Promoting Healthy Diet to Hostel Residents in University Via Integrated Learning Program with a Built-in Research for the Prevention of Non-Communicable Diseases (NCDs)

Knowledge Transfer Project—Cooking Mama Series

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MAKE A DIFFERENCE: IMPACTS OF SERVICE-LEARNING
9-11 June 2011
Who are we?

- APIAS 亞太老年學研究中心

Asia-Pacific Institute of Ageing Studies was established as a University wide Institute in 1998. We has two core businesses – research and courses. With both having the vision to create a harmonious society for all ages.
Knowledge Transfer (KT) refers to practically transferring knowledge to one part of the organization to another (or all other) part(s) of the organization. In our context, it will be professionals (i.e. professors, experts, practitioners) to students, students to community or vice versa (via the mean of service-learning or campus wide activities). And Knowledge Transfer Project in Lingnan University aims to promote community education.

- **KT slideshow**

  - Professionals
  - Students
  - Community
  - Lecture
  - Service Learning
  - Trainings
  - Campus Wide Activity
Knowledge Transfer in Lingnan

1. What knowledge do we transfer to the community?

   **Content of KT**
   1. Healthy Life
      Health Mind
   2. Body Positive

   **Approach of KT**
   1. Train-the-trainer Approach
   2. Built-in Research and follow-up Programs
   3. Intergenerational Platform

2. How do we transfer the knowledge to the community?
Content:
3 Main themes of Knowledge Transfer

Body Positive
- Nurturing positive attitude toward one’s own bodies and appearances, tapping physical, psycho-cultural side of health

Healthy Life Healthy Mind
- Fostering a healthy life and healthy mind of participants, tapping physical and psychological side of health

Young Old Partnership
- Reinforcing intergenerational solidarity through Young-Old partnership
3 Main themes of Knowledge Transfer

Body Positive
- Girls with thousand faces
- Love your Skin

Healthy Life! Healthy Mind!
Cooking Mama Series
- Health Frontiers in Tuen Mun

YO! (Young-Old) Partnership
- Dementia Talk
- Social Gerontology Mass Training
Healthy Life Healthy Mind – Why?

Post war Baby Bloom in 1950-1960s

Source: U.S. Census Bureau, International Data Base.
Healthy Life Healthy Mind – Why?

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Healthy Life Healthy Mind – Why?

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Healthy Life Healthy Mind – Why?

With an Aging population...
Healthy Life Healthy Mind – Why?

Dependency Ratio (Cont’d)
What is NCD?

- Why does Non-communicable disease (NCDs) matter?
  - The leading cause of death, increase premature death and create medical burden
  - Representing 35millions of global death in 2005, the figure projected to jump up to 57% in the next ten years

- Characteristics of NCDs
  - High morbidity and mortality rate
  - Require long-term care management
  - Not infectious, developed through the accumulation of risk factors

- NCDs in Hong Kong
  - Cancers and Heart disease remains as the top two killers from 2001-2011
  - NCD trend spreading from middle-aged people to younger generation
Healthy Life Healthy Mind – Why?

Exhibit 30: Proportionate death (as percentage of total registered deaths) of selected disease groups in years 1966, 1976, 1986, 1996 and 2006

Note: The percentage may not add up to 100% due to rounding.

(Trend of NCD)

(Sources: Census and Statistics Department; DH)
Increasing Trend of Non-Communicable Disease (NCD)

- Mr. John Tsang Chun-wah, age 60, Financial Secretary of HKSAR. He had a coronary artery blockage in 2009.

- Mr. Stephen Sui-lung Lam, age 56, Secretary for Constitutional Affairs of HKSAR. He underwent a percutaneous coronary intervention in early Apr 2011.

- Mrs. Rita Lau Ng Wai-lan, age 58, She just resigned from the post of Secretary for Commerce and Economic Development, following an operation to remove a colon tumour.
NCD – spreading to younger generation

Profile

Height: 110cm
Weight: 142.3 pounds
BMI: 53.3
(Standard BMI: 19)

Main reason for obesity: Unhealthy diet
小肥膏厚 無法量血壓
醫生：減肥達標估計要兩年
2011年05月17日

【本報訊】 「中國第一肥童」盧志豪（小肥），昨日接受本港兒科專科醫生臨床檢查。醫生初步相信他是「單純肥胖症」，與患病無關，過胖「元凶」來自「食過龍」，但結論仍待今日入院詳細檢查。醫生認爲嚴格控制食量是目前唯一可行辦法，目標是小肥體重減六成（39公斤），若每日減半公斤，估計仍要兩年，其間稍有鬆懈便前功盡廢。對於愛吃的小肥來說，絕對是「地獄式減肥」。記者：林熊 司徒韋桐 黃龏煇

