

The Awareness and Utilization of Canada's Food Guide and the Changing Face of Canada: A comparison of native-born and immigrant adults in Ontario

CRDCN 2018 National Conference

October 18-19th, 2018

Hamilton, Ontario

< Session 3A: Food and food insecurity >

Eugena Kwon

Ph.D. Candidate

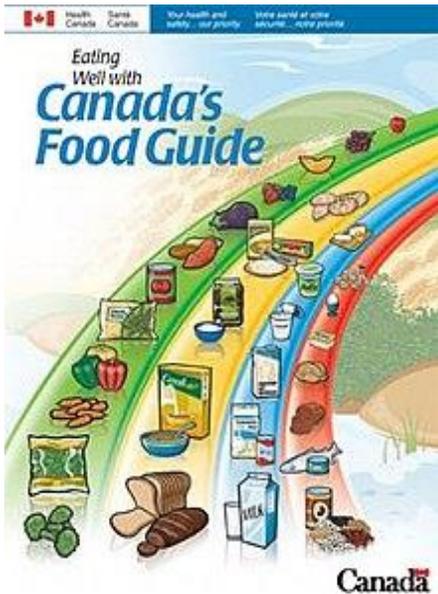
Department of Sociology

Western University

Growing Emphasis on Healthy Eating

- Every year in Canada, **more than two-thirds of the death** result from chronic diseases such as cardiovascular disease and type 2 diabetes (Public Health Agency of Canada, 2010)
- As **unhealthy food choice** has been long identified as one of the major risk factors for many chronic health conditions, emphasis has been placed on the implementation of various policy strategies to improve food literacy (Ezzati and Riboli, 2012; Garriguet, 2009; Hopper et al., 2012; Howard, Edge, and Munro, 2013)
 - **2010:** the Federal, Provincial and Territorial (FPT) Ministers of Health launched *the Integrated Pan-Canadian Healthy Living Strategy*
 - **2017-18:** *Health Canada's* department plan also identified that one of their key supporting initiatives is to reduce the risk of *nutrition-related chronic diseases* (Health Canada, 2016; Philpott, 2017)
- Among the various policy strategies to improve food literacy, disseminating healthy eating messages through **Canada's Food Guide** has been one of their **top priorities** (Garriguet, 2009; Health Canada, 2007, 2015; Howard, Edge, and Munro, 2013; Varghese and Moore-Orr, 2002)

What is Canada's Food Guide?



- Known as **an educational resource** designed to promote healthy eating among Canadians
- the aim is **to help Canadians to make informed food choices** that meet nutritional guidelines (Health Canada, 2015; Government of Canada, 2017)
- The currently used 2007 version provides *age and sex-specific dietary recommendations* for four food groups
 - including vegetable and fruit, grain products, milk and alternatives, and meat and alternatives (Health Canada 2007)
 - it also provides recommendations on choosing foods which are low in added fat, sugar or salt, as well as the recommended daily energy intake (Health Canada 2007)

Importance of Awareness and Utilization

- Research has found such guides to be helpful in changing eating habits (Garcia and Piche, 2001; Garcia et al., 2016)
 - A recent study also showed that **those who adhered greatest to the recommendations** from Canada's Food Guide **had the most optimal diet quality and a lower risk of obesity**, showing the effectiveness of Canada's Food Guide (Jessri, Ng, and Abbe, 2017)
- However, their effectiveness is only dependent on public awareness and utilization by its targeted audience
 - e.g. the Canada's Food Guide has to be known and be used by Canadians for it to be truly effective
- As such, there has been a growing research, and policy focus on awareness and utilization of Canada's Food Guide
 - **Awareness:** Whether individuals have seen or heard of Canada's Food Guide
 - **Utilization:** Among those who are aware of Canada's Food Guide, whether these individuals have used the information from the Canada's Food Guide

Consideration of the Changing Face of Canada

- **Canada** is a country with the highest proportion of immigrants among the G8 countries, with about 20% being foreign-born (Statistics Canada, 2016)
 - Moreover, number of immigrants in Canada will only continue to grow – as it is projected that *first- and second-generation immigrants could account for nearly one in two people by 2036* (Statistics Canada, 2017)
- Prior research has shown evidence that immigrants are more likely to adapt to unhealthy dietary patterns as they acculturate (see the review of Lesser et al., 2014; Sanou et al., 2014)
 - With increased consumption of fast food and convenience food
 - Such negative dietary acculturation has led to negative health outcome for immigrants, with increased risk for chronic health conditions
- However, current healthy eating strategies have yet to consider the changing face of Canada
 - little focus has yet been given on how immigrants are accessing and utilizing food literacy resources, more specifically **Canada's Food Guide**

Research Objectives

1. To examine awareness and utilization of Canada's Food Guide among Canadian adults in Ontario, comparing how immigrants (both recent and established immigrants) differ compared to their native-born counterparts

- **Quantitative Approach**
- **By drawing data from the Canadian Community Health Survey 2015**

2. To identify what specific challenges and barriers may exist for immigrants in accessing and utilizing Canada's Food Guide

- Qualitative Approach
- By drawing data from 45 in-depth, qualitative interviews with recent immigrants

Research Objectives

1. To examine awareness and utilization of Canada's Food Guide among Canadian adults in Ontario, comparing how immigrants (both recent and established immigrants) differ compared to their native-born counterparts

- Quantitative Approach
- By drawing data from the Canadian Community Health Survey 2015

2. To identify what specific challenges and barriers may exist for immigrants in accessing and utilizing Canada's Food Guide

- **Qualitative Approach**
- **By drawing data from 45 in-depth, qualitative interviews with recent immigrants**

