  - 30% substance abuse
- School students
  - 30-50% have depression
  - 18% obese
  - 15% smoking
  - 2-4% substance abuse







Making the Connections



"Your State Project"

School-Based Adolescent Prevention and Positive Youth Development Programs in Hong Kong:

Participants

Year	No. of schools	No. of participants	Mean age (Years)	Age range (Years)
09-10	28	3328	12.59	10-18
10-11	18	2248	13.58	12-17

Substance abuse behaviors in the past year

	Wave 1		Wave 2	
	No (%)	Yes (%)	No (%)	Yes (%)
1. Smoking	94.0	6.0	92.7	7.3
2. Drinking alcohols	72.3	27.7	66.0	34.0
3. Taking ketamine	99.6	0.4	99.5	0.5
4. Smoking cannabis	99.8	0.2	99.6	0.4
5. Using cough medicine	99.3	0.7	99.1	0.9
6. Inhaling organic solvents	97.8	2.2	98.2	1.8
7. Taking psychotropic drugs	99.8	0.2	99.6	0.4
8. Smoking/injecting heroin	99.9	0.1	99.7	0.3

Delinquent behaviors in the past year

	Wave 1		Wave 2	
	No (%)	Yes (%)	No (%)	Yes (%)
1. Stealing	90.1	9.9	90.2	9.8
2. Cheating	40.6	59.4	39.6	60.4
3. Playing truant	96.4	3.6	95.0	5.0
4. Runaway	95.6	4.4	95.0	5.0
5. Destroying others' properties	87.5	12.5	87.3	12.7
6. Assault	89.0	11.0	88.9	11.1
7. Having sexual intercourse	99.0	1.0	98.4	1.6
8. Group assault	96.9	3.1	96.2	3.8
9. Reviling	31.3	68.7	30.4	69.6
10. Staying overnight without parents' permission	97.1	2.9	95.8	4.2
11. Threatening others	85.2	14.8	85.2	14.8
12. Sneaking into others' place or residence without permission	96.0	4.0	96.4	3.6

Internet addiction symptoms in the past year

	Wave 1		Wave 2	
	No (%)	Yes (%)	No (%)	Yes (%)
1. Feeling preoccupied with the Internet	60.2	39.8	58.1	41.9
2. Using the Internet with increasing amount of time to achieve satisfaction	67.7	32.3	67.4	32.6
3. Making repeatedly unsuccessful efforts to control Internet use	76.8	23.2	75.4	24.6
4. Feeling restless, depressed, or irritable when attempting to cut down Internet use	85.6	14.4	86.0	14.0
5. Staying online longer than intended	57.5	42.5	51.5	48.5
6. Jeopardizing the loss of significant relationships, job and other opportunities because of the Internet use	80.7	19.3	76.8	23.2
7. Lying to others to conceal their Internet usage	80.5	19.5	80.0	20.0
8. Using the Internet as a way of escaping from problems or relieving a dysphoric mood	81.1	18.9	79.4	20.6
9. Going through withdrawal when off-line (e.g., depression, moodiness/ irritability)	87.8	12.2	85.8	14.2
10. Spending too much money on online fees	89.9	10.1	88.4	11.6

The Chinese Internet Addiction (Young) Scale (Shek, Tang, & Lo, 200

• Self-harming behavior

Data in 2009-2010 vs. 2010-2011(%)

	2009-2010		2010-2011	
	No	Yes	No	Yes
Cut wrist, arms, or other area(s) of body?	91.7	8.3	90.6	9.4
Burned yourself with a cigarette?	99.2	0.8	99.0	1.0
Burned yourself with a lighter or a match?	98.7	1.3	98.6	1.4
Carved words into your skin?	95.1	4.9	94.4	5.6
Carved pictures, designs, marks into skin?	94.9	5.1	95.0	5.0
Severely scratched yourself, to the extent that scarring or bleeding occurred?	89.6	10.4	89.4	10.6
Bit yourself to broke the skin?	92.6	7.4	92.4	7.6
Rubbed sandpaper on your body?	99.1	0.9	99.2	0.8
Dripped acid onto your skin?	99.7	0.3	99.6	0.4
Used bleach, comet, etc. to scrub your skin?	99.5	0.5	99.3	0.7
Stuck sharp objects like needles into skin?	96.8	3.2	97.2	2.8
Rubbed glass into your skin?	98.4	1.6	98.3	1.7
Broken your own bones?	99.4	0.6	99.6	0.4
Banged your head against something to cause a bruise to appear?	95.7	4.3	95.9	4.1
Punches oneself to caused a bruise to appear?	94.2	5.8	94.6	5.4
Prevented wounds from healing?	91.4	8.6	90.7	9.3
Done anything else to hurt yourself that was not asked about in this questionnaire?	95.3	4.7	96.4	3.6

• Compensated dating

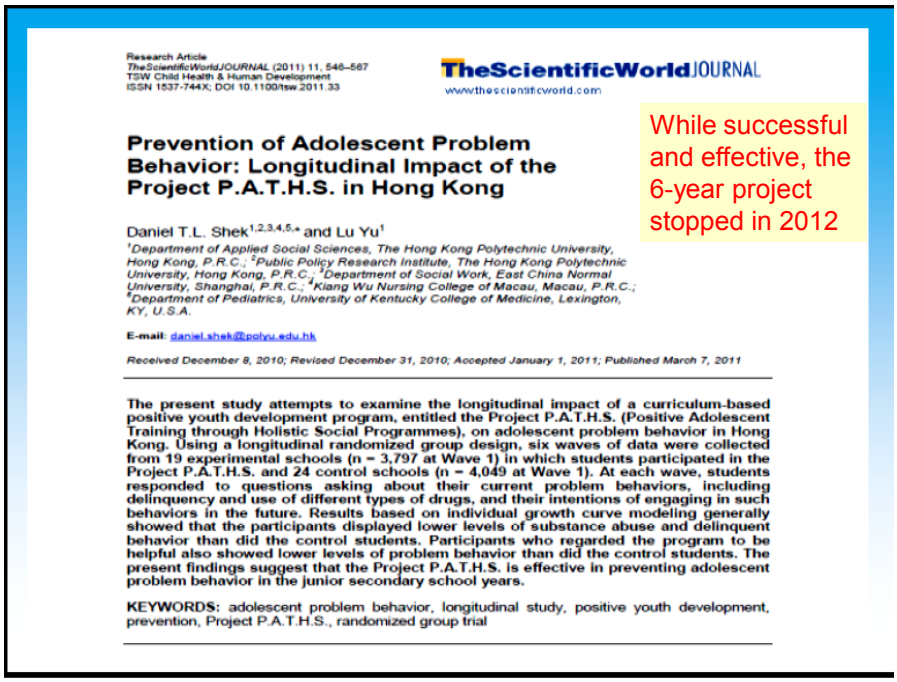
Percentage before and in the past year [a] (%)

	2010-2011 No	2010-2011 Yes
Engaged in compensated social activities with stranger(s) for money / material gains before?	98.0	*2.0*
Had sexual relationship with stranger(s) for money and/or material gains before?	99.6	0.4
Engaged in compensated social activities with stranger(s) for money / material gains in the past year?	98.4	*1.6*
Had sexual relationship with stranger(s) for money and/or material gains in the past year?	99.5	0.5

[a] This part is newly added into the questionnaire in 2010/2011 academic year, therefore there is no data for the 2009/2010 academic year.

