Engaging immigrants in early psychosis treatment: a clinical challenge

ONLINE APPENDIX

Additional information about the methodology

Description of Early Intervention Services

The five-year programs offer individualized and intensive care for persons with first episode psychosis based on illness stage and severity. Their goal is functional and symptomatic remission. Following early psychosis guidelines, all participants receive level of care adapted to the severity of the illness and intensity of disability. Usually the first 3 months patients are seen 2 to 5 times a week at the clinic both individually and in group therapies. The intensity of care decreases gradually over the following 6 months to once a week to every 2 weeks. During the second year, the intensity of care varies between once per week to once per month. However, if there is a relapse, the intensity goes back to the active treatment phase intensity. The treatment plan is individualized and can include therapeutic groups up to four sessions per week (occupational therapy, psychoeducation, sport and concurrent substance abuse), individual meetings with a case manager and with a psychiatrist, family interventions, cognitive behavioural therapy and outreach interventions. Efforts are always made to engage patients with sporadic attendance. Different outreach methods are used: phone call, letter, home visits, family meeting, meeting with housing facilities, and community outreach.

Adherence assessment

Medication adherence was assessed by asking the question: "Is the participant adhering to his or her medication?" to the participants themselves, the case manager or the psychiatrist and by medical chart review (including information from the family or community pharmacist reports, laboratory results, etc.). Adherence was categorised as: good (90% to 100% adherence), partial (less than 90% but not 0%) or none. When there was a discrepancy from the different sources about medication adherence, the lower estimate was considered.

Attrition definition

The two-year follow-up status was categorized as: followed, lost to follow-up, transferred or deceased, to allow calculation of the attrition rate. To be considered "lost to follow-up," participants had to clearly express that they refused the follow-up or had to be unreachable for more than three months without indication that they would come back to the program. Patients traveling or with sporadic attendance but who intended to come back to the clinic were considered as "followed-up". Participants who were transferred to another clinic out of the study catchment areas before 24 months but who were still followed-up at 21 months were considered followed-up. Participants transferred before 21 months were considered as missing data.

To control for potential confounding, we tested three different outcome hypotheses for the transferred participants: 1) all were considered followed-up; 2) all were considered lost to follow-up; or 3) all were excluded. Differences in attrition rate between

immigrants and non-immigrants remained significant in all three analytical scenarios, indicating that our results were robust despite these transferred participants.

Country of origin

Each immigrant was assigned to a group based on his country of origin. For SGI, parental birth country was used. Regions were collapsed in clusters to regroup different categories in line with those of Statistics Canada's 2006 Census:[13] Canadian, American from the USA, European, African, Caribbean, Mexican, Central and South American, Middle Eastern and North African, Asian.

Mixed SGI (n=9) were included into the non-immigrants group, because they displayed a similar socio-demographic profile to the non-immigrants (e.g., mother-tongue French).

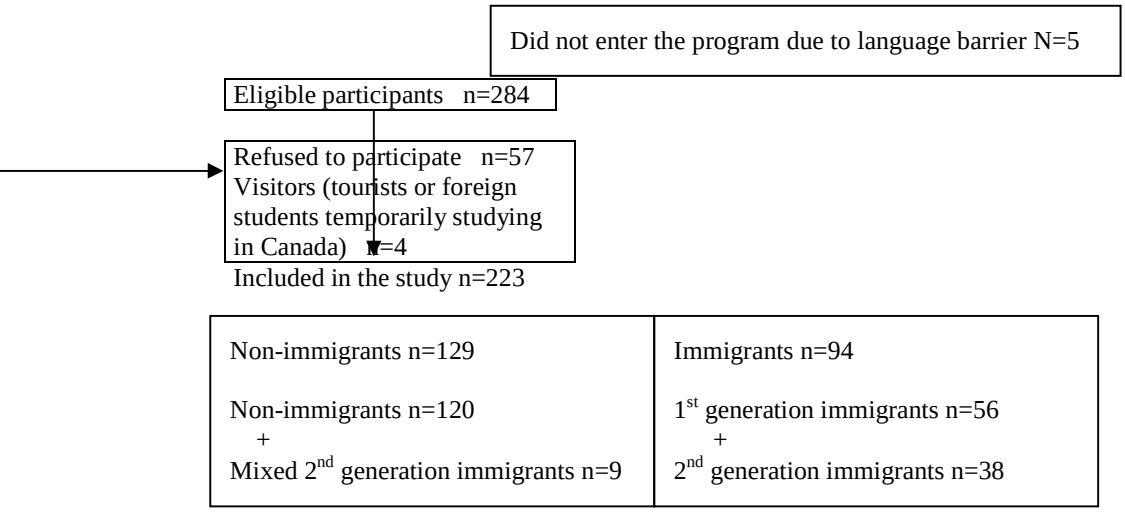

Fig. 1. Participants enrolment flowchart

Table 1 Country of origin of the 223 first episode psychosis participants

Country of origin*	N = 223
Canada (Caucasian)	129