Strength of integrating mixed-methods for conducting health policy research

- Numerous studies have begun to identify the strength of integrating mixed-methods for conducting **health policy research**, as it **combines the strength of both methodologies** (Ridde and de Sardan, 2015; Tariq and Woodman, 2010; Wisdom and Creswell, 2013)
- More specifically, the quantitative results provide **generalizable statistical evidence**, while qualitative results offer more rich data **to better understand the problem** and identify the potential solution (Parvez, 2013; Spillman, 2014)
 - As such, when used together, both methods complement each other and provide better insight to inform future policies
- The goal of this mixed-method study is **to inform future policies surrounding healthy eating** – by providing a more comprehensive insight into ways in which we can better improve food literacy among the increasingly cosmopolitan Canadian population

Quantitative Data: Data Source

- **Data Source:** Derived from the master file of the 2015 Canadian Community Health Survey (CCHS)
 - a nationally representative **cross-sectional survey** that collects information related to health status, health care utilization and health determinants for the Canadian population aged 12 and over (Statistics Canada, 2016)
 - The CCHS is frequently used by government agencies as well as non-profit organizations to monitor, plan, implement and evaluate programs to improve population health in Canada
- **only the 2015 cycle is used for this study:**
 - CCHS 2015 cannot be pooled with previous years of CCHS as there was a major redesign of the data (e.g. new sample frame) and content revisions (e.g. additional variables) for the 2015 cycle
 - Given all these factors, Statistics Canada advises that caution should be taken when comparing data from previous cycles to data released for the 2015 cycle onwards

Quantitative Data: The Study Population

- **The Study Population:**

- The CCHS excludes residents living on reserves, full-time members of the Canadian Forces, and the institutionalized
- For CCHS 2015, data on Canada's Food Guide was only collected in Ontario and Prince Edward Island
- Given this study's interest in immigrant populations, I restricted the final sample to adult residents in Ontario (19 years or older)
 - as Ontario is identified as the top destination in Canada for immigrants (Ministry of Citizenship and Immigration, 2017)

- **Strength: This is the first large population-based study (N=15,180)**

- The final weighted analytical sample size for this study is 15,180 (10,530 native-born Canadians, 3,620 established immigrants, and 1,030 recent immigrants)

Measures

- **DVs:** Two outcome variables related to Canada's Food Guide are used
 - **1) Awareness of CFG:** "Have you ever seen or heard of Canada's Food Guide?"
 - categorized dichotomously (0=yes; 1=no) to measure awareness
 - **2) Utilization of CFG:** collected among the respondents who responded "yes" to the first dependent question on the knowledge of Canada's Food Guide
 - also categorized dichotomously (0=yes; 1=no), asking whether the respondent ever used information from Canada's Food Guide
- **IV: Immigrant Status**
 - categorized as (1) Native-Born (ref), (2) Recent Immigrants, and (3) Established Immigrants
 - **Recent immigrants** refer to those who lived in Canada for 10 years or less, and **established immigrants** refer to those who have been in Canada for more than 10 years

Measures & Methods

- ***Other Control Variables.***

- age (ref=19-25); gender(ref=male); marital status (ref=married/common-law); highest level of education of the respondent and the household (ref=less than high school); total personal income (ref=less than \$30,000); total household income (ref=less than \$30,000); employment status (ref=employed); type of work (ref=waged-work); country of origin (ref=North America/Europe); language first learned at home in childhood (ref=official language); size of the region of residence (ref=rural area)

- **Analytical Strategy:**

- Descriptive Statistics
- Logistic regression Models

The qualitative data: In-depth, Semi-Structured Interviews with 45 Recent Immigrants

- **Objective:** To identify whether specific challenges and barriers may exist for immigrants in accessing and utilizing Canada's Food Guide
- **Sample:** Derived from 45 in-depth, semi-structured interviews with recent immigrants (including international students)
 - Restriction criteria: 18 years or older, and have arrived Canada within the last ten years
 - The data collection took place in one large-sized and one mid-sized city in Ontario, Toronto (N=30) and London (N=15), between January 2017 to February 2018
 - Research ethics approval was obtained by a university ethics board before the start of the research
- **Data Collection:** Non-randomized convenience sampling and snowball sampling methods were used
 - Participants were recruited through posters placed around immigrant settlement agencies, English classes, employment centres, university/college campuses, and various grocery stores.
 - Some participants were also recruited through referrals
 - Snowball sampling was only used when it was initiated by the participant

The qualitative data: In-depth, Semi-Structured Interviews with 45 Recent Immigrants

- **Using a preliminary interview guide:** Participants were asked to share their immigration experiences and their general lifestyles (e.g. dietary patterns and physical activity involvement)
 - **Semi-structured questions** were asked to probe for their immigration background, integration experiences, post-migration food choices, and how they are managing their general health and well-being in Canada
 - There were also **specific questions on Canada's Food Guide**, asking whether the participant had heard about Canada's Food Guide. Participants were also asked to share their general perceptions of Canada's Food Guide and whether they have experienced any specific challenges and barriers to accessing or utilizing the guide
- Transcribed and coded using the *QDA Miner Lite (Version 2.0)*
- In abiding by the ethical guidelines regarding confidentiality and privacy requirements, each participant has been given a pseudonym to ensure anonymity and confidentiality

Results from Canadian Community Health Survey 2015

***Comparison of the awareness and utilization of Canada's Food Guide
between immigrants and the native-born Canadians in Ontario***