Behavioral intention in the next two years

	Wave 1 No (%)	Wave 1 Yes (%)	Wave 2 No (%)	Wave 2 Yes (%)
1. Drinking alcohols	73.3	26.7	64.5	35.5
2. Smoking	97.0	3.0	95.3	4.7
3. Taking psychotropic drugs	99.2	0.8	98.8	1.2
4. Having sexual intercourse	98.0	2.0	96.1	3.9
5. Engaging in gambling activities	92.3	7.7	88.8	11.2



Research Article
TheScientificWorldJOURNAL (2011) 11, 546–567
TSW Child Health & Human Development
ISSN 1537-744X; DOI 10.1100/tsw.2011.33

TheScientificWorldJOURNAL
www.thescientificworld.com

Prevention of Adolescent Problem Behavior: Longitudinal Impact of the Project P.A.T.H.S. in Hong Kong

While successful and effective, the 6-year project stopped in 2012

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Received December 8, 2010; Revised December 31, 2010; Accepted January 1, 2011; Published March 7, 2011

The present study attempts to examine the longitudinal impact of a curriculum-based positive youth development program, entitled the Project P.A.T.H.S. (Positive Adolescent Training through Holistic Social Programmes), on adolescent problem behavior in Hong Kong. Using a longitudinal randomized group design, six waves of data were collected from 19 experimental schools (n = 3,797 at Wave 1) in which students participated in the Project P.A.T.H.S. and 24 control schools (n = 4,049 at Wave 1). At each wave, students responded to questions asking about their current problem behaviors, including delinquency and use of different types of drugs, and their intentions of engaging in such behaviors in the future. Results based on individual growth curve modeling generally showed that the participants displayed lower levels of substance abuse and delinquent behavior than did the control students. Participants who regarded the program to be helpful also showed lower levels of problem behavior than did the control students. The present findings suggest that the Project P.A.T.H.S. is effective in preventing adolescent problem behavior in the junior secondary school years.

KEYWORDS: adolescent problem behavior, longitudinal study, positive youth development, prevention, Project P.A.T.H.S., randomized group trial

Research Article

Family and Personal Adjustment of Economically Disadvantaged Chinese Adolescents in Hong Kong

Daniel T. L. Shek[1, 2, 3, 4, 5] and Pik Fong Tsui[1]

The Scientific World Journal
Volume 2012, Article ID 142689, 8 pages
doi:10.1100/2012/142689

Table 2: Past year exposure to substances.

	Never (%)		Attempted (%)	
	Poor group	Nonpoor group	Poor group	Nonpoor group
(1) Smoking	90.1	95.3	9.9	4.7
(2) Drinking	70.7	71.3	29.3	28.7
(3) Use ketamine	99.6	99.8	0.4	0.2
(4) Use cannabis	99.6	99.8	0.4	0.2
(5) Use cough medicine without coughing	99.6	99.3	0.4	0.7
(6) Use organic solvent	99.1	97.7	0.9	2.3
(7) Use pills (e.g., ecstasy)	100.0	85.0	0	15.0
(8) Use or inject heroin	100.0	96.1	0	3.9

Table 3: Delinquent behaviors between poor and nonpoor groups in the past year.

	Never (%)		Attempted (%) (1–4 times)		Attempted (%) (5 times or above)	
	Poor group	Nonpoor group	Poor group	Nonpoor group	Poor group	Nonpoor group
(1) Stealing	86.5	90.3	12.7	9.0	1.0	0.7
(2) Cheating	38.1	38.4	43.1	42.2	18.8	19.4
(3) Truancy	95.9	97.2	3.2	2.1	0.9	0.7
(4) Running away from home	94.1	96.7	5.4	3.0	0.5	0.3
(5) Damaging others' properties	88.8	86.1	10.3	12.1	0.9	1.8
(6) Assault	90.5	88.6	7.2	9.3	2.3	2.1
(7) Having sexual intercourse with others	98.2	99.6	1.8	0.3	0	0.1
(8) Group fighting	96.3	97.1	2.3	2.5	1.4	0.4
(9) Speaking foul language	24.9	30.3	37.1	38.0	38.0	31.7
(10) Staying outside overnight without parents' consent	97.2	97.2	2.3	2.1	0.5	0.7
(11) Strong arming others	79.1	85.0	16.8	11.3	4.1	3.7
(12) Trespasses	96.8	96.1	3.2	3.2	0	0.7

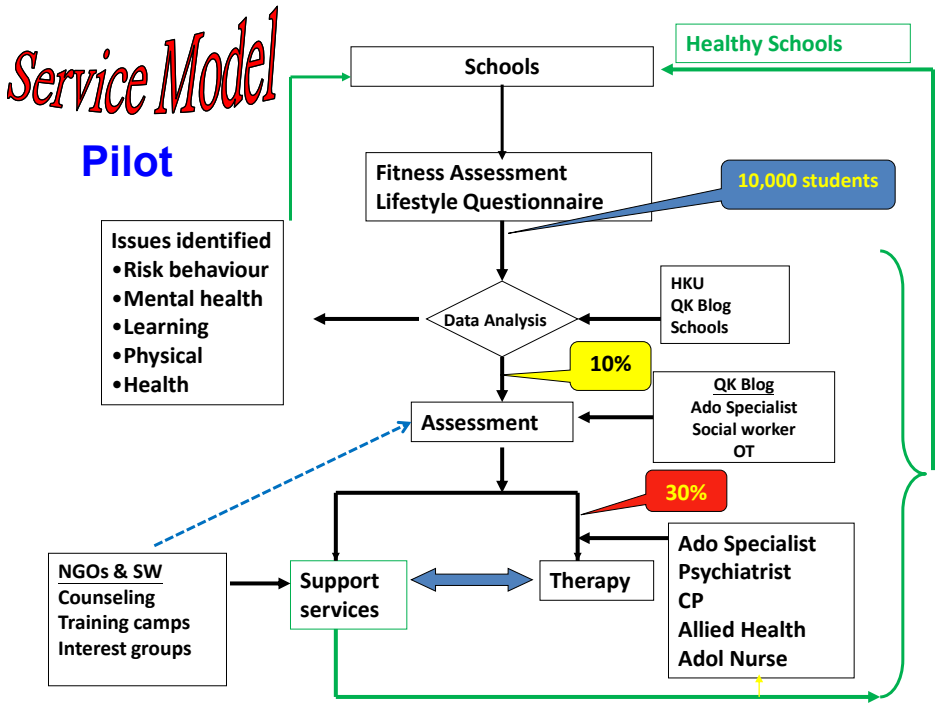
No significant difference was found between the two Socio-economic groups in terms of problem behavior and substance abuse behavior.