後頭指腫髮有糖尿
余醫師指指小肥父母了解其病情，成長背景及飲食習慣等，得悉小肥8個月大便轉便乾燥，1歲改吃飲料，父母在8個月時發現他過胖，至1歳時便為他求醫。父母透露，小肥曾到過廣州中山醫院、珠海兒童醫院及三九醫院求醫，初診醫生發現他有輕度腎炎影響胰臟分泌，但及後已排除有分泌失衡，結論與余醫生判斷一致。

餘醫生指小肥後頭腫脹感，不不排除是腎臟病變，其尿蛋白長期陰性，汗水無法揮發引致真菌感染。當醫生要檢查小肥癡癡以確定是否有異常問題時，小肥頭部被吩咐舉起，但他實在太胖，醫生伸手在其雙腿之間把肉捲來捲去也找不到處理，最後還是要小肥睡下，但小肥無法躺在1米的病床，要其父及醫生合力抱上床，最後醫生證實其腎臟正常，轉而檢查他血壓時，卻因小肥後皮下脂肪太厚，診儀器也沒法測量數據，要今日入院再量。

完成檢查後，余醫生安排其臨床體驗，初步認為小肥是單純肥胖症，無關其他病患，而同齡小童體重的標準範圍不超過25.6公斤。余醫：糖尿病手術要滿10歲才能做，目前亦無任何減肥藥物對5歲童是安全的，故減肥食量是唯一辦法。

Source:
5%小四生不吃早餐易肥

【本報綜合報導】煎魚、罐頭午餐肉等加工製的方便食品，大多對身體無益。澳洲有研究發現，食一金、濁化，更可於半小時內減少血流量，增加風險。英國的專家建議，成年人每日不可貪食多於四罐頭食品少吃為妙。

網上近日流傳一張惡作劇減肥食單，聲稱由英國心臟基金會（British Heart Foundation）提供。食單包括香腸、雪糕等，每日三餐可減減十磅，而且百分百安全。估計萬千領取該食單飲食，其中有人頗感眼花。

專家警告食單欠缺重要營養，極不健康。

英國《每日郵報》報導，這份冒牌英國心臟基金會官方食單近日在數十個網站上廣泛流傳，列明早、午、晚三餐的飲食及分量，聲稱透過化學分解原理幫助減脂，保證三天減十磅，且百分百安全。

食單建議早餐吃一隻雞蛋、一片多士、一隻香蕉等；午餐只吃一杯豆士、五塊克力架餅乾，配以辣味或茶；晚餐包括兩條法蘭克福腸、半杯甘荀、一杯雪糕或雪條、半杯雪糕或雪條。根據標準，女性每日需攝取約二千卡路里，男性則為二千五百卡路里，但食單中的食物只提供千一百卡路里，遠低於正常標準，而且一杯的分量是多少，也沒列明。

九八年至二○○六年參與衛生署學生健康服務，多看電視和少做體能運動，另外，衛生署在查，訪問六千七百名家長，結果發現，逾八成小四至六成小五兒童，每天看電視四至六小時，約為衛生署建議的兩倍。

肥胖、糖尿病等健康問題外，英國一項研究，比對健康營養飲食的兒童和非健康營養飲食的兒童，發現增加一個標準差，八歲半時的智商便上升

三十三歲英女子弟馬莉按著食單進食減肥而暈倒：「這個減肥法真可怕，我都過數次，曾中途暈倒，也常頭暈頭痛。體重是減輕了，但之後無論吃得多健康，磅數還是回升。」
Healthy Life Healthy Mind – Why?

1. Quality of Life
2. Heavy burden of medical expenses

Ageing Population

Trend of NCD
A life-course Approach to NCD Prevention

### Exhibit 4: Relationship between common risk factors and major NCD

<table>
<thead>
<tr>
<th>Risk Factors</th>
<th>Behavioural</th>
<th>Biomedical</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease/condition</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Physical inactivity</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Unhealthy diet</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Alcohol misuse</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Excess weight</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Hypertension</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Adverse lipid profile</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><strong>Diseases of the circulatory system</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancer</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Chronic respiratory diseases</td>
<td>+</td>
<td>?</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Injuries and Poisoning</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Excess weight</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>High blood pressure</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Adverse lipid profile</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

**Keys:** + Established risk factor  ? Possible risk factor  # Association/Co-morbidity
A life-course Approach to NCD Prevention

More than 80% of NCD are preventable

Best way to prevent NCD => Develop healthy life at earlier stage
Healthy Life Healthy Mind – Why?

