

Validation of a questionnaire on the health literacy of minority francophones

1. Margareth S. Zanchetta, PhD, RN (Ryerson University, Faculty of Community Services - Daphne Cockwell School of Nursing; CRF - CSSS de la Montagne and Centre de recherche SHERPA, Équipe METISS)
2. Christine Maheu, PhD, RN (Ingram School of Nursing, Faculty of Medicine, McGill University)
3. Louise Racine, PhD, RN (University of Saskatchewan, College of Nursing)
4. Catherine Montgomery, PhD (Université du Québec à Montréal, department of social and public communication; director, Équipe METISS)
5. Margot Kaszap, PhD (Université Laval, faculty of education)
6. Jalila Jbilou, PhD, MD (Université de Moncton, school of psychology)
7. Samuel Giguère, BScN, RN (University Health Network)
8. Daidre-Ann Reece, BScN, RN (Ryerson University, Faculty of Community Services - Daphne Cockwell School of Nursing)
9. Yves Talbot, MD, (Mount Sinai Hospital)
10. Mohamed Mohamed, BScN, RN (Toronto Public Health)
11. Marlene Thélusma-Rémy, BA (Collège Boréal, Toronto)
12. Spyridoula Xenocostas, M.Sc. (CIUSSS du Centre-Ouest-de-l'île-de-Montréal, SHERPA, Institut universitaire au regard des communautés culturelles, Équipe METISS)
13. Henry Parada, PhD (Ryerson University, Faculty of Community Services - School of Social Work)

Background: Development of the original questionnaire

1. Premise: To build family health literacy, it is necessary to be able to identify the right source of information, get access to that information and use it safely.
2. Target: Mobilization of the social capital and cultural assets of minority francophones.
3. Objective: Capture the multidimensional experiences of minority francophones and understand the factors associated with their social capital and cultural assets.
4. Rationale: The mechanisms by which minority francophones respond to systemic barriers and exercise that mobilization in the area of healthcare are uncharted research territory.

Purpose of the study

- Collect data equally from men and from young and older women in order to check content validity and question readability.
- Measure various qualitative aspects of the questionnaire by including reading tests and tests to assess comprehension of questions and response choices.

Concept of health literacy

- Multidimensional knowledge constructed socially over one's entire life (Kaszap & Zanchetta, 2009)
- It encompasses various skills, including reading, writing, speaking and critical thinking, which are deeply influenced by language and culture (Howard, Sentell & Gazmararian, 2006)

Conceptual approach

- Social capital of minority francophones (Bouchard, Gilbert, Landry & Deveau, 2006; Bouchard, 2008; Bouchard, Gaboury, Chomienne, Gilbert & Dubois, 2009)
- The micro level: The individual and his/her relationships with community networks, which are adjusted by values and beliefs and by feelings toward the francophone community and cultural identity
- Variables associated with social engagement and underlying motivations, social practices, mental dispositions, the feeling of being in control of the conditions of life, the ability to adapt, health status, health habits and the development of trust and solidarity
- Self-determination of language behaviour in minority settings (Landry, Allard, Deveau & Bourgeois, 2005)
- Linguistic identity with a cultural asset, from a linguistic vitality standpoint. Ethnolinguistic identity tends to develop in a family context, while linguistic vitality develops in a public space context.
- Linguistic vitality expresses itself in various forms of collective capital: demographic, political, economic and cultural. Within the life experiences associated with socialization, autonomy and conscientization, it reaffirms linguistic identity, leading to the desire for integration.

Consequently...

- There is a connection between social capital, cultural assets and the health literacy experiences of minority francophones, including their determination to act and their mobilization.

Phases of the study

- The draft of the questionnaire through the selection of evidence based on a scan, full reading and critique of the transcripts of 21 interviews, with the selection of narrative data describing minority francophones' experiences of integration in the receiving communities in ON, SK and AB.
- Three central themes:
 - (a) Cultural asset: Strong attachment to healthy, natural food; valuing more traditional, natural methods of maintaining health and treating disease;
 - (b) Social capital: Little awareness of the existence of community resources in French; little use of community resources in French; English reading experiences in elementary school;
 - (c) Systemic barriers: Living in an anglophone hegemonic linguistic environment with limited access to interpreters; little health information in French on provincial websites; little interest in browsing the Internet for medical information; little or no access to francophone health professionals.

Themes relating to social capital and cultural assets

Social capital

- Acquisition of medications from country of origin
- Actions by the respondent, family members, friends or community members in the event of problems obtaining health services in French (buying traditional products from country of origin for treatment, calling a doctor in country of origin for medical advice, returning to country of origin for medical care)
- Individual and family actions in response to barriers to healthcare access
- Advantages of speaking French when obtaining health services and care
- Problems due to lack of fluency in English when obtaining healthcare services
- Reason(s) for going or not going to a francophone agency
- Use of medications from country of origin by the respondent or family members

Cultural assets

- Actions by the francophone community to obtain better social services and healthcare in French
- Awareness of francophone agencies in the community
- Potential facilitation factors through a website for the respondent and the community
- Better ways of making francophone agencies more useful to the community
- Attempts to understand medical information in French when meeting with a health professional
- Potential use of a provincial French-language website that provides a list of francophone agencies and health information
- Use of an interpreter in a healthcare institution
- Value of an interpreter in discussions with healthcare providers