TABLE 4: Differences between poor group and nonpoor group in positive youth development constructs.

Measures	Poor group		Nonpoor group		*F* value
	Mean	SD	Mean	SD	
CBC	4.37	0.83	4.45	0.74	2.50
PA	4.45	0.93	4.53	0.87	1.70
GPYDQ	4.51	0.75	4.59	0.71	2.36
PIT	4.04	1.08	4.27	0.94	11.82*
Problem behavior	0.41	0.42	0.39	0.46	0.03
Substance abuse	0.08	0.19	0.09	0.21	0.44
Family interaction	3.48	0.83	3.78	0.81	25.28*
Paternal parenting	2.29	0.72	2.63	0.52	64.35*
Maternal parenting	2.86	0.58	2.93	0.50	4.32

Note. An overall alpha level based on the Bonferroni adjustment was carried out to adjust for inflated type 1 error.
*$P < .01$.

The mean scores indicated that the poor group had lower scores on family interaction (*M = 3.56,* SD = .84) than did the non-poor group (*M = 3.78, SD = .84).* The poor group also had worse perceived paternal parenting (*M = 2.28, SD = .73) than did the nonpoor group (M = 2.63,* SD = .52). The effect size of the differences ranged from low to moderate levels.



Further analysis - correlations

1. 你有否上學時遲到超過5次?
2. 你曾否外出唱K或蒲網吧?
3. 你曾否蒲通頂?
4. 你曾否逃學去玩?
5. 你有否吸煙的習慣?
6. 你有否飲酒的習慣?
7. 你有否經常唔開心?
8. 你曾否出現睡眠不足問題?
9. 你曾否服用任何藥物令情緒高漲和興奮?
10. 你曾否感到異常的暴躁?
11. 你有否出現記憶力衰退?
12. 你有否覺得思考變得遲緩?
13. 你有否出現情緒焦慮？

7, 8, 10, 11, 12, 13 = Mental problem

1, 4, 5,6, 9 = Risk behaviour

2, 3 = Partying or recreational

For typical adolescent **RISK TAKING BEHAVIORS** (health-compromising behaviors), ***significant adults*** (parents and school teachers) seem to matter a lot. Parents substance use behaviors, not caring parents and teachers are all significant predictors.

Source	Type III		
	Wald Chi-Square	df	Sig.
(Intercept)	1.842	1	.175
Family violence	7.964	1	.005
Parents smoking	4.223	1	.040
Parents drinking	41.066	1	.000
Parents using drugs	43.800	1	.000
Not having family activities	2.582	1	.108
Parents NOT caring for me	5.751	1	.016
Poor relationship in school	4.571	1	.033
Teachers NOT caring for me	16.146	1	.000
Friends NOT caring for me	.046	1	.830

For the **MENTAL ISSUES**, violence and drinking at home as well as lack of caring friends emerged as significant predictors.

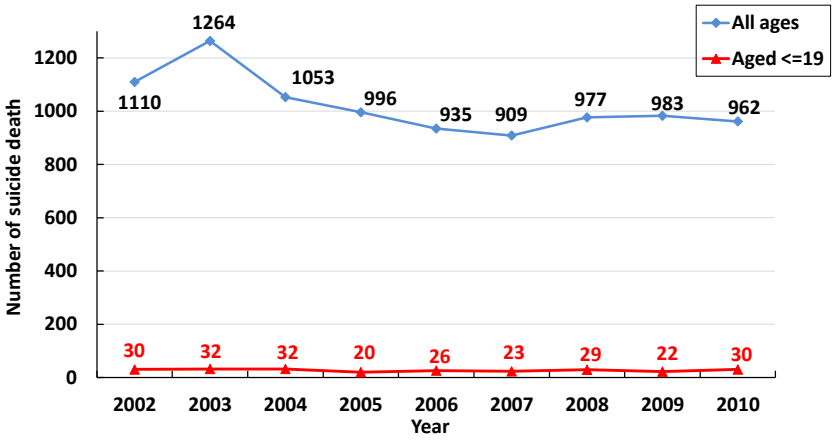
Source	Type III		
	Wald Chi-Square	df	Sig.
(Intercept)	37.550	1	.000
Family violence	6.222	1	.013
Parents smoking	.561	1	.454
Parents drinking	10.717	1	.001
Parents using drugs	1.961	1	.161
Not having family activities	.076	1	.783
Parents NOT caring for me	.011	1	.915
Poor relationship in school	.592	1	.442
Teachers NOT caring for me	2.627	1	.105
Friends NOT caring for me	4.736	1	.030

Background

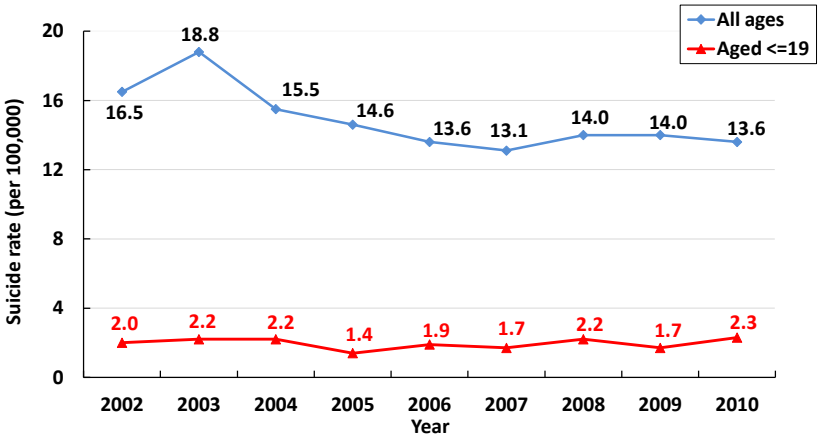
Prevalence rate of suicidal ideation and behavior in Hong Kong adolescents

	Study Population	Gender	Ideation	Plan	Engaged in suicide behavior	Medical attention required
Yip et al. (2004)	2586 (aged 13 to 21)	Female	21.1%	6.2%	8.3%	1.2%
		Male	13.1%	4.2%	8.5%	1.3%
Wong et al. (2005)	1309 (aged 12 to 17)	Female	-	-	14.1%	-
		Male	-	-	3.8%	-

