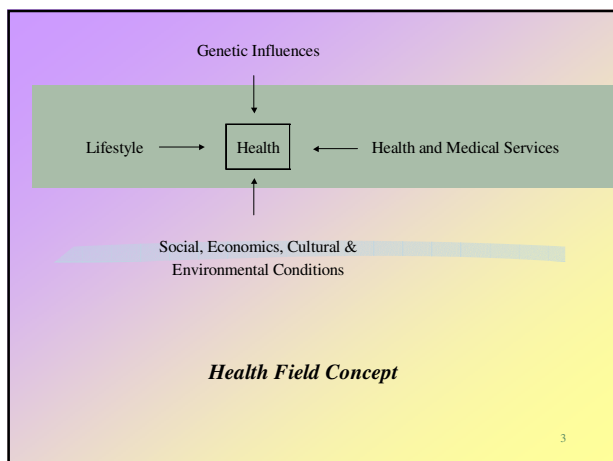## Slide 1

The Evaluation of Health Promotion

Professor Albert Lee MB BS(Lond) MPH MD(CUHK) FFPH(UK) FRACGP FHKAM(FamMed) FRCP(Irel

Director, Centre for Health Education and Health Promotion, Head of Professor & Family Medicine Unit, Department of Community and Family Medicine, The Chinese University of Hong Kong

Slide 2

Background

A *Health Education and Health Promotion Unit* was first established in 1998 to provide education, research and training in health education and promotion. Built on the successful accomplishment, the University approved to upgrade the Unit to become *a Centre in* 2000 to sustain, consolidate and further develop the *concept of setting approach to promote better population health*. In February 2002, *IUHPE* has designated the Centre to be the Sub-regional Office for the Pearl River Region (southern part of China, Hong Kong, Macau and Taiwan) and take the leading role in coordinating IUHPE activities in this area, and also regional co-ordinator for GPHPE.

2

Slide 3

```
              Genetic Influences
                     |
                     v
Lifestyle  -->   [ Health ]  <--  Health and Medical Services
                     ^
                     |
          Social, Economics, Cultural &
            Environmental Conditions
```

Health Field Concept

3

Slide 4

Health Promotion is the process of enabling people to exert control over the determinants of health and thereby improve their health.

4

Slide 5

Therefore health promotion is not something that is done on or to people, it is done ***with*** people. Participation and partnership are valued processes in health promotion.

5

Slide 6

Health must enter each system and find a place on organizations and institutions which created and structured for other purposes.

The setting approach projects are designed to:

- Introduce specific interventions to create working and living environments
- Develop health policies
- Integrate health into quality, audit and evaluation in establishing evidence based practice

6

1

Traditional epidemiological indicators such as measures of the incidence and prevalence should not be used solely to access the success or failure of health promotion interventions.

Epidemiological data would be very useful for justification for launching health promotion initiatives not for evaluation.

7

A WHO European Working Group on Health Promotion Evaluation identified four core features of approaches appropriate for the evaluation of health promotion initiatives:

1. the active participation of all key players;

2. the use of multiple methods;

8

A WHO European Working Group on Health Promotion Evaluation identified four core features of approaches appropriate for the evaluation of health promotion initiatives:

☐ evaluation should enhance the capacity of individuals, communities, organizations and governments to address health promotion concerns; and

☐ evaluations that accommodate the complex nature of health promotion interventions and their long term impact.

9

The Ottawa Charter for Health have provided considerable guidance on the range of actions and strategies which distinguish health promotion from other forms of health and medical intervention, it is more concerned with issues of equity such as healthy public policy, community involvement, access to appropriate services, and social well being.

