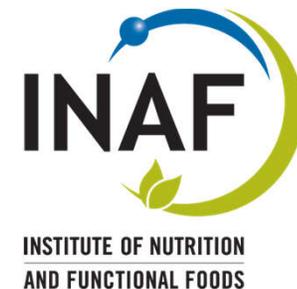


Practices and habits of Quebec Metropolitan Community's consumers toward locally produced foods: Development of a "locavore score"

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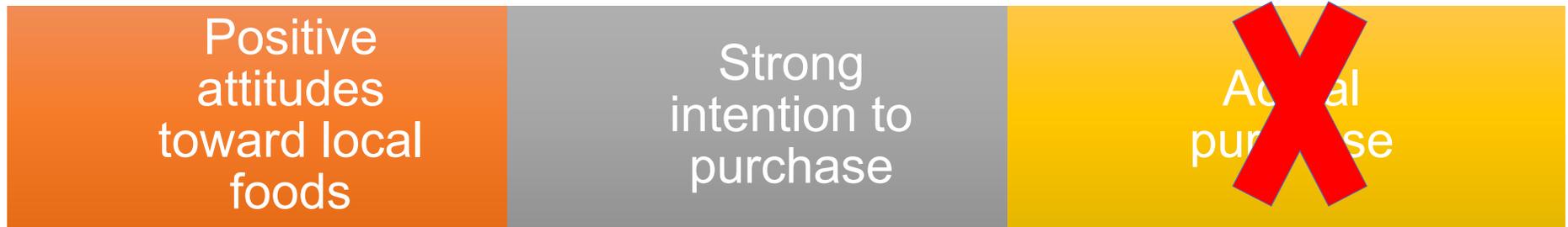
Introduction

- Various dimensions (distances, boundaries, relationships, ethics, etc.) → wide range of definitions for the term “local”;
- Different perceptions among consumers of what “local food” refers to;
- Array of motivations why consumers are seeking for local foods :
 - Freshness, taste, healthiness, trust, support of local economy and producers, environmental awareness, etc.

(Feldmann & Hamm, 2015; Granvik et al, 2017)

Introduction

An attitude-behavior gap :



(Feldmann & Hamm, 2015)

Objectives

Main objective of the study:

- Understanding practices, habits, attitudes and perceptions of consumers living in the Quebec Metropolitan Community (QMC) toward locally produced foods.

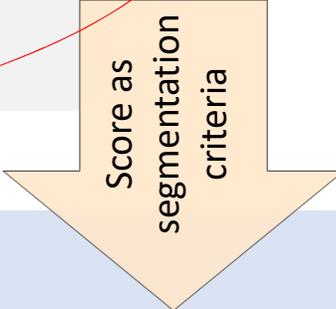
Specific objective (that will be address today) :

- Describe food purchasing and consumption habits among QMC consumers.

An Explanatory Sequential Mixed Methods Study

Phase 1 : Quantitative (survey)

1. Development of an assessment tool measuring food purchasing habits and practices (i.e., « Locavore Score »);
2. Completion of Web-based questionnaires by a sample of QMC's consumers, and reliability evaluation of the « Locavore Score ».



Score as
segmentation
criteria

Phase 2 : Qualitative (focus groups)

1. Development of a semi-structured interview guide;
2. Selection of a consumer sub-sample from phase 1 based on score;
3. Exploring consumers's attitudes and perceptions regarding consumption of locally produced foods.

Sampling & Data Collection: Web-based Questionnaires

1. *Food purchasing habits and practices questionnaire* exploring :

- Urban agriculture practices
- Purchasing habits
- Frequency of use of short food supply chains (SFSC) and other stores
- Geographical origin of food
- General questions about local food consumption

For the **last month** and **off-season** for **11 selected foods**

Regional Food Basket



Sampling & Data Collection: Web-based Questionnaires

General questions about local food consumption* :

- Annual frequency of purchase for local foods :
“During the year, to which approximate frequency do you procure local foods (produced or processed within 80 km of place or purchase)?”
(6 answers options from “I never buy local foods” to “once a week or more”)
- Main provisioning place for local foods :
“Generally, in which place do you procure most of your local foods?”
(e.g. supermarket, farmer’s market, my own garden/production)

** These questions were used to evaluate construct validity of the Locavore score.*

Sampling & Data Collection: Web-based Questionnaires

2. A sociodemographic questionnaire :

- Gender, age, education, occupation, postal code, household size, income, etc.