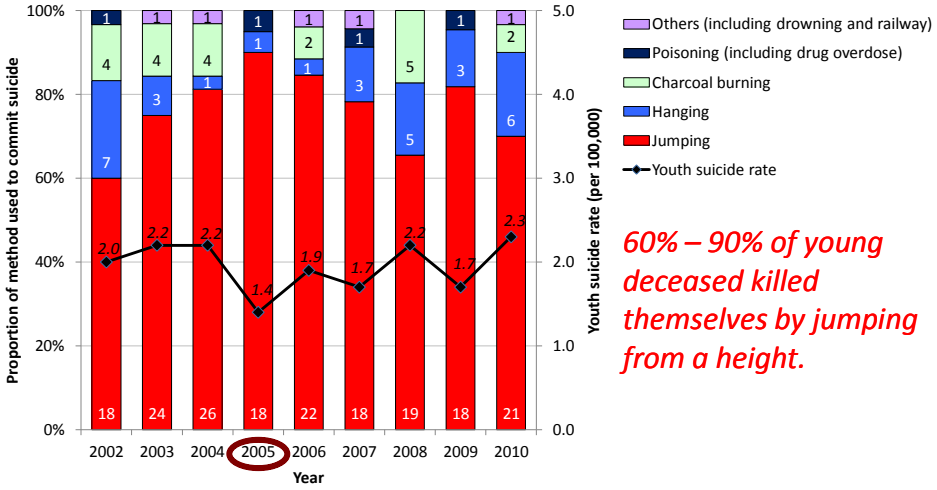
Suicides in Hong Kong



Suicide rates (per 100,000) in Hong Kong

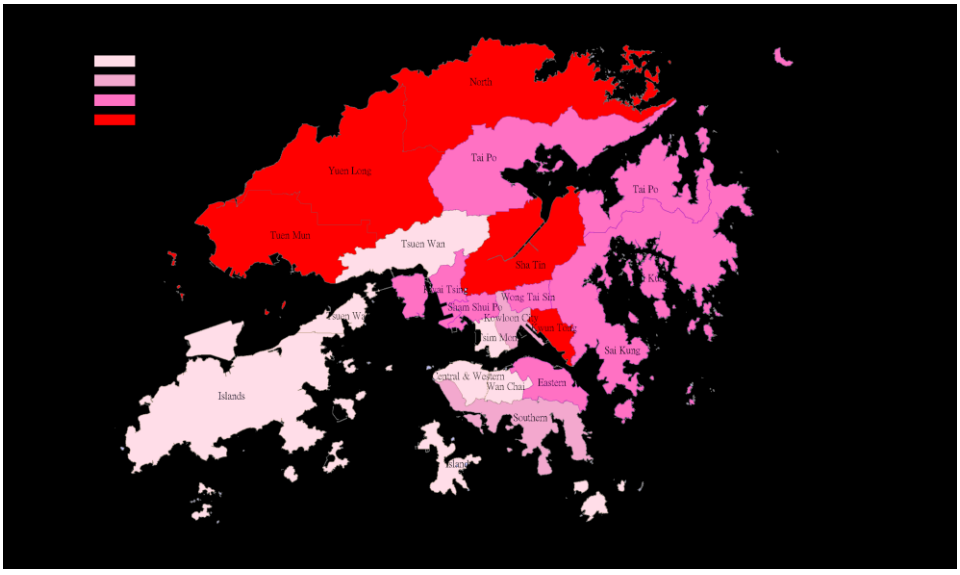


Method used to Commit Suicide among Youth

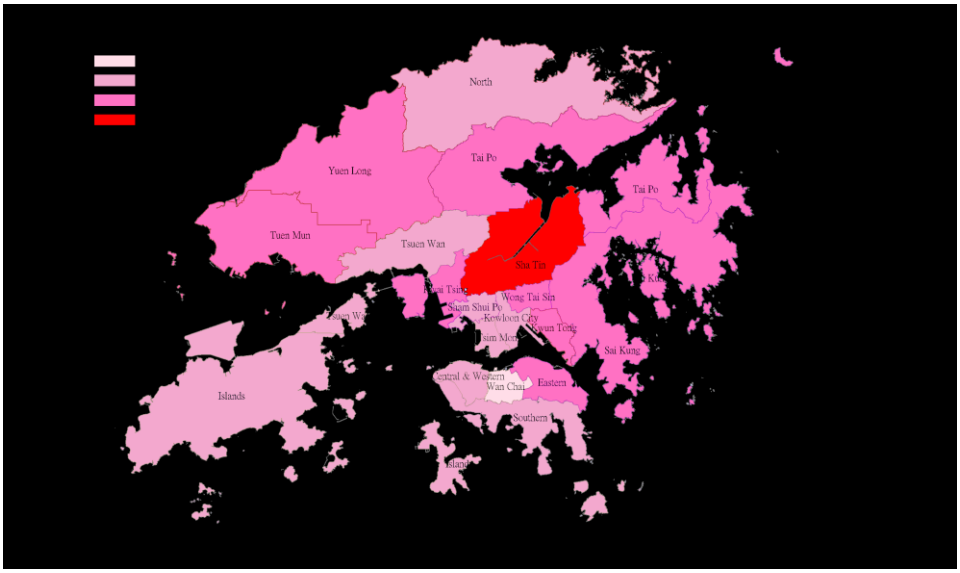


60% – 90% of young deceased killed themselves by jumping from a height.