Draft questionnaire

- Development of 21 questions
- Five francophones helped test this “cross-sectionality” in the meaning of the words used in the questionnaire
- Aim: To ensure that the reading level of the health content meets the health literacy standards of a Grade 3 to 5 (elementary school) reading level, so that poorly educated respondents can participate

Creation of qualitative and subjective evaluation forms

- Form 1 for experts from the francophone community who provided some socio-demographic data, such as city of residence, education, age, sex and level of French-English bilingualism
- Forms 2 and 3 for research professionals, after the individual or group session (depending on the preference of the natural experts): their observations on the reactions and behaviours of the natural experts during evaluation of the questionnaire, and their impressions regarding their interaction with the natural experts
- Form 4 for the natural experts to evaluate the questions in the questionnaire: they should check “yes” or “no” and provide their opinions or suggestions about each question, with the aim of identifying the components of the questionnaire that reflect the mobilization of social capital and the cultural assets of francophones

Preliminary tests to fine-tune the questionnaire by checking its semantic clarity and conceptual consistency

- Test of simplicity and readability, for the questionnaire as a whole
- Flesch's readability test (1948): measures reading difficulty based on the following formula, which can subsequently be categorized:
- $$\textit{Simplicity} = 206.835 - 1.015 \left(\textit{number of} \frac{\textit{words}}{\textit{sentences}} \right) - 86.4 \left(\textit{number of} \frac{\textit{syllables}}{\textit{words}} \right)$$

Chart for interpreting the results of the French-language Flesch test (Timbal-Duclaux, 1990)

Total score	Text style
0-20	Scholarly content
21-25	Standard
26-30	Fairly easy
31-35	General audience
35+	Very general audience

Applying the Flesch test to the questionnaire

- Overall, 20 questions (93%) fell into general or very general audience, fairly easy, or standard style categories
- Two questions were more difficult to understand because they were written in a more scholarly style, which might not have been detected if we had conducted a random test

Consultation with the natural experts from the target population, who made sure that the statements selected accurately reflected everyday reality and conveyed the pragmatic components of the concepts, or even its empirical indicators

- Content validity test and evaluation of comprehension
- 92 natural experts – Toronto, Sudbury and Edmonton sites

City	Sex	Age (range)	French-English bilingual	Years of education (range)	Other education information
Edmonton					
17 experts	Male n= 2	21-30= 2	Yes= 2	14-16	-
	Female n= 15	15-20= 3	Yes= 13	10-20	Fourth-year university (n= 1)
		21-30= 8	No= 2		
		31-40= 1			
		51-60= 1			
		71-80= 1			
		81-85= 1			
Sudbury	Male n=6	21-30= 3	Yes= 3	12-17	Third-year college (n= 1)
08 experts		31-40= 3	No= 2		
			Not stated= 1		
	Female n= 2	21-30= 2	Yes= 1	12-16	
			No= 1		
Toronto	Male n= 34	15-20= 4	Yes= 23	11-22	First-year university (n= 1)
67 experts		21-30= 12	No= 11		
		31-40= 10			
		41-50= 4			
		51-60= 1			
		Not stated= 2			
	Female n= 33	15-20= 6	Yes= 22	12-20	College n= 2
		21-30= 16	No= 11		Second-year college n= 1
		31-40= 8			First-year college n= 1
		41-50= 2			University n= 2
		51-60= 2			
		Not stated= 1			
Subtotal	Male= 42	21-30= 40%	Bilingual= 28 (66%)		
	Female= 50	21-30= 52%	Bilingual= 36 (72%)		

Question evaluated	Number of words	Number of syllables	Number of sentences	Readability index	Style category
Question #1	34	55	7	62.14	Very general audience
Question #2	73	141	5	25.13	Fairly easy
Question #3	86	139	6	52.60	Very general audience
Question #4	112	204	6	30.52	General audience
Question #5	98	170	6	40.38	Very general audience
Question #6	103	172	6	45.13	Very general audience
Question #7	103	177	6	40.94	Very general audience
Question #8	112	179	6	49.80	Very general audience
Question #9	91	150	6	49.02	Very general audience
Question #10	251	462	14	29.61	Fairly easy
Question #11	111	186	9	49.54	Very general audience
Question #12	67	149	16	10.44	Scholarly content
Question #13	56	86	6	64.68	Very general audience
Question #14	60	118	7	28.22	Fairly easy
Question #15	56	110	7	28.86	Fairly easy
Question #16	84	167	8	24.41	Standard
Question #17	95	187	11	28.00	Fairly easy
Question #18	27	41	4	68.78	Very general audience
Question #19	67	129	6	29.15	Fairly easy
Question #20	46	76	6	56.31	Very general audience
Question #21	78	151	6	14.03	Scholarly content
TOTAL	1810	3249	154	39.82	Very general audience

Dimension	Proportion of responses (%)
Clarity of questionnaire	
Lack of questions that cause doubts (Question 9)	94
Question sequence easy to follow (Question 2)	77
Lack of questions that are hard to understand (Question 1)	76
Lack of repeated questions (Question 7)	65
How easy the questions are to understand	
Keep the wording in the questionnaire (Question 3)	87
Keep the questions in the questionnaire (Question 4)	79
Lack of vague questions (Question 6)	83
Acceptance of the questionnaire	
Lack of embarrassing questions (Question 8)	95
Acceptable length of time to complete (Question 5)	79