3. A photo-based food packaging assessment :

- Pictures of packages for all items of the Regional Food Basket that participants may have at home during the 14 days period of the study.



Sampling & Data Collection: Participants

- Inclusion criteria :
 - ≥ 18 years old
 - Live in the QMC
 - Primary responsibility for food purchasing within the household.
- Recruitment method :
 - Email lists, social media, network of project partners.
- Period :
 - From mid-July 2017 to mid-October 2017
 - Each participant : ± 14 days for completion of tools

Data analyses : Score development

The **Locavore Score** is a **weighted-average** score evaluating **two key components**, for each of the 11 items from the Food Basket:

- 1) The frequency of use of SFSC provisioning schemes;
 - 2) The geographical proximity (where food was farmed or processed).
- Points are attributed on an ordinal scale for each key item of the questionnaire.
 - Consumption habits (e.g. vegetarianism, preferences, allergies) were considered for each participant and foods that were not consumed were excluded from individual analysis.

Data analyses : Score development

Validity and reliability analyses

1. **Pre-test** : Participants (n=11) and members of the research team (n=7) were asked to complete the questionnaire and comment its structure and items understanding.
2. **Expert-panel evaluation** : Members of the research team and partners (n=9) were consulted to determine the score's composition.
3. **Construct validity**: Using Spearman correlations between participant's Locavore Scores and answers to general questions about local food consumption.
4. **Internal consistency**: Using Cronbach's α coefficients.

All analyses were performed with SAS University Edition

Results

Table 1. Socio-demographic profile of the QMC Consumer Sample (n=299)

Sex		Education Level (last completed)	
Men	44 (15%)	High-School	17 (6%)
Women	255 (85%)	College	85 (28%)
Age* (mean ± SD)	39.0 ± 15.3	University	197 (66%)
Occupation		Household Income (pre-tax)	
Student	81 (27%)	0\$- 23 999\$	52(17%)
Worker	171 (57%)	24 000\$-36 999\$	25 (8%)
Retired	38 (13%)	37 000\$-56 999\$	53 (18%)
Other/NS	9 (3%)	57 000\$-79 999\$	33 (11%)
Residence Area*		80 000\$ or more	118 (40%)
Quebec City	248 (86%)	NS	18 (6%)
Autre ville/MRC	40 (14%)		

Data are presented as n (%), unless otherwise specified.

*Missing data: Age (n=4) and residence area (n=11)

Table 2. Descriptive statistics (n=299) of the Locavore Score

Mean* (\pmSD)	2.91 (\pm 2.04)	Minimum - Maximum	0.20 - 9.57
Median	2.33	Range	0 to 24.7