Evidence that demonstrates positive change in these areas should also contribute to health promotion effectiveness.
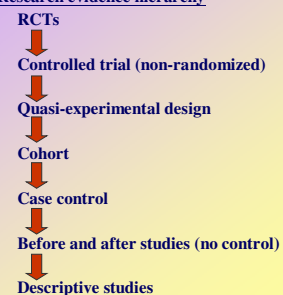
10

Bangkok Charter for Health

☐ Advocacy
☐ Invest in sustainable policies, actions and infrastructure to address the determinants of health
☐ Capacity building for policy development, leadership, health promotion practice, knowledge transfer and research, and health literacy
☐ Regulate and legislate
☐ Partner and build alliance with public, private, non-governmental and international organisations and civil society to create sustainable actions

11

Evaluation of Health Promotion and Health Education: What are our aims and is it applicable to use the orthodox Evidence Based Medicine model?

Research evidence hierarchy

RCTs

⬇

Controlled trial (non-randomized)

⬇

Quasi-experimental design

⬇

Cohort

⬇

Case control

⬇

Before and after studies (no control)

⬇

Descriptive studies

12

Evaluation of Health Promotion Programmes

Many researchers have questioned the appropriateness of experimental and quasi-experimental designs, essentially instinctive from the clinical field, when applied to health promotion interventions, and have highlighted their limitations within complex social settings such as schools.

13

Evidence-based practice

The randomized controlled trial is often not appropriate for health promotion interventions. This bias towards quantitative research has been identified as a problem for health promotion, where change is often subjective, long term and related to many factors.

14

Many commentators argue that health promotion needs to move towards a social science model of evaluation which acknowledges different 'stakeholders' who have different interests and viewpoints, and uses broader methodologies including more qualitative research.

15

The approach to advancement of knowledge of health promotion based only on findings from controlled research design has real dangers especially when it excludes other forms of evaluation not meeting experimental design criteria.

16

Evidence of success in health promotion may best be built on data which are derived from several different sources i.e., experimental studies, observational studies, using both quantitative and qualitative data

17

However, given the fact that health promotion is a complex activity where there may be disagreement about values and priorities, evaluation is also about identifying the values or criteria which will be used to determine success.

18

3

The classic scientific method of proof, the experiment, relies on controlling all factors apart from the one being studied. This can best be achieved under laboratory conditions. However, this is clearly impossible and unethical to achieve where people's health is concerned.

19

Triangulation using multiple methods is to improve confidence in research findings. Different types of triangulation can be used (Gifford, 1996), for example:
- Data source triangulation. This involves using different kinds of information to investigate a given research questions such as client records, minutes, documents and interviews.
-

20

- Researcher triangulation. This involves more than one researcher.
- Method of triangulation. This involves using a number of different methods, such as focus group discussions, individual interviews, participant observations.

21

• Type 1 error: refers to erroneous conclusion that an intervention ahs achieved significant change when, in fact, it has failed to do so.
• Type 2 error: refers to an erroneous conclusion that an intervention has failed to have a significant impact when in fact it has actually done so.
• Type 3 error: asserts that an intervention has failed to achieve successful results when it was poorly designed to have the desire effect.

• Type 4 error: evaluation is done for the sake of evaluation and the results are irrelevant to decision makers.
• Type 5 error: an intervention showing an effect with statistical significant but so slight to have any practical significance.

Challenges in Evaluating the Health Promoting School Initiative

☐ Complexity of multifaceted interventions
☐ Ethics of randomized trials
☐ Fiscal requirements
☐ Professional capabilities & responsibilities of school level staff

Source: Dr. Diane Allenworth
Evaluation of Health Promoting Schools. International Health Promoting School Workshop. Taiwan 15-17 December 2004

24

What Should Be Evaluated?

☐ Formative
☐ Process
☐ Impact
☐ Outcome

25

What Should Be Evaluated?

☐ Formative (Evaluating the design)
- Relationship of initiative to WHO directive?
- Ability of initiative to promote/achieve
  - Education goals (knowledge, skills, literacy)?
  - Adoption of healthy behaviors?
  - Improvements in health status?
- Is it comprehensive? Factual?
- Relationship of initiative to "best practices identified in research?