Maintaining Health from a life-course Perspective

Childhood

Adolescents

Middle Age

Old Age

Biomedical Risk factors

Accumulation of Behavioral Risk Factors, e.g. unhealthy diet

Decreased functional Ability

NCD
1. Quality of Life?
2. Heavy medical expenses?

Promote Healthy diet among hostel residents

Maintaining Health from a life-course Perspective
Our approach in Knowledge Transfer

1. Train-the-trainer approach
2. Built-in Research and follow-up programs
3. Intergenerational Platform

Professional

Community

KT ambassador

Train-the-trainer approach
1. Train-the-Trainer Approach

1st Tier Trainer
- Nutritionist
- Professors
- Researchers

2nd Tier Trainer
- Student Researchers
- Elderly

3rd Tier Trainer
- Hostel Residents
- Community

Academic/Professional Knowledge

University

Community

Knowledge Skills

- Trainings
- Consultations

- Research
- Cooking Mama Workshops
Our approach in Knowledge Transfer

1. Train-the-trainer approach
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Community
2. Built-in Research and Follow-up Program

A typical day living in hostel

Cooking Mama Health Workshops

Facts and Evidences

Targeted Health Knowledge and Health Programs

400 Questionnaires from 6 hostels and Canteen (residents and Non-residents data)
2. Built-in Research - Aims and Objectives

• Understanding hostel residents’ eating habit, knowledge and perception toward health and diet

• Based on the research finding, to provide more specific health knowledge to hostel residents

• Educating residents basic health knowledge through data collection
Targeted on hostel residents

- Maintaining health from a life course perspective

Hostel residents –
- Start to develop their own eating habit when living in hostels, which would affect their health in long term
- Limited cooking skills and cooking utensils in hostel
- A group of people who share similar eating habit
2. Built-in Research: A typical day living in hostel

Develop Research Framework and Questionnaire

1. Health knowledge and attitude
   - Do they know how to maintain a healthy diet?

2. Perceived ability to maintain Healthy Diet
   - What are the constraints of maintaining healthy diet?

3. Eating Habits
   - Are they having a healthy/unhealthy diet?

4. General Health Status
   - Are they healthy at this stage?
Sampling

- Cluster Sampling

<table>
<thead>
<tr>
<th>Residents</th>
<th>Hostel A</th>
<th>Hostel B</th>
<th>Hostel C</th>
<th>Hostel D</th>
<th>Hostel E</th>
<th>Hostel F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total:</td>
<td>254</td>
<td>41</td>
<td>58</td>
<td>41</td>
<td>52</td>
<td>40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-Residents</th>
<th>/</th>
<th>/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total:</td>
<td>149</td>
<td>/</td>
</tr>
</tbody>
</table>

Total: 403 Questionnaire
2. Built-in Research: A typical day living in hostel

Data Collection

1. Students fill in questionnaires
2. Measure General Health Status
3. Student Researchers explain to students their general health status
4. Students given a piece of fruit for their participation
2. Built-in Research: A typical day living in hostel

Findings and Analysis

1. Health knowledge and attitude

2. Perceived ability to maintain Healthy Diet

• Do they think Health is important?

3. Eating Habits

• Do they know how to maintain a healthy diet?

4. General Health Status
2. Built-in Research: A typical day living in hostel

Findings and Analysis

1. Health knowledge and attitude

2. Perceived ability to maintain Healthy Diet

3. Eating Habits

4. General Health Status

- 85.6% participants *Agree/Strongly Agree* that “Health is the most important thing in my life”

- ~40% or less than 40% of participants understand basic health knowledge
  i.e. food pyramid, dietary advice
2. Built-in Research: A typical day living in hostel
Findings and Analysis

1. Health knowledge and attitude

2. Perceived ability to maintain Healthy Diet

3. Eating Habits

4. General Health Status

- Do they think they are able to maintain healthy diet in hostels?
2. Built-in Research: A typical day living in hostel

Findings and Analysis

1. Health knowledge and attitude

2. Perceived ability to maintain Healthy Diet

3. Eating Habits

4. General Health Status

- **62.5%** participants Agree/Strongly Agree that “There are adequate healthy food choices at home”

- **12.1%** participants Agree/Strongly Agree that “There are adequate healthy food choices in hostel”
2. Built-in Research: A typical day living in hostel
Findings and Analysis