Table 1: Weighted Descriptive Statistics, Canadian Community Health Survey, 2015

<u>Variables</u>	<u>Full Sample (N=15180)</u>	<u>Native-Born (N=10530)</u>	<u>Recent Immigrants (N=1030)</u>	<u>Acculturated Immigrants (N=3618)</u>
Awareness - Ever Seen or Heard of Canada's Food Guide				
Yes	85	92	55	74
No	15	8	45	26
Utilization - Ever Used Information from Canada's Food Guide				
Yes	58	59	51	55
No	43	41	49	45
Age (Mean)	45	43	36	54
Age (Categorical)				
19-25	20	25	23	6
26-34	15	16	28	10
35-49	23	21	37	25
50-64	24	24	8	31
65+	18	15	5	29
Gender				
Male	49	49	49	46
Female	51	51	51	54
Marital Status				
Married/Common-Law	56	52	61	64
Single/Never-Married	31	37	32	17
Divorced/Separated/Widowed	13	11	6	19
Highest level of education (Respondent)				
less than high school diploma	17	19	14	12
high school graduate	20	21	13	21
trade or college certificate/diploma, some university (no bachelor's)	33	35	22	33
bachelor's degree	19	17	30	23
degree higher than bachelor's	10	9	21	12
Highest level of education (Household)				
less than high school diploma	5	5	2	5
high school graduate	14	15	6	13
trade or college certificate/diploma, some university (no bachelor's)	38	41	22	33
bachelor's degree	27	25	38	29
degree higher than bachelor's	17	15	31	20
Total Income (Respondent)				
less than \$30,000	40	37	58	39
\$30,000-\$49,999	22	22	19	22
\$50,000-\$79,999	21	21	14	24
\$80,000-\$99,999	8	9	3	6
\$100,000 or more	10	10	6	9
Total Income (Household)				
less than \$30,000	15	13	23	14
\$30,000-\$49,999	16	15	23	18
\$50,000-\$79,999	23	22	21	26
\$80,000-\$99,999	11	11	12	13
\$100,000-\$149,999	18	20	15	17
\$150,000 or more	16	19	6	12
Employment Status				
Employed (Including Temporary and Part-Time Work)	63	63	63	63
Not Employed	37	37	37	37
Type of Work				
Paid-Employee	85	86	86	81
Self-Employed	15	14	14	19
Country of Birth				
North America/Europe	78	98	13	40
Asia	14	1	64	37
South, Central america/Caribbean/Africa	7	0	23	22
Language first learned at home in childhood and still understood				
Official Language (English, French, or Both)	68	88	13	29
Official Language (English, French, or Both) + Other	8	5	18	12
Other	24	7	69	60
Size of the Region of Residence				
Rural area (less than 1,000)	13	18	1	5
Small population centre (1,000 to 29,999)	9	11	1	4
Medium population centre (30,000 to 99,999)	8	10	2	4
Large urban population centre (100,000 or greater)	70	61	95	87

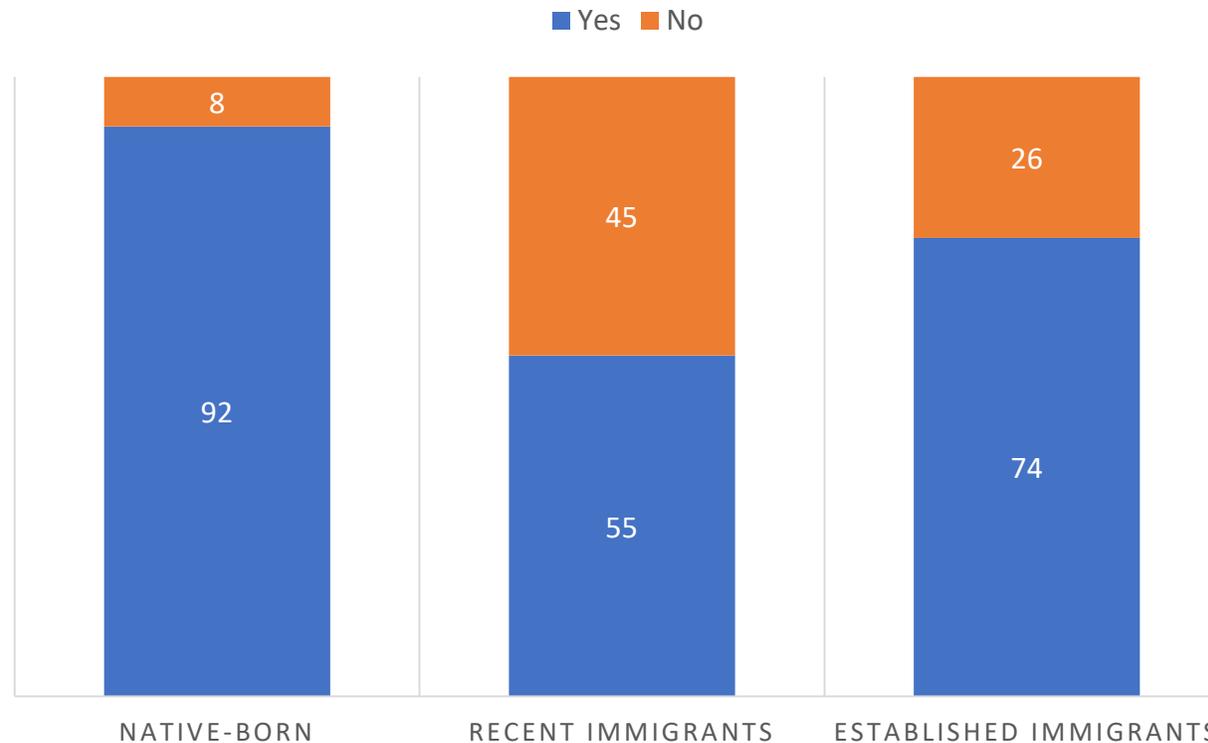
Note 1: Total percentage for certain variables does not add up to 100% due to rounding during the Statistics Canada vetting process.

Note 2: However, their exclusion do not systematically biases the results.

Source: Canadian Community Health Survey (CCHS), Master File, Statistics Canada, 2015.