26

What Should Be Evaluated?

☐ Process (Evaluation of the implementation)
- Acceptability? User-friendliness? Attainability?
- Continuous improvement by all sectors/components of HPS?
  - Assessment using standard tool?
- Participation of a team using a program planning approach?
- Identification of barriers to initiative? Unplanned effects?
- Collaboration between education and health? School, community agencies & families?
- Degree of participation of students?

27

What Should Be Evaluated?

☐ Impact (Evaluating the immediate effect)
- Effectiveness of HPS to promote
  - Changes in health literacy/health knowledge/personal & social skills?
  - Adoption of healthy behaviors?
    - By students? staff? families?
  - Increase in academic achievement? Attendance?
  - Nurturing & supportive environment?

28

What Should Be Evaluated?

☐ Outcome (Evaluation of long-term goals)
- Ability of HPS to promote improvement in health status (Reduction in mortality, morbidity and disability)?
  - Students? School staff? Families?
- Ability of HPS to improvement of quality of life of community members? (Changed in social indicators)
  - Healthier environment?
  - Reducing hunger?
- Cost effectiveness?

29

It is important to distinguish the different types of outcome associated with health promotion activities. They can be broadly divided into four types; health and social outcomes, intermediate health outcomes, health promotion outcomes, and health promotion actions (Nutbeam, 1996).

30

Health and social outcomes

The health and social outcomes represent the end-point of health and medical interventions, and are usually expressed as health outcomes in terms of mortality, morbidity; disability and dysfunction; health status; and social outcomes such as quality of life, life satisfaction and equity.

31

Intermediate health outcomes

The intermediate heat outcomes represent the determinants of health and social outcomes such as healthy lifestyles (personal behaviours that protect or increase risk of ill health); healthy environments (the physical environment and economic and social conditions that can impact directly on health and support healthy lifestyle); and also effective health services.

32

Health Promotion Outcomes

Reflecting modification to those personal, social and environmental factors which are means to improving people's control and changing determinant of health i.e. intermediate health outcomes

33

Health Promotion Outcomes

□ Health literacy: cognitive and social skills which determine the motivation and ability of individuals to gain access to understand and use information in ways which promote and maintain good health.

34

Health Literacy

□ Knowledge
□ Self efficacy (self confidence)
□ Self-empowerment
□ Attitudes modification
□ Future orientation
□ participation

35

□ Social influence and action: improved social 'connectedness', improved community competency and empowerment
□ Healthy public policy and organisational practice: policy-determined legislation, funding, regulations and incentives significantly influence organisational practice.

36

6

Social moblisation

- Community competency & empowerment
- Social capital and connectedness
- Peer and community norms
- Public opinion and mandate

37

Healthy Public Policy

- Policy statement
- Legislation and regulation
- Organization procedures, rules and administration
- Management practice
- Funding and resources allocation

38

Health Promotion Actions

- Education – creation of opportunities for learning which are intended to improve personal health literacy.
- Facilitation – partnership to mobilise resources for health.
- Advocacy – action taken on behalf, individuals and/or communities to overcome structural barriers to the achievement of health.
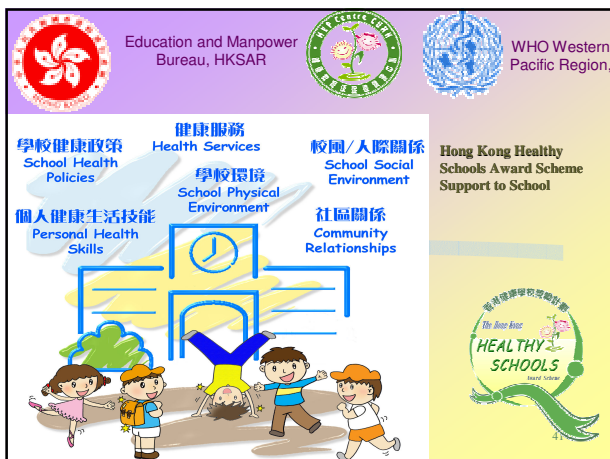
39