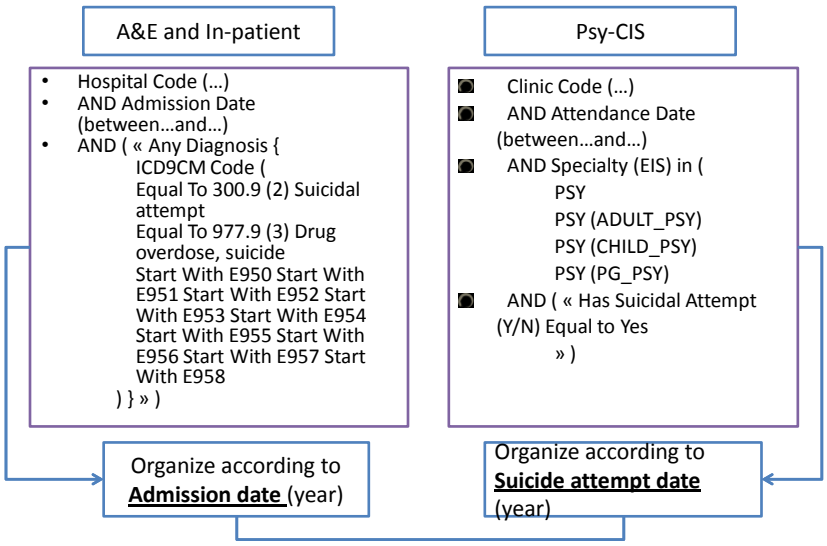
Residential distribution, 2002 – 2010



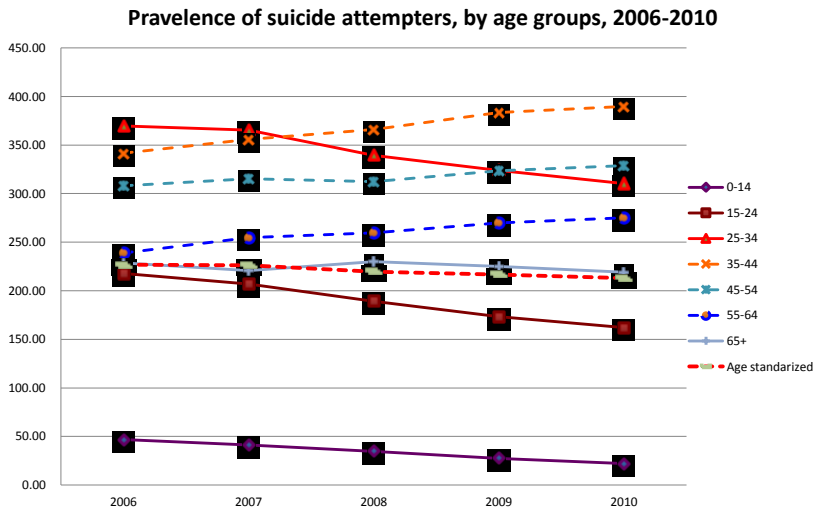
Residential distribution, 2002 – 2010



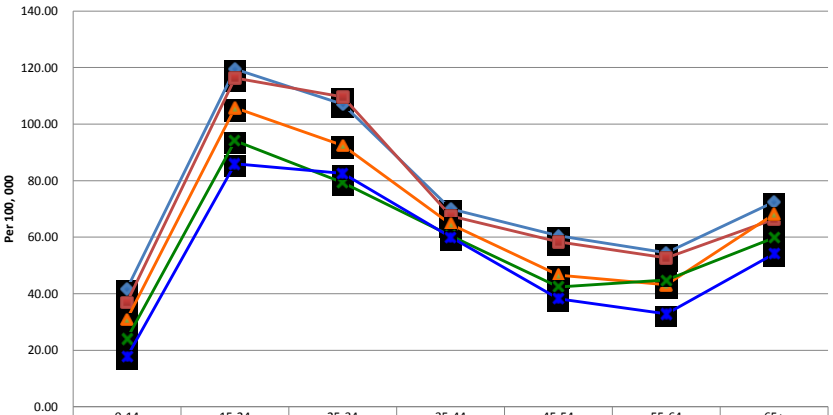
Data retrieval and organization



Prevalence - age pattern

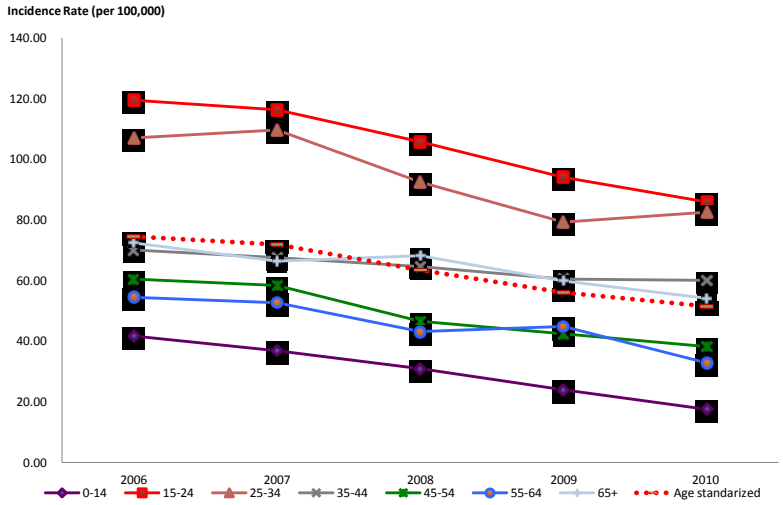


Incidence – age trend

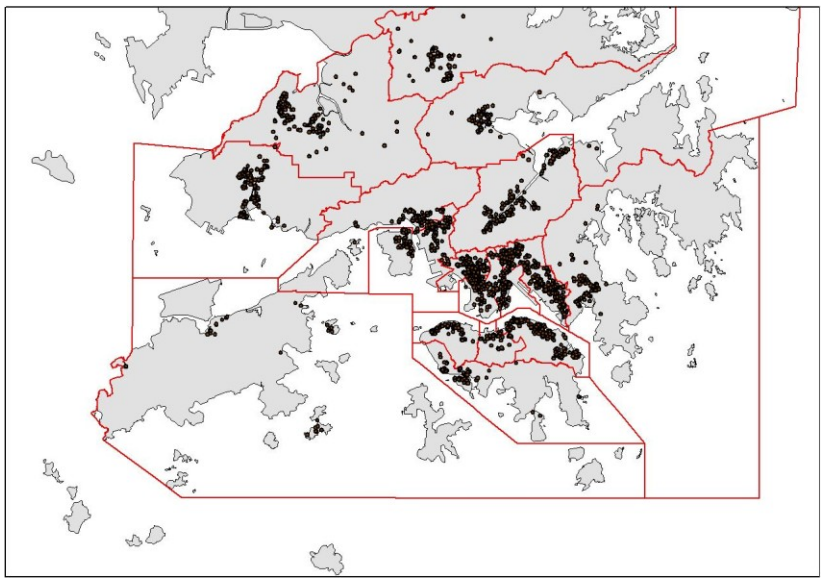


	0-14	15-24	25-34	35-44	45-54	55-64	65+
2006	41.72	119.47	107.02	70.06	60.48	54.48	72.47
2007	36.90	116.28	109.65	67.56	58.38	52.71	66.44
2008	30.92	105.74	92.44	64.63	46.55	43.15	68.21
2009	24.04	94.09	79.26	60.53	42.42	44.84	59.88
2010	17.60	85.97	82.57	60.05	38.22	32.85	54.16