Awareness of Canada's Food Guide

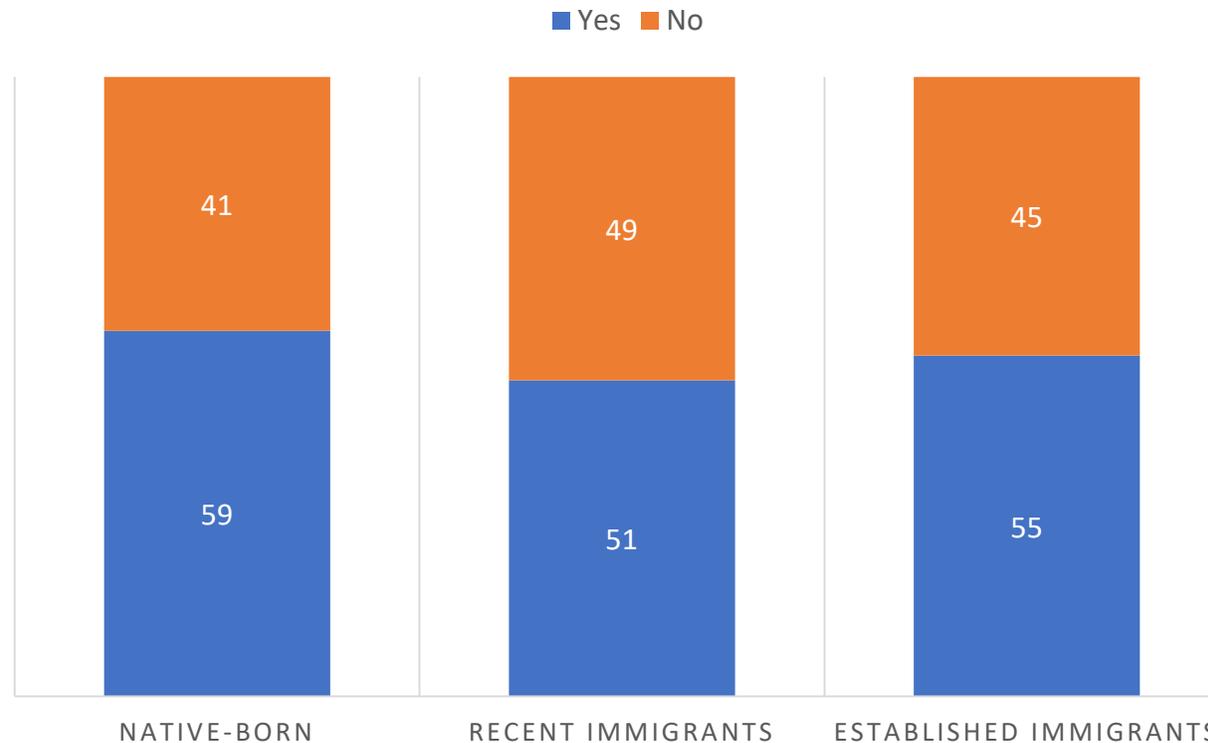
HAVE YOU EVER SEEN OR HEARD OF CANADA'S FOOD GUIDE?



Source: Canadian Community Health Survey 2015

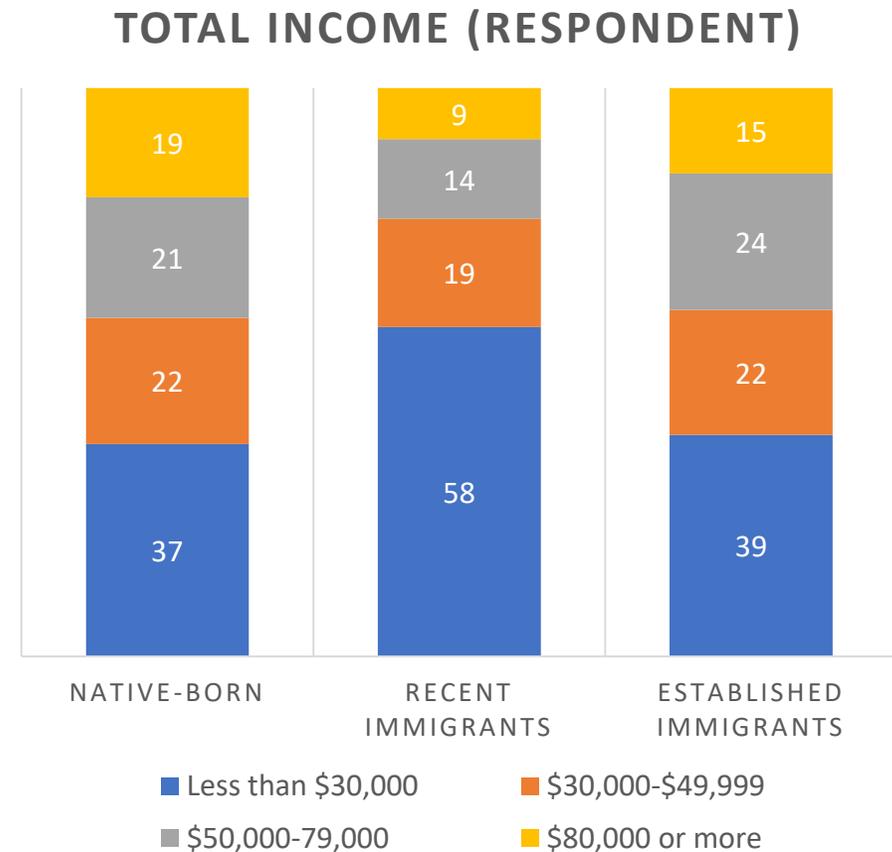
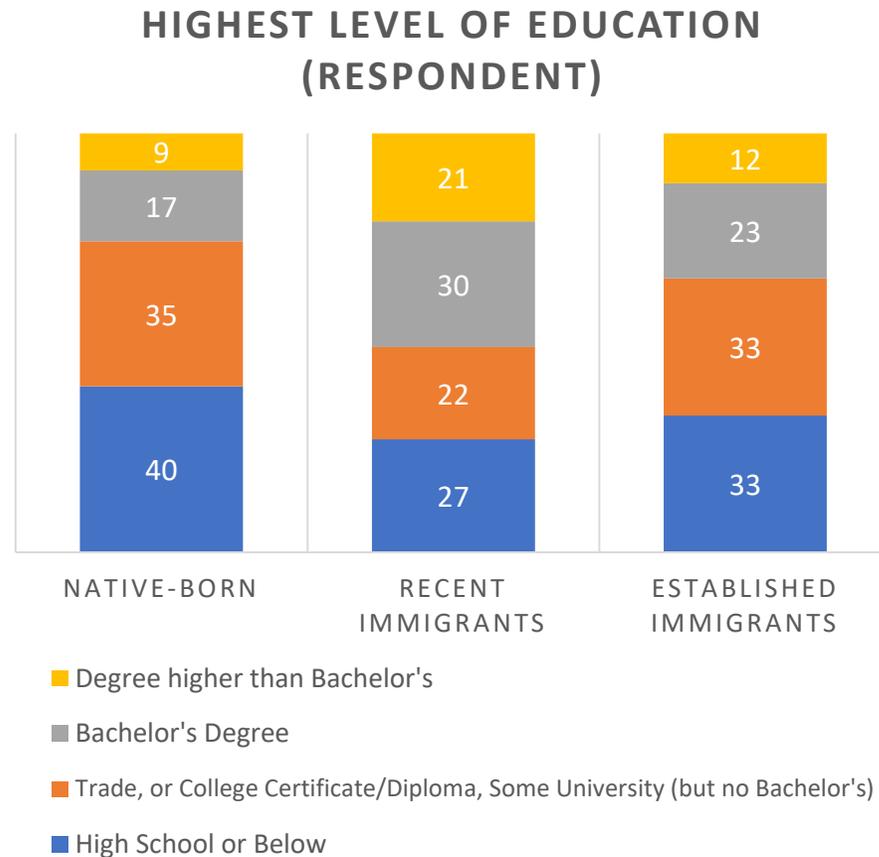
Utilization of Canada's Food Guide