What are the indicators for success in Health Promoting Schools

- The school as an environment
- The formal and informal curricula
- The hidden curriculum and ethos of the school
- The links with families and other aspects or the community
- Health and social services

- Lee A., Cheng F., St Leger L (2005). Evaluating Health Promoting Schools in Hong Kong: The Development of a Framework. *Health Promotion International*, 20(2): 177-186.
- Lee A., Cheng F., Yuen SK., Ho M (2005a). *Effective of health promoting schools: Hong Kong experience.* 6th IUHPE European Conference on Health Promotion and Health Education on Effectiveness and Quality of Health Promotion, Stockholm, Sweden, June 1-4, 2005.
- Lee A., St Leger L., Moon A (2005). Evaluating Health Promotion in Schools: A case study of design, implementation and results from the Hong Kong Healthy Schools Award Scheme. *Promotion and Education*, Special issue on school health, In Press.

40

Education and Manpower Bureau, HKSAR

WHO Western Pacific Region,

學校健康政策 School Health Policies

健康服務 Health Services

校園／人際關係 School Social Environment

學校環境 School Physical Environment

個人健康生活技能 Personal Health Skills

社區關係 Community Relationships

Hong Kong Healthy Schools Award Scheme Support to School

HEALTHY SCHOOLS

41

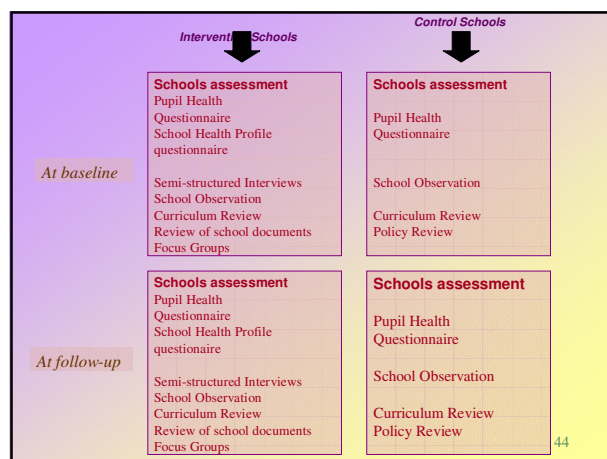*Expected outcomes* i) The students will increase awareness and knowledge of health issues, and equip with the skills necessary to practice healthy habits;

ii) The schools will make health a key consideration in school improvement plans, provide health education to ensure all students have the knowledge and skills to lead healthy lives and promote the concept of collaboration and welcome others to work together for the pupils;

42

iii) It will make the school site as safety and healthy environment for pleasurable learning and working;

iv) The schools will prevail quality ethos and be a good model for others;

v) The schools will promote community awareness of how to educate young people e.g. smoking, drug abuse in order to complement other health initiatives.

43

At baseline

Schools assessment
Pupil Health Questionnaire
School Health Profile questionnaire

Semi-structured Interviews
School Observation
Curriculum Review
Review of school documents
Focus Groups

Schools assessment
Pupil Health Questionnaire

School Observation

Curriculum Review
Policy Review

At follow-up

Schools assessment
Pupil Health Questionnaire
School Health Profile questionaire

Semi-structured Interviews
School Observation
Curriculum Review
Review of school documents
Focus Groups