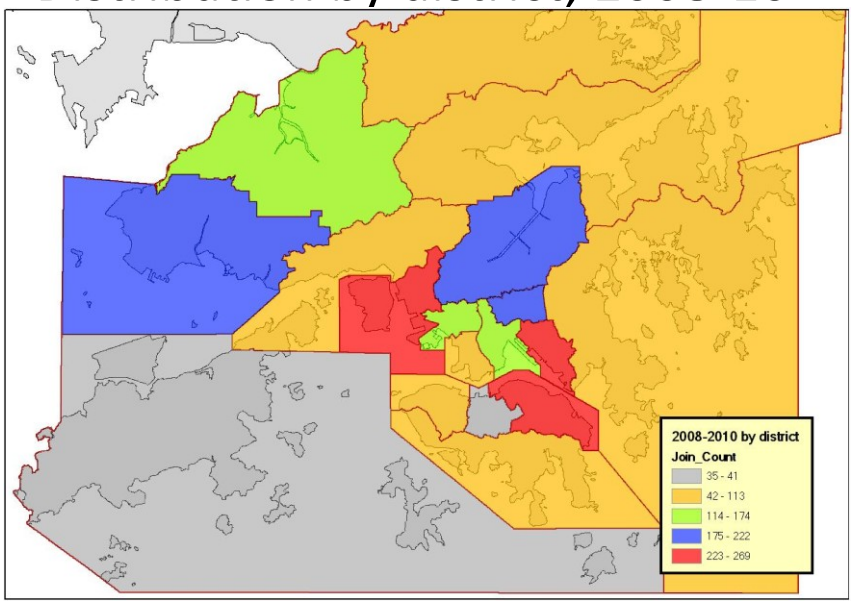
Incidence – age pattern

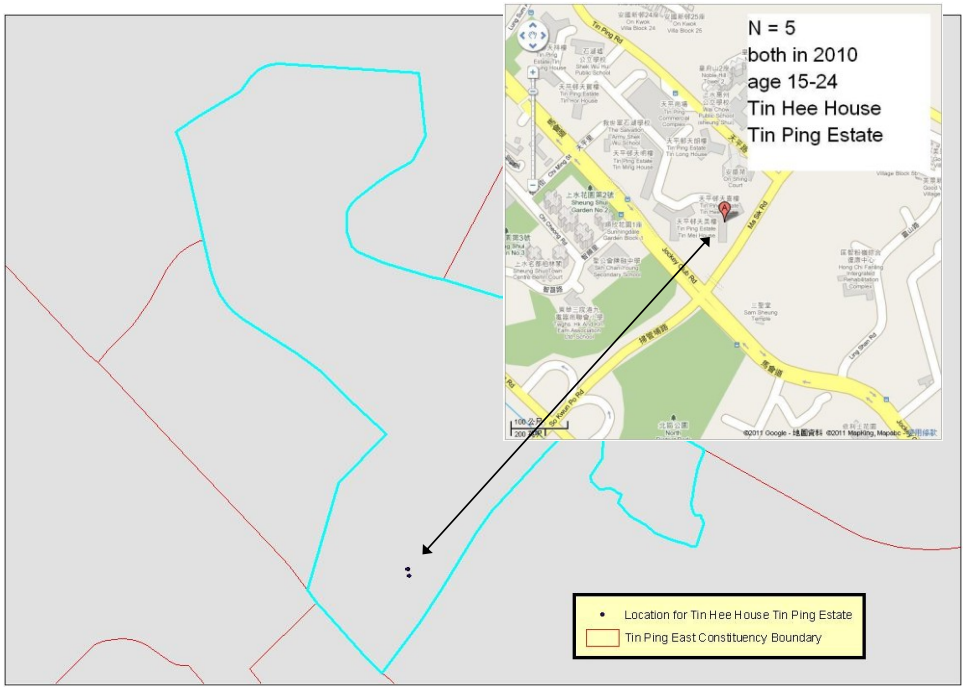


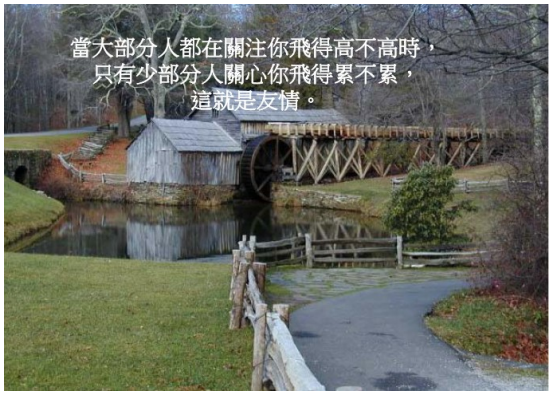
Suicide Location 2008-2010



Distribution by district, 2008-10







FRIENDS, PLAYMATES – not many studies on this

Specific interventions tackle the increasing social gradient that occurs post-14 through each of the drivers identified.

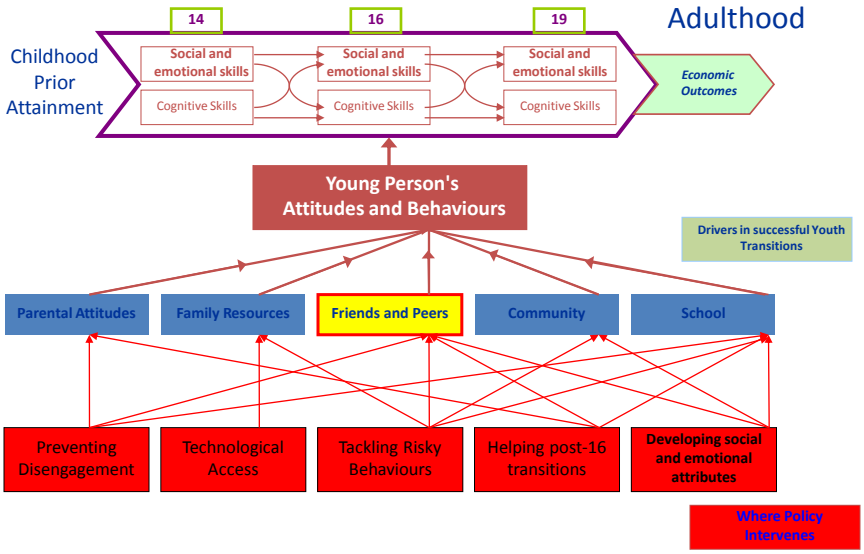
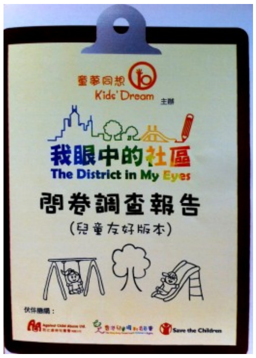
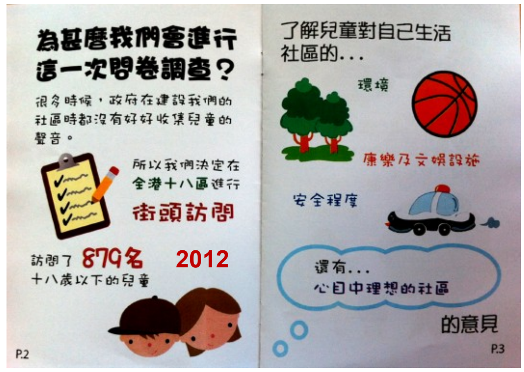