HAVE YOU EVER USED INFORMATION FROM CANADA'S FOOD GUIDE?



Source: Canadian Community Health Survey 2015

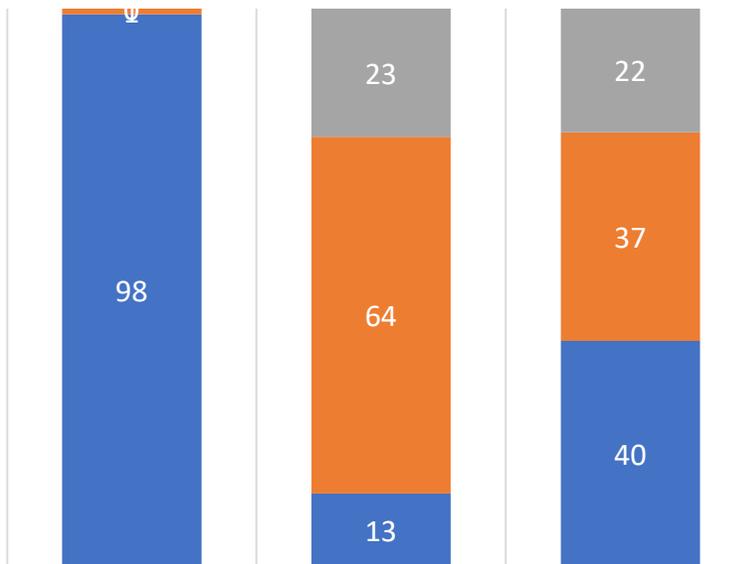
Selected Sample Characteristics for Canadian Adults in Ontario, by Immigrant Status



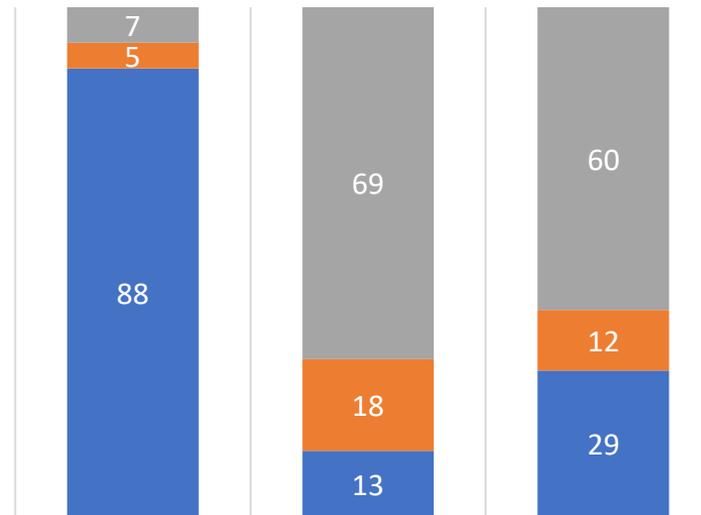
Source: Canadian Community Health Survey 2015
 Note: Some proportion does not add up to 100% due to rounding during the Statistics Canada vetting process; their exclusion do not systematically biases the results

Selected Sample Characteristics for Canadian Adults in Ontario, by Immigrant Status