Schools assessment
Pupil Health Questionnaire

School Observation

Curriculum Review
Policy Review

44

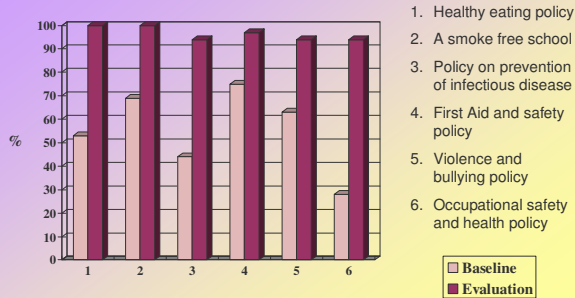| Types of outcomes	Indicators to be measured	Measuring instrument
Health and social outcomes	Depressive symptoms, life satisfaction, perceived health status, perceived academic achievement	Validated questionnaires: LIFE, DSRS, YRBS.
Intermediate outcomes	i. Attitudes, lifestyles and risk behaviours ii. School environment and school ethos iii. School health services	Questionnaires to students and schools, school observation, documentary review, interviews, ethnography.
Health Promotion Outcomes	i. Health skills and knowledge, and self efficacy ii. School health policies iii. Networking with parents, community and other schools to launch health programmes	Questionnaires to students and schools, curriculum review, documentary review, interviews, focus group, participant observation.
Health Promotion Action	i. School timetable for health education activities (formal and extra-curricular) ii. PTA and community involvement	Documentary review

45

School Improvement after implementing Health Promoting Schools

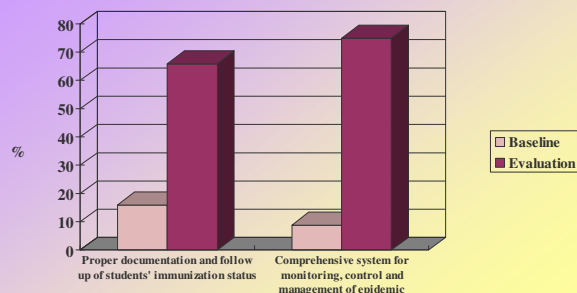Experience of The Hong Kong Healthy Schools Award Scheme

46

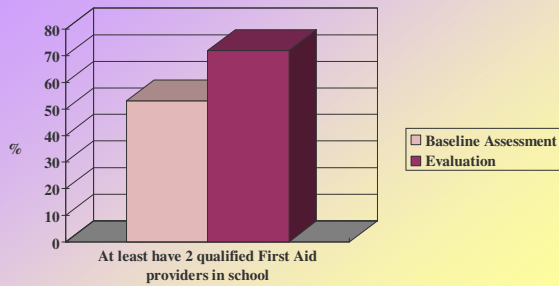## Implementation of Health Promoting School (n=32 schools)

1. Healthy eating policy
2. A smoke free school
3. Policy on prevention of infectious disease
4. First Aid and safety policy
5. Violence and bullying policy
6. Occupational safety and health policy

Baseline
Evaluation

47

Infectious Control and Prevention (n=32schools)

Proper documentation and follow up of students' immunization status

Comprehensive system for monitoring, control and management of epidemic

Baseline
Evaluation

48

8

Changes of Uses that Practice
First Aid Service at School
(n=32 schools)


```
80
70
60
50
%  40                    □ Baseline Assessment
30                    ■ Evaluation
20
10
 0
   At least have 2 qualified First Aid
         providers in school
```
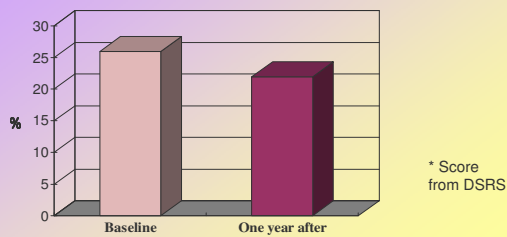
49

Improvement of Student Health Behaviour Observed after Implementation of Health Promoting School for 1 year
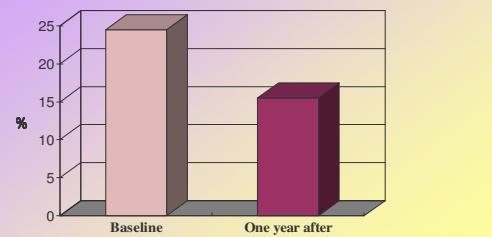
(12 Primary Schools)

