Title: Colorectal cancer prevention in Chinese immigrant women: an educational program

Tsorng-Yeh Lee, RN, PhD
## Faculty Disclosure

<table>
<thead>
<tr>
<th>Faculty name</th>
<th>Beryl F. Pilkington</th>
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<tbody>
<tr>
<td>Conflict of interest</td>
<td>None</td>
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<tr>
<td>Employer</td>
<td>Nursing, York University, Canada</td>
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<tr>
<td>Sponsorship</td>
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<tr>
<th>Faculty name</th>
<th>Grace Ho</th>
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<tr>
<td>Conflict of interest</td>
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<tr>
<td>Employer</td>
<td>South Riverdale Community Health Centre</td>
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<tr>
<td>Sponsorship</td>
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Goals and Objectives

- **Session goal:** Educate Female Cancer Patients to Promote Health

- **Session Objectives:**
  - (a) to let the participants know how to educate new immigrant women (NIW) about CRC screening services provided by the Canadian health care system;
  
  - (b) to learn how to advance NIW’s knowledge on CRC prevention strategies, focusing on food literacy, eating habits, and physical activity;
Introduction

• Colorectal cancer (CRC):
  - The 3rd most commonly diagnosed cancer in Canada
  - The 3rd leading cause of death from cancer in women in Canada.

• Risk factors:
  - family history
  - polyps in the colon and rectum
  - rare genetic conditions
  - physical inactivity
  - being overweight or obese
  - eating a diet high in red meat
  - eating processed meats, alcohol, diet low in fibre
  - cooking meat at high temperatures
Introduction

• Early prevention and detection are crucial in order to reduce mortality.

• Recommended CRC screening begins at age 50, but the incidence of CRC is reduced if diet and physical activity can be appropriately controlled.

• It is very important to educate the public regarding the relationships among healthy diet, physical activity, and CRC risk factors at an earlier age.
Introduction

• Data released by Statistics Canada indicate that nearly half (48.6%) of the GTA's population is born abroad.

• Immigrants faced many challenges and barriers: for example; the cultural differences and language barrier.

• Chinese is one of the fastest-growing immigrant groups in Canada. While mainstream resources (e.g. printed materials) exist, these typically fail to meet the cultural and linguistic needs of Chinese women.
Introduction

- Chinese women may not be aware of the Canada’s guidelines for healthy eating.

- Many of them may not meet the minimum recommendations for dietary intake or physical activity.

- Chinese tend to cook meat at high temperatures (such as well done, fried, broiled or barbequed) and preserve meat by smoking, curing, salting or adding preservatives such as nitrates or nitrites.
Introduction

• Eating such meats increases the risk of developing colorectal cancer, and the more people eat the higher risk they face.

• Furthermore, immigrants in Canada report lower cancer screening utilization compared with the general population.

• Chinese immigrants may not be aware of CRC screening opportunities provided by the healthcare system. Thus, many Chinese are at increased risk for CRC morbidity and mortality.
Introduction

• A US study reported that Asians have a 10–30% higher risk of being found with late stage CRC at time of diagnosis.

• Reasons for this disparity may include lack of knowledge, language barriers, limited access to healthcare, and cultural beliefs that do not promote screening.
Introduction

• It is critical to initiate a culturally appropriate and language friendly educational program in order to effectively serve the Chinese immigrants in GTA through provision of informational and psychosocial support.
Objective

• To examine the efficacy of an educational program for improving participants’ knowledge on healthy diet and CRC risk prevention over time.
Methods

• A pre-posttest design was used

• The program lasted 2 hours per week for six weeks and repeated two times within a year.
Methods

• Lessons offered in the educational program:
  • Week 1: Introduction to Ontario Healthcare System, Canada’s Food Guide and food safety strategies
  • Week 2: Unhealthy eating behaviours and CRC risk
  • Week 3: Exercise demonstrations
  • Week 4: CRC prevention and screening
  • Week 5: Cooking demonstrations
  • Week 6: Focus group discussion and course evaluation
Methods

• **Instruments:** Four instruments were used
  • Demographic data questionnaire
  • A food Safety Questionnaire
  • Feeling about Cancer and Cancer screening
  • The International Physical Activity Questionnaire (IPAQ) short form
Methods

• **Procedure:**
  Participants signed a consent form and filled out demographic data in week 1.