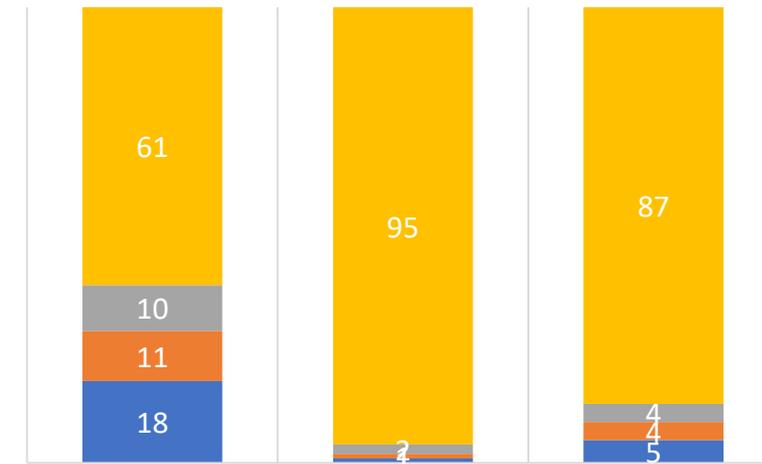
COUNTRY OF BIRTH



MOTHER TONGUE LANGUAGE



SIZE OF REGION OF RESIDENCE



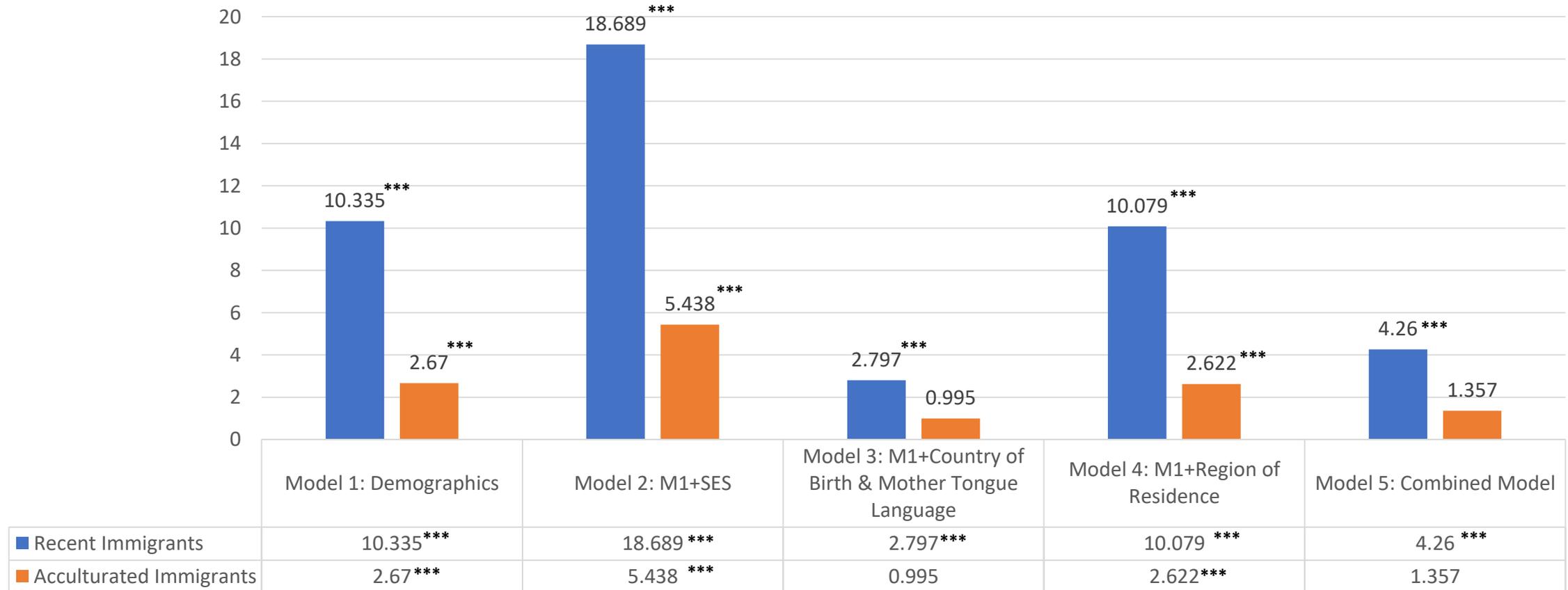
- South, Central America/Caribbean/Africa
- East and South Asia
- North America/Europe

- Other
- Official Language and Other
- Official Language Only

- Large Population Centre (100,000 or greater)
- Medium Population Centre (30,000 to 99,999)
- Small Population Centre (1,000 to 29,999)
- Rural Area (less than 1,000)