50

Mental Health（Primary School）
Students With Symptoms of Depression*


```
30
25
20
%  15                         * Score
10                         from DSRS
 5
 0
   Baseline    One year after
```
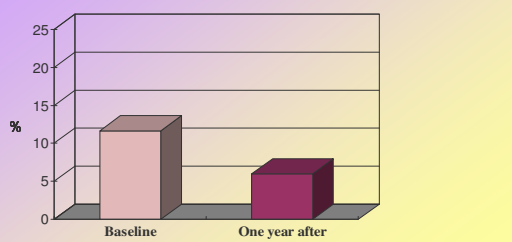
(*P-value = 0.022)

51

Mental Health（Primary School）
Students Feeling Sad and Hopeless


```
25
20
%  15
10
 5
 0
   Baseline    One year after
```

(*P-value = 0.010)

52

Mental Health（Primary School）
With Mild Self-Harm Behaviour


```
25
20
15
%  10
 5
 0
   Baseline    One year after
```
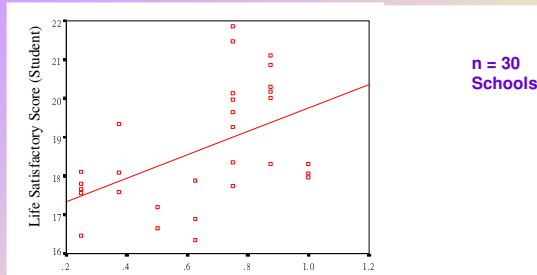
(*P-value = 0.049)

53

Association between Student Health Behaviour and School Ethos

54

9

Score and the school encourage students to involve in community activities and social services

Life Satisfactory Score (Student)

n = 30 Schools

Score for School encourage students to involve in community activities and social services
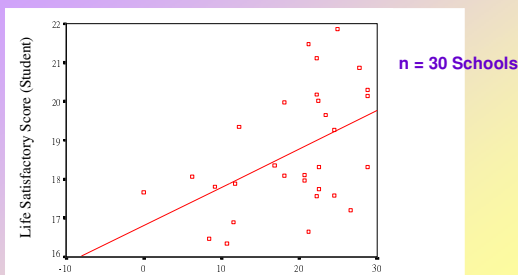
(*P-value = 0.005)

55

Relationship between Life Satisfaction Score and a caring and supportive school ethos

Life Satisfactory Score (Student)

n = 30 Schools
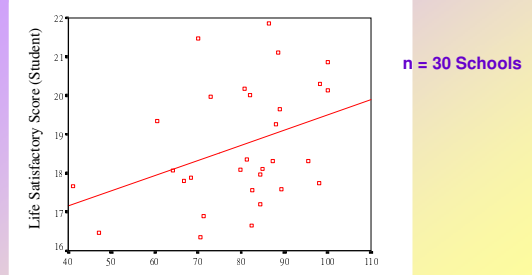
Scores for A caring and supportive school ethos

(*P-value = 0.046)

56

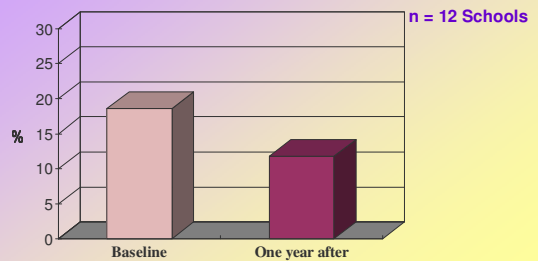**Score and establishment of an environment of value and mutual respect**

Life Satisfactory Score (Student)

n = 30 Schools

Score for Establishment of an environment of value and mutual respect

(*P-value = 0.008)

57

Eating Habit（Primary School）

Eating Chips and Crisps

（At least four times a week）

n = 12 Schools

%

Baseline   One year after

(*P-value = 0.005)