Table 5.10 , No. of casual friends /close friends as reported by respondents

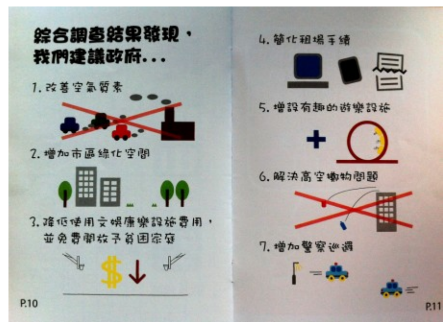
Case No.	Total no. of casual friend in H.K. (New Immigrant , native friends)	No. of casual friend in China	Total no. of close friend in H.K. (New immigrant, native friends)	No. of close friend in China
A	4 (4, 0)	over 30	0	12
B	20 (10, 10)	over 40	2 (2, 0)	10
C	4 (3, 1)	over 30	6 (6, 0)	13
D	6 (1, 5)	0ver 30	6 (5, 1)	12
E	3 (2, 1)	over 20	2 (2, 0)	14
F	30 (5, 25)	over 30	2 (2, 0)	12
G	14 (11, 3)	over 20	3 (3, 0)	10
H	3 (3, 0)	over 20	2 (2, 0)	15
I	14 (9, 5)	over 20	4 (3, 1)	12
J	13 (11, 2)	over 30	1 (1, 0)	14
K	8 (3, 5)	over 30	3 (3, 0)	13
L	13 (4, 9)	over 20	3 (3, 0)	13
M	40 (2, 38)	over 30	6 (1, 5)	15

COMMUNITY & NEIGHBOURHOOD


童夢同想
Kids' Dream
主辦
我眼中的社區
The District in My Eyes
問卷調查報告
(兒童友好版本)
伙伴機構：
Save the Children


為甚麼我們會進行這一次問卷調查？
很多時候，政府在建設我們的社區時都沒有好好收集兒童的聲音。
所以我們決定在全港十八區進行
街頭訪問
訪問了879名
十八歲以下的兒童
2012
P.2
了解兒童對自己生活社區的...
環境
康樂及文娛設施
安全程度
還有...
心目中理想的社區
的意見
P.3


成績龍虎榜
經過計算之後，我們發現...
空氣最清新
綠化情況最好
離島區
最多兒童喜愛區內文娛康樂設施
最安全
灣仔區
P.8
空氣最差
綠化情況最差
最骯髒
油尖旺區
最少兒童喜愛區內文娛康樂設施
中西區
最危險
深水埗區
P.9


綜合調查結果發現，我們建議政府...
1.改善空氣質素
2.增加市區綠化空間
3.降低使用文娛康樂設施費用，並免費開放予貧困家庭
P.10
4.簡化租場手續
5.增設有趣的遊樂設施
6.解決高空擲物問題
7.增加警察巡邏
P.11


小朋友想要...
北區
要似皇宮
大埔
少發生罪案
元朗
想要間醫院
屯門
藍天白雲
花草
荃灣
少一些車輛
沙田
翻新巴士站
葵青
多些戲棚
給老人家看粵劇
油尖旺
要有動物園
西貢
要有BAND房
中西區
笑臉
灣仔
有真的森林
長洲
有地鐵去!
南區
成條街都係粉紅色
香港要
藍色的海
我眼中的社區
The District in My Eyes
童夢同想
Kids' Dream
P.6
P.7

Why is Community Connectedness Important?

"Each community must create a vision of what it wants for all children and young people. Only then can those communities create an environment in which children and young people can achieve their greatest potential, through supports, services, and opportunities."

Family and Youth Services Bureau

"Your State Project"

Neighbourhood context to child health

- Birth weight - Economic disadvantage accounted for 80.8% of the between-neighbourhood variance for African-American mothers and 76.3% for white mothers
- Problem behaviour - 11.7% of the variation between neighbourhoods was explained by neighbourhood variables
- Injuries - 10% of variance in health outcomes was explained by neighbourhood socioeconomic status
- Child maltreatment - 83% of variation in child health outcome was explained by the full model

Taken together, neighbourhood effects explain up to 10% of the variation in certain child health outcomes, after controlling for a number of different family characteristics

Perception of Neighborhood Environments and Self-rated Health (SRH) in Tin Sui Wai, Hong Kong

The Internet Journal of Public Health. 2012 Volume 2 Number 1. DOI: 10.5580/2b7c

. Mean scores of perception of neighborhood environments and SRH

	Total score	*Mean score (Standard deviation)*
Physical and living environment	80	43.3 (16.1)
Service environment	40	21.7 (8.1)
Social environment	100	51.8 (19.1)
SRH	5	2.8 (1.2)

- **Conclusions** :- Significant negative association of poor SRH with perceptions of physical and living, service and social environments.
- Income and education levels also were significant predictors of SRH.

The effects of perception of neighborhood environments and demographic/SES variables on "poor" SRH

	Model 1	Model 2	Model 3	Model 4	Model 5
Physical & living environment	β-0.108 OR=0.89 (0.87-0.91)			β-0.044 OR=0.95 (0.88-1.00)	β-0.016 OR=0.98 (0.90-1.00)
Service environment		β-0.214 OR=0.80 (0.77-0.84)		β-0.095 OR=0.90 (0.76-0.96)	β-0.120 OR=0.88 (0.74-0.94)
Social environment			β-0.085 OR=0.91 (0.90-0.93)	β-0.015 OR=0.98 (0.94-1.00)	β-0.010 OR=0.98 (0.94-1.00)
Education level					β-0.660 OR=0.52 (0.26-0.83)
Monthly income					β-0.390 OR=0.67 (0.38-1.00)
Nagelkerke R^2	0.468	0.472	0.440	0.476	0.506

The values in parentheses are the Confident Intervals (CI)
OR is odds ratio

Table 5.7 Use of welfare, leisure, sports, and cultural facilities (Street and Household Survey)

	% not done at all	% consuming mostly in TSW[102]	First 2 major reasons for not consuming in TSW
Among those in the street survey			
Using community centre facilities	39%	50%	More facilities outside, More choices outside,
Participate in social service organization activities	55%	31%	More facilities outside, More choices outside,
Participate in sport activities	21%	66%	More facilities outside, More choices outside,
Using public library	14%	77%	convenience because of work/study, More choices outside,
Using rest places	12%	78%	More choices outside, More facilities outside,
Participating in art and cultural activities	48%	20%	More facilities outside, More choices outside,
Among those in the household survey			
Using community centre facilities	64%	33%	(less than 5% of the sample)
Participate in social service organization activities	70%	28%	(less than 5% of the sample)
Participate in sport activities	43%	44%	More facilities outside, more choices outside
Using public library	34%	57%	More choices outside, convenience because of work/study
Using rest places	30%	65%	(less than 5% of the sample)
Participating in art and cultural activities	69%	19%	More choices outside, go with friends/relatives outside TSW