• The rest of the three instruments were administered in week 1, week 6 and two months after the program.

• **Analysis:**
  SPSS version 23.0 and Repeated measures ANOVA (RM-ANOVA) were used to analyze the data.
Results

• **Participants’ demographic characteristics**

  • The mean age of the 50 participants was $54.58 \pm 8.97$ (37-71).
  
  • The majority of them were permanent residents (58.8%) and married (66.7%) with **lower level of education** (72.6% less than high school).
  
  • Their family income was below $35,000 (84.3%).
  
  • Most of them were **unemployed** (80.4%).
  
  • Only few participants had family members with CRC (7.8%).
Results

• Food Safety Knowledge
  • Participants’ overall correct answer rate on the 20-item food safety knowledge questionnaire was:
    • 49.30% before the educational program (week 1),
    • 72.85% after the program (week 6), and
    • 74.30% two months after the program.
Results

- **Food Safety Knowledge**
- **RM-ANOVA** indicated that a significant difference existed among the three knowledge total scores.

### Repeated Measure ANOVA

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<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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<td>2</td>
<td>275.952</td>
<td>28.34</td>
<td>.000</td>
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<tr>
<td>Within Groups</td>
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<td>102</td>
<td>9.737</td>
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<td>Total</td>
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<td>104</td>
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Results

• **Food Safety Knowledge**
• Post-hoc tests indicated that:
• **A significant** difference existed between scores in week 1 and week 6 (t=4.71, p<.001)
• **A significant** difference existed between scores week 1 and two months after (t=5.00, p< .001).
• **No** significant difference existed between week 6 and two months after (t=.29, p=.93).

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<tr>
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<th>Week 1</th>
<th>Week 6</th>
<th>2 mons after</th>
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<tr>
<td>Week 1</td>
<td></td>
<td>Sig. diff.</td>
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<tr>
<td>Week 6</td>
<td></td>
<td></td>
<td>No sig. diff.</td>
</tr>
<tr>
<td>2 mons after</td>
<td>Sig. diff.</td>
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Results

• Food Safety Knowledge
• Post-hoc tests indicated that:

• These results showed that the educational program had an effect on improving participants’ food safety knowledge and this effect lasted two months after the program.
Results

• Feeling about Cancer and Cancer screening

• 42 questions
• Include five subscales:
• Behavioral Beliefs (Q1-11),
• Attitudes toward Behaviour (Q12-25),
• Control Beliefs (Q26-32),
• Perceived Behavioral Controls (Q33-38), and
• Behavioral Intentions (Q39-42).
Results

• Feeling about Cancer and Cancer screening

• RM-ANOVA revealed that no significant difference existed among the total scores and subscale scores at three different time periods.

• These results showed that the educational program had no effect on participants’ feeling about cancer and cancer screening
Results

• CRC screening services:

  • Have you ever done any colon cancer screening?
  • No: 63.3%; Yes, 24.5%, Not Sure: 12.2%

  • Has your provider talked to you about colon cancer screening?
  • No, 57.1%, Yes, 26.5%, Not sure 16.3%
## Results

- Physical activity

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<thead>
<tr>
<th></th>
<th>Week 1</th>
<th>Week 6</th>
<th>2-month after</th>
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<tbody>
<tr>
<td><strong>No exercise</strong></td>
<td>52.7%</td>
<td>43.6%</td>
<td>28.1%</td>
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<tr>
<td><strong>Strong exercise</strong></td>
<td>47.3%</td>
<td>56.4%</td>
<td>71.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
<td>100%</td>
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Results

- Physical activity

- Chi-square tests
- Significant differences existed in physical activity between week 1 and week 6 ($\chi^2=5.04$, $p<.05$)
- Significant differences existed in physical activity between week 1 and 2-month after the program ($\chi^2=9.77$, $p<.01$)
- No significant difference existed between week 6 and 2-month after ($\chi^2=2.60$, $p=.11$).
Results

- Physical activity
- Chi-square tests
- These results showed that the educational program had an effect on improving participants’ physical activity at the end of this program and also two months after the program.
Conclusion

• This project revealed that the educational program can improve participants’ food safety knowledge and physical activity.

• The effect of the educational program on participants’ Feeling about Cancer and Cancer screening needs further investigation.
Recommendation
References

References


Thank You!
Comments?
Questions?