58

Eating Habit（Primary School）

Eating Chocolates and Candies

（At least four times a week）

n = 12 Schools

%

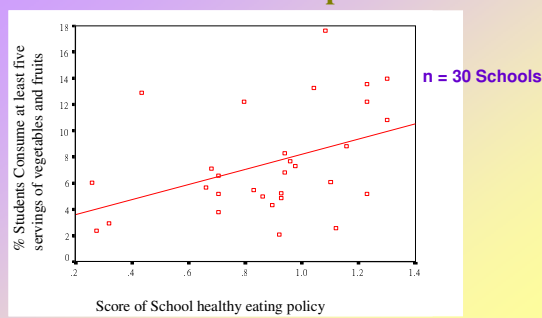Basline   One year after

(*P-value = 0.017)

59
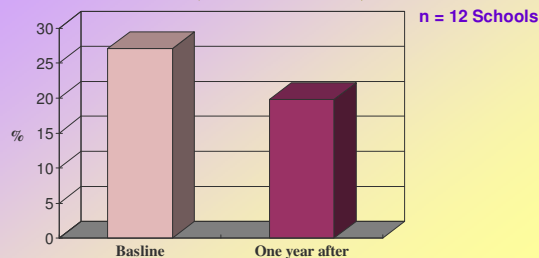
Association between Student Health Behaviour and School Health Policy

60

10

Slide 61

Healthy Eating Policy and the Vegetables and Fruits Consumption

n = 30 Schools

Y-axis: % Students Consume at least five servings of vegetables and fruits
X-axis: Score of School healthy eating policy

(*P-value = 0.023)
61

Slide 62

Relationship between School Healthy Eating Policy and Milk Consumption

n = 30 schools

Y-axis: % of Students Drinking at least two glasses of milk daily
X-axis: Score of School healthy eating policy

(*P-value = 0.029)
62

Slide 63
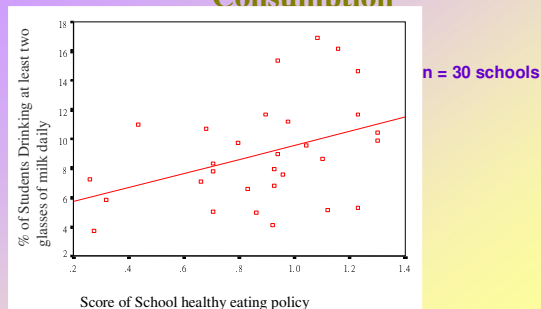
Principal's perspectives

☐ *"There was great improvement with satisfying results. It was because we were not only worked for the benefits of students but for all staffs and teachers at our school."*

Students' perspective

☐ *"I think that it is a kind of peer influence. The success and efforts in health promotion of our school did push students to behave appropriately. If we remain shy in front of others, it reflects poor self-esteem and self-confidence. This performance violated our healthy school image. Once we observe our peers performing confidently, it will also boost up confidence to perform accordingly. "*

63

Slide 64

Students' perspective

☐ *"I think that there is a significant change within this year. Our school is famous of good academic performance in the past. But substantial change was found in the last year. Only good examination result is not enough, we are demanding ourselves to have a good character and comprehensive development outside campus. "*

☐ *"After participated in healthy breakfast campaign of school, my parents have started to prepare healthy breakfast for me! I can enjoy healthy breakfast every day. "*
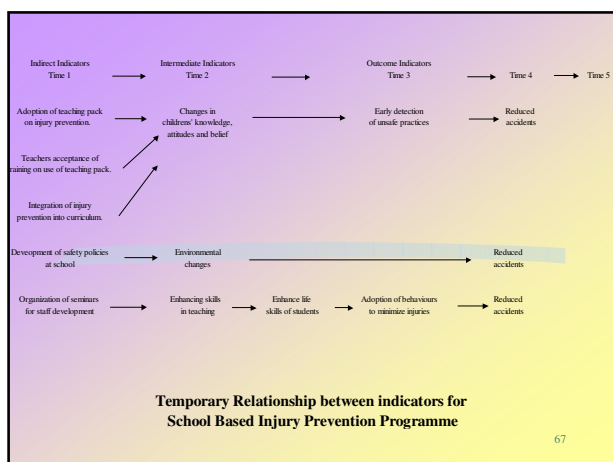
64