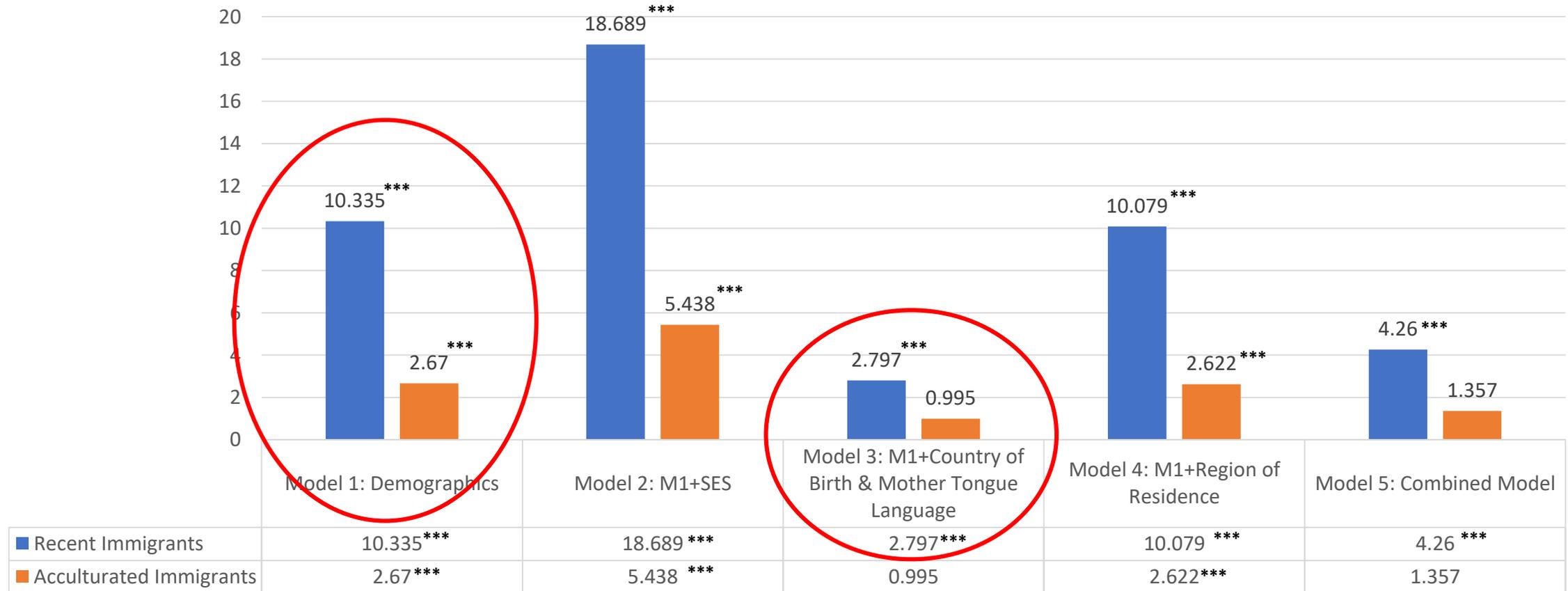
Source: Canadian Community Health Survey 2015
 Note: Some proportion does not add up to 100% due to rounding during the Statistics Canada vetting process; their exclusion do not systematically biases the results

Weighted Logistic regression model estimating the likelihood of being unaware of Canada's Food Guide (Ref = Native-Born)



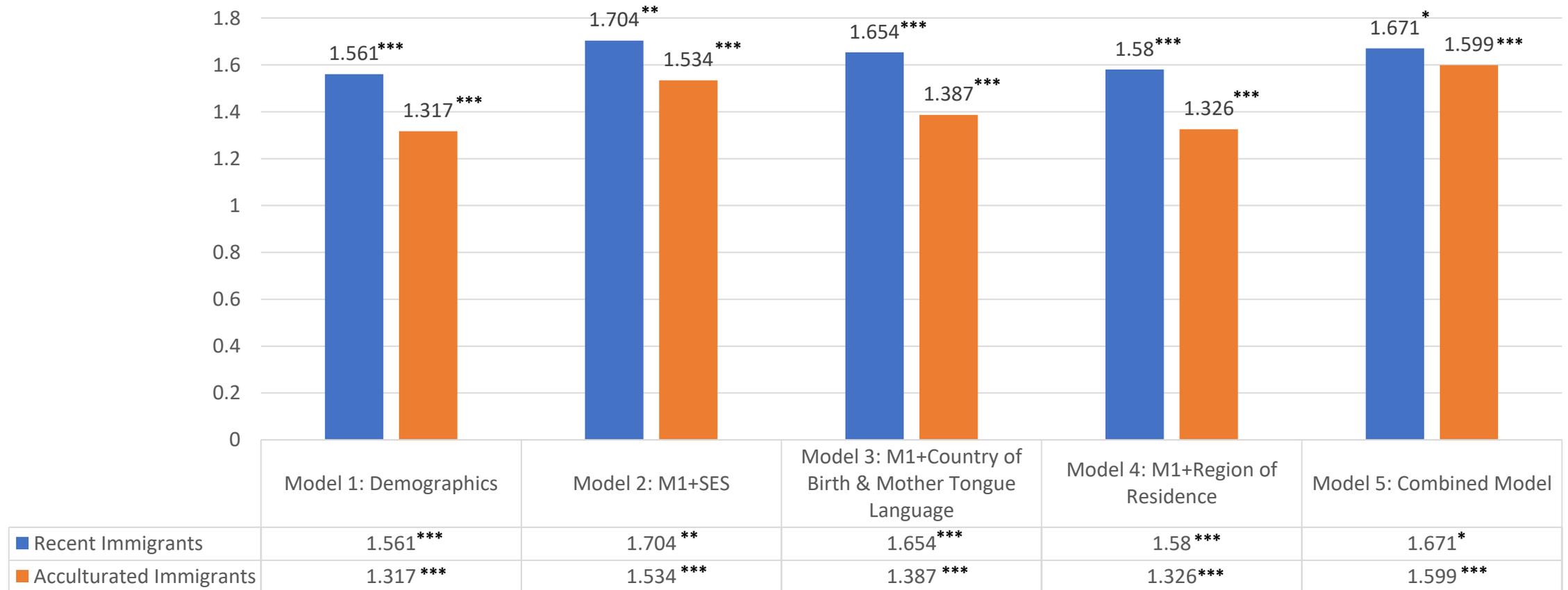
Source: Canadian Community Health Survey (CCHS), Master File, Statistics Canada, 2015.
 Note: *p<0.05, **p<0.01, ***p<0.001

Weighted Logistic regression model estimating the likelihood of being unaware of Canada's Food Guide (Ref = Native-Born)



Source: Canadian Community Health Survey (CCHS), Master File, Statistics Canada, 2015.
 Note: *p<0.05, **p<0.01, ***p<0.001

Weighted Logistic regression model estimating the likelihood of underutilizing (not using) Canada's Food Guide (Ref = Native-Born)



Source: Canadian Community Health Survey (CCHS), Master File, Statistics Canada, 2015.
Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Results from 45 Semi-Structured Interviews with Recent Immigrants

*Identifying the challenges and barriers which may exist for immigrants
in accessing and utilizing Canada's Food Guide*