1. Health knowledge and attitude

2. Perceived ability to maintain Healthy Diet

3. Eating Habits

4. General Health Status

- 60.3% participants Agree/Strongly Agree that “I am able to cook healthily at home”
- 13.2% participants Agree/Strongly Agree that “I am able to cook healthily in hostel”
2. Built-in Research: A typical day living in hostel

Findings and Analysis

1. Health knowledge and attitude

2. Perceived ability to maintain Healthy Diet

3. Eating Habits

4. General Health Status

- What is their eating pattern?
- What is their eating proportion?
- What is their food choices?
- What is their consideration of choosing food?
2. Built-in Research: A typical day living in hostel
Findings and Analysis

1. Health knowledge and attitude

2. Perceived ability to maintain Healthy Diet

3. Eating Habits

4. General Health Status

• Eating Pattern: only 33% participants have meals with regular time and 36% have meals with regular quantity

• Food Choices: The most frequent food choice of residents is Processed food. The most frequent cooking method is Microwave cooking

• Considerations of choosing food: Taste> Price> Outlook> Convenience> Nutritional value
3. Eating Habits

Hostel residents’ eating habits – eating proportion:

<table>
<thead>
<tr>
<th>Questions</th>
<th>units</th>
<th>Students’ proportion (per day)</th>
<th>Healthy proportion (per day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grains and Cereals</td>
<td>bowls</td>
<td>2</td>
<td>3-6</td>
</tr>
<tr>
<td>Vegetables</td>
<td>Serving (1 - 1 1/3 bowl of cooked vegetables)</td>
<td>1</td>
<td>2-2.5</td>
</tr>
<tr>
<td>Fruits</td>
<td>portions</td>
<td>1</td>
<td>2-3</td>
</tr>
<tr>
<td>Milk and milk products</td>
<td>cups</td>
<td>1</td>
<td>1-2</td>
</tr>
<tr>
<td>Meat and protein</td>
<td>tael (1 tael meat's protein ≈ 1 egg)</td>
<td>2</td>
<td>5-6</td>
</tr>
<tr>
<td>Bean</td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
2. Built-in Research: A typical day living in hostel
Findings and Analysis

1. Health knowledge and attitude
2. Perceived ability to maintain Healthy Diet
3. Eating Habits
4. General Health Status

- Almost all students are able to maintain normal BMI, blood pressure and fat percentage at this stage
2. Built-in Research: A typical day living in hostel

Possible Actions

1. Enhance student’s basic health knowledge
2. Equip students to cook healthily in hostels
3. Provide more healthy choices for students
4. Encourage students to cook in hostels

1+2 = Cooking Mama Series!
2. Follow-up Program – Cooking Mama Workshops

- enhance students knowledge about health and NCD
- equip them with healthy cooking skills
2. Follow-up Program – Cooking Mama Workshops

<table>
<thead>
<tr>
<th>Part</th>
<th>Do you know?</th>
<th>Do you think?</th>
<th>Do you do?</th>
<th>Knowledge + Attitude = Behavior?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part 1</td>
<td>- Exploring student’s understanding about basic health knowledge</td>
<td>- Exploring student’s priority of health in their life</td>
<td>- Exploring student’s daily eating habit</td>
<td>- Students explains their difficulty in maintaining healthy eating habits in hostels</td>
</tr>
</tbody>
</table>
Part 1: Do you know..?

1. Exploring student’s understanding about basic health knowledge

2. Teach them basic health knowledge + food labels
Part 2: Do you think...?

- Exploring student’s priority of health in their life
Part 3: Do you do...?

- Exploring student’s daily eating habit

Breakfast  Lunch  Dinner
Part 4: Knowledge+ Attitude = Behavior?

- Students explains their difficulty in maintaining healthy eating habits in hostels
2. Follow-up Program – Cooking Mama Workshops

Healthy Cooking Skills – Cooking Demonstration

Healthy Recipe

stories about food

Easy Cooking tips

Intergenerational Platform
Our approach in Knowledge Transfer

1. Train-the-trainer approach
2. Built-in Research and follow-up programs
3. Intergenerational Platform

- KT ambassador
- Community
- Professional
3. Intergenerational Platform

- Enhancing intergenerational solidarity through intergenerational knowledge transfer

1. Enhance Intergenerational understanding
2. Promote mutual respect and learning between generations
3. Intergenerational Platform
3. Intergenerational Platform
Our approach in Knowledge Transfer

1. Train-the-trainer approach
2. Built-in Research and follow-up programs
3. Intergenerational Platform

- Consultations
- Trainings

Professional

KT ambassador

Cooking Mama Series

Community

Maintaining Health from a life-course perspective
Cooking Demonstration & Sharing Session
Thank you!

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