Slide 65

Teachers' perspectives

☐ *"Improved communications between staffs and frequent meetings were introduced by the new principal since two years ago when he had assumed this duty."*

☐ *"Even though those health promotion activities were not in big scale, they organized systematically. All procedures were clearly stated out. An evaluating mechanism was added in each activity."*

☐ *"It is rare for us to sit down like this and have chats because there are too many meetings to be held…it is hard to arrange any leisure talk for teachers like this. But I believe that teachers will welcome it if they have more time. "*

65

Slide 66

HPS supports schools in crisis management

☐ The framework of the HKHSA prepared the schools with:
  1. a structuralized crisis management system;
  2. proper documentation and follow up on students' sick leave record;
  3. policy on prevention of infectious disease;
  4. a supportive and harmonized school environment to encourage sharing and mutual support, etc.

☐ The crisis became an opportunity for the whole community, including the schools to overcome what seemed then like an insurmountable challenge.

☐ The different components of HPS can contribute to effective crisis management in school setting based on the details of guidelines of the HKHSA.

66

11

Temporary Relationship between indicators for School Based Injury Prevention Programme

67

Publication

Healthy Cities in Hong Kong
健康城市在香港

Tsuen Wan Healthy City: Youth Risk Behaviour Survey
荃灣健康城市：青少年健康行為調查

Tai Po Safe and Healthy City:
Tai Po Community Diagnosis Survey
大埔安全及健康城市：大埔社區診斷調查

Kwai Tsing Healthy City:
Kwai Tsing Community Diagnosis Survey
葵青健康城市：葵青社區診斷調查

70

ALLIANCE FOR HEALTHY CITIES CONFERENCE & INAUGURAL ASSEMBLY
October 2004, Kuching, Malaysia

The 18th IUHPE World Conference on Health Promotion and Health Education
第18屆國際健康促進及教育聯盟---國際性健康推廣及健康教育會議

Our Centre has been involved in

中心參與了：
4 Symposia 座談會
3 Oral presentations 口頭匯報
4 Oral poster and 口頭及海報發表
6 Poster presentations 海報發表

12

IUHPE has nominated the Centre to host the
20th World Conference on Health Promotion and Health Education 2010 in Hong Kong.

20th World Conference on Health Promotion and Health Education 2010 in Hong Kong, China

Strengthening the Community action, creating a Supportive Environment: Take the double challenges to promote better health and prevent emerging infectious diseases and new epidemics of chronic diseases

強化社區協作，創建支援健康環境：面對雙重挑戰，改善國民健康，預防傳染病爆發及慢性病傳播

The proposed themes of the Conference are:
會議主題包括：

◆ Strengthening partnership and setting approach in promoting health
◆強化跨界別合作及以場所推動健康發展

◆ Building systems and policies to tackle the primary determinants of health in combating communicable and infectious diseases by healthy setting approach
◆以發展健康場所方法，建立系統及政策處理對抗傳播性疾病及傳疾病的基本決定健康因素。

◆ To highlight the rights of citizens to live in a 'Healthy City', to work in 'Healthy Workplace' and having their children edcuated in 'Healthy Schools".
◆強調市民生活於「健康城市」裏的權益，於「健康工作間」工作，而子女於「健康學校」接受教育。

Satellite seminars and workshops for the conference will be organized by collaborating parties in local and neighboring cities.
會議的相關研討會及工作坊將由香港及鄰近城市的合作單位主辦。