Figure 1. Distribution (n=299) of the Locavore Score

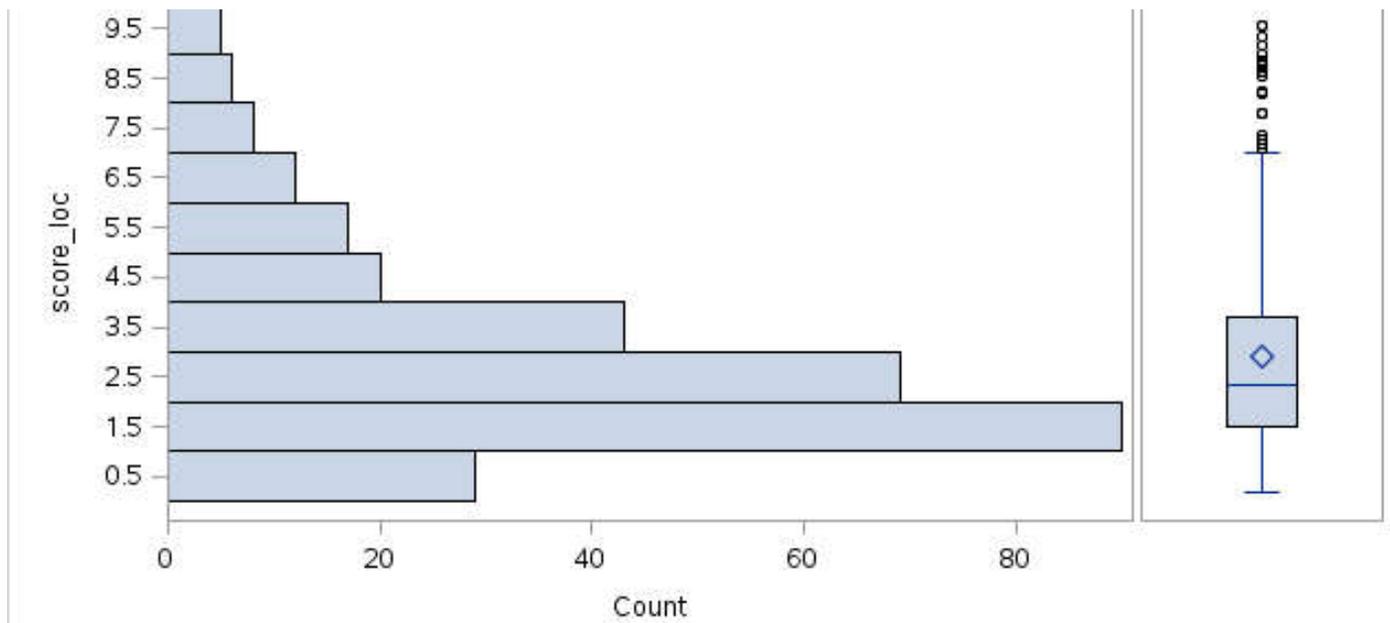


Table 3. Internal Consistency (n=299) of the Locavore Score

Sub-scores selected for evaluation	α Cronbach
All 11 food sub-scores (n=43)*	0.88
7 most completed sub-scores (n=189)*	0.83
	

*n= number of participants to have consumed foods corresponding to sub-scores.

Table 4. Construct Validity Measures for the Locavore Score (n=299)

Construct Validity Items*	<i>r</i>	<i>p</i>
Annual frequency of purchase for local foods	0.39	<i>p</i> <.0001
Main provisioning place for local foods	0.37	<i>p</i> <.0001

*Items were two general questions about local foods procurement habits.

Discussion

- Locavore Score's internal coherence appears to be adequate, with Cronbach $\alpha > 0.70$.
- Locavore Score's correlated with general questions about local food consumption, which support its construct validity :
 - Moderate correlations observed although suggest a potential gap between participants' overall behavior evaluation vs. actual reported behavior.
 - Questionnaire items evaluate a broad range of provisioning schemes for each food items, avoiding (mis)interpretation of the term "local".

Feldmann et al, 2015; Granvik et al, 2017; Wilkins, 2002; Adams et al, 2011; Campbell, 2011.

Strenghts and limitations

Strenghts :

- Size of quantitative sample (n=299)
- Multiple reliability analysis of Score
- Measurement method of local consumption behavior that avoids impact of interpretation of the term “local food”

Limitations :

- Non-probability sampling so generalizability is not possible
- Seasonality bias
- Recruitment bias

Conclusion

- To our knowledge, this is the first score to be developed to characterize consumers' SFSC use and place of origin of food consumed.
- Furthermore, this is the first mixed-methods study investigating commonly held beliefs toward local food consumption habits in this population.
- Integration of quantitative and qualitative data will contribute to address **the attitude-behavior gap** about consumption of local foods underlined in the literature.

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