Neighbourhood food environment and dietary intakes in adolescents

International Journal of Pediatric Obesity, 2010; 5: 420–427

- Perceived availability of fast-food shops and convenience stores were positively associated with moderate/high consumptions of high-fat foods (OR fast 1.10 and OR con 1.15) and junk food/soft drinks (OR fast 1.10 and OR con 1.10).
- Significant negative associations of the perceived availability of restaurants with intakes of vegetables and fruit were observed (OR veg 0.87 and OR fruit 0.83).
- The positive relationship between reporting fast-food shops with intake of junk food/soft drinks were observed only in ***boys*** and those with ***low perceived family affluence***.
- The negative association of reporting restaurants with fruit consumption was found in those with low and middle perceived family affluence only.

Conclusions. Perceived availability of neighbourhood fast-food shops, restaurants, and convenience stores may have a negative impact on adolescent dietary intakes particularly for those from poorer families

Built environment and children's academic performance (HKCEE) – A Hong Kong perspective

Habitat International 33 (2009) 45–51

Conclusions:- Land use environment in the neighbourhood does impose important effects on young people and they do recognise that.

- However, young people seem not being able to capitalize the benefits of the ''routine activities'' due to various reasons, and among them management of public space is a major one.
- In general, there is an inadequate government effort in trying to ***stimulate young people's interest in contributing to the debate of urban land use policy***, making most young children rather indifferent on a number of socio-economic land use issues.

Statistical results of multiple linear regression model

Variable	Coefficient	*t*-Statistic	*p*-Value	Statistical significance
APP	0.056119	2.378573	0.0180	**
BED	−1.376185	−2.162170	0.0313	**
GEN	1.178775	1.902583	0.0580	*
ULIB	0.644674	2.348091	0.0195	**
UCOM	0.930139	2.645868	0.0085	***
UYOU	0.885591	2.358455	0.0189	**
UPARK	0.528745	2.213219	0.0276	**
DISTURB	−0.683903	−2.782880	0.0057	***
AWARE	0.726584	2.018908	0.0443	**
BELONG	0.859102	2.420770	0.0160	**

*, ** and *** indicate significance at 90%, 95% and 99% confidence levels, respectively. Dependent variable: CE; method: least squares; sample: 364; included observations: 364.

Out of the total 37 independent variables, we find only 10 statistically significant ones

- APP – floor area occupied per person
- BED – number of people sharing a bedroom of which the respondent occupied
- GEN – number of generations in the accommodation
- **ULIB** – usage of library
- UCOM – usage of community centre
- UYOU – usage of youth centre
- **UPARK** – usage of park
- DISTURB – agree with too much traffic
- **AWARE** – have adequate awareness & knowledge of community
- **BELONG** – felt the community belonged to me

Major challenges

- We do have lots information on problems and needs
- We also have effective intervention programmes
- Major research-practice gap is in **public health or population approach** to many intervention programmes – parenting, family, school, community ….on problems like obesity, child abuse, poverty, developmental behavioural problems…. **proportional universalism + outcome accountability**
  - Linking research with policy, service organization and clinical practice
  - Linking public health, primary care with secondary/tertiary care
  - Linking health with other professionals
  - Linking child-family-school-community
  - Linking child-parents-friends-teachers-neighbours
  - Life cycle and transition
  - Geographical and risk factors targeted
- Medical →Health →Child leadership

Towards a public health approach to parenting programmes for parents of adolescents. J of public health 2012; 34:141-7

Stewart *et al. BMC Public Health* 2012, **12**:106
http://www.biomedcentral.com/1471-2458/12/106

BMC Public Health

CORRESPONDENCE Open Access

Developing community-based preventive interventions in Hong Kong: a description of the first phase of the Family Project

Sunita M Stewart[1], Cecilia S Fabrizio[2*], Malia R Hirschmann[2] and Tai Hing Lam[2]

Abstract

Background: This paper describes the development of culturally-appropriate family-based interventions and their relevant measures, to promote family health, happiness and harmony in Hong Kong. Programs were developed in the community, using a collaborative approach with community partners. The development process, challenges, and the lessons learned are described. This experience may be of interest to the scientific community as there is little information currently available about community-based development of brief interventions with local validity in cultures outside the West.

Methods: The academic-community collaborative team each brought strengths to the development process and determined the targets for intervention (parent-child relationships). Information from expert advisors and stakeholder discussion groups was collected and utilized to define the sources of stress in parent-child relationships.

Results: Themes emerged from the literature and discussion groups that guided the content of the intervention. Projects emphasized features that were appropriate for this cultural group and promoted potential for sustainability, so that the programs might eventually be implemented at a population-wide level. Challenges included ensuring local direction, relevance and acceptability for the intervention content, engaging participants and enhancing motivation to make behavior changes after a brief program, measurement of behavior changes, and developing an equal partner relationship between academic and community staff.

Conclusions: This work has public health significance because of the global importance of parent-child relationships as a risk-factor for many outcomes in adulthood, the need to develop interventions with strong evidence of effectiveness to populations outside the West, the potential application of our interventions to universal populations, and characteristics of the interventions that promote dissemination, including minimal additional costs for delivery by community agencies, and high acceptability to participants.

Resources and Capital

- **Increase access to resources and capital**, incl. human capital, psychological capital, and social capital (Zubrick, 2000)

Time
- Work Hours
- Time spent with families

Material Resources
- Household Income
- Financial sufficiency

Human & Cultural Capital
- Education level
- Parenting Style
- Cultural Knowledge, beliefs & traditions

Psychological Capital
- Satisfactions
- Stress
- Self-efficacy

Social Capital
- Trust, Social networks & supports
- Availability of services
- Social participations

Evolution of Human Being


THIS COMPANY SAYS THAT THEIR NEW BABY FORMULA WILL MAKE YOUR BABY SMARTER AND IMPROVE HER EYESIGHT, TOO.
REALLY?
Brainy Baby
DVD
2+2=4
The French Rejection 26
God of Cricket 40
TIME
ARE YOU
MOM ENOUGH?
BY KATE PICKERT
TIME
THE TRUTH ABOUT TIGER MOMS


PAULA JONES: WHAT HAPPENS NEXT
TIME
You called us slackers. You dismissed us as Generation X. Well, move over. We're not what you thought.
STOP
Following Me !!

Thank You