Immigrants' Exposure to Canada's Food Guide: Ineffective of Dissemination

- The qualitative interview findings also revealed that the majority of the immigrants were unaware of Canada's Food Guide → 71% of the participants (32 out of 45) responded that they did not know
- Many of these participants were very eager to know more information about where and how they can access this resource
 - Out of 32 recent immigrants who responded that they do not know Canada's Food Guide, 75% of them (24 participants) responded that they feel that the food guide sounds like a helpful resource and were interested in knowing more about it

“Well, I don't know how they look like, but I am going to look it up today. You said that it's on the website too, right? I am curious how they take all the different types of food into account. **I would be interested to know about these... But I guess, I just didn't know that we had such a thing [Laugh].** I am actually very glad that you told me about it, because I don't know much about the way of eating here in Canada. Pakistanis eat really different. [Laugh]. **I want to know more about what's considered healthy or not healthy here.”**

–Aqeelah, Female, Mid-20s, Single, Financial Advisor (with Bachelor's degree), Pakistan

Immigrants' Exposure to Canada's Food Guide: Ineffective of Dissemination

- Participants also asked the interviewer about where they can access these resources on healthy eating, more specifically, Canada's Food Guide:

“Do a lot of people actually know about it? I don't think I heard about this from my colleagues or friends... Ever. **I lived in Canada for about nine years now. [Laugh]. Where do you get this info?** Like, I am surprised that my family doctor never told me about it. Well, I wonder if this is generally not well-known among other Canadians too? I did my Master's degree here, and have a good job right now. [...] **I don't think it is well-advertised if I didn't run into it during my nine years in Canada.** Well, like... I feel like this stuff should have been given out on my very first visit to my family doctor when I arrived... Or... Well, somewhere. It seems like it's essential info.”

–Wang, Male, Mid-30s, Married, Technician (with Master's degree), China

- Some participants questioned why they had not been directed to such resources anywhere, including places such as immigrant settlement agencies, English as Second Language (ESL) classes, and also from their family doctors.
 - A few also indicated that they feel that this is essential information that should be more widely disseminated for newcomers

Immigrants' Exposure to Canada's Food Guide: Role of the Educational Institutions

- Recent immigrants who knew about the Canada's Food Guide:
 - Total of 13 out of 45 participants (29%)
 - Overall, these participants were young, ranging from early-20s to mid-30s
 - Majority of the participants were exposed to the food guide as part of their school curriculum
- **Educational institutions** (e.g. primary and secondary schools) were the main venues where these immigrant participants were exposed to Canada's Food Guide
 - A few also acquired information on Canada's Food Guide at university, through an elective course on nutrition and during the orientation session for international students
 - In addition to the school curriculum, one participant responded that they were told about the guide from a work colleague, and another participant received the food guide from their family doctor

Recurring issue: Lack of Dissemination

- Among those who responded that they knew about Canada's Food Guide, only 30% of them knew about the existence of the translated versions of Canada's Food Guide which are offered in 10 different languages

“Oh, really? **I actually didn't know that they had one in Korean.** [...] I think it (the food guide) didn't really stick to her (my mother) because it was perhaps harder for her to read it...? **I find that these things are hard to follow even with a full understanding of English. Maybe, the Korean one will be more eye-catching for her as it is easier to read.**”

–Fei, Female, Early-20s, Single, Undergraduate Student, Hong Kong

- Again, such findings also indicate that these resources are not effectively disseminated and promoted among the immigrant population

Effectiveness of CFG for immigrant population: Source of new nutrition-related information

- To the participants who knew about Canada's Food Guide, they were asked whether they found the guide to be useful or not (e.g. used probes like "Have you tried using it? How often have you used the guide to make food choices?")
- Several participants found the guide to be very helpful in exposing them to new nutrition-related information that they did not know before, although CFG's lack of practicality was identified by the immigrants (e.g. not enough examples on how to apply the knowledge)
 - But younger participants did not see this as an issue, as they often acquired additional information from other sources such as the internet

"Oh... Like peanut butter? I was surprised to see them on the guide. I thought those were unhealthy... Because when I was a child, my mother didn't really let me eat them too often. [Laugh]. Well, we see more peanut butter now in my country – but when I was little, it was rare and was really expensive. **And there was this perception that this is like... Umm... Like, kind of a junk food? Like Nutella.** [Laugh]. Well, I remember that it used to be sold side-by-side with Nutella. [...] But yeah, **it was helpful... Like these things, I wouldn't have known before?"**

–Miyoun, Female, Mid-20s, Single, Bank Teller (with Bachelor's degree), South Korea

Concluding Discussions

- With such emphasis on healthy eating, Canada had spent **a budget of approximately \$37,337,000 between 2009 to 2015** towards the development, maintenance and implementation of **the Nutrition Policy and Promotion program**, which aimed to increase knowledge, understanding, and action on healthy eating among Canadians (Public Health Agency of Canada, 2010b; Health Canada and Public Health Agency of Canada, 2015)
 - Despite such efforts, this study suggests that the lack of awareness of the existing resources seem to be a significant problem among the immigrants in Canada
- **Issue to be considered: much of the governments' effort has been on revising the content of the food guide**
 - More effective dissemination strategies is needed for Canada's Food Guide → specifically tailored for the immigrant population

Policy Implications

- As Canada's population is becoming more diverse than ever, a one-size-fits-all approach may not work for effective dissemination of food literacy resources (e.g. Canada's Food Guide) to the immigrant population
- Implementation of a **multi-sectoral partnership** is needed:
 - More effective dissemination strategies are needed through the implementation of multi-sectoral partnerships *with immigrant organizations, such as the settlement agencies*
 - This will help to increase the awareness and utilization of Canada's Food Guide among the immigrant population, and more broadly also increase their exposure to food literacy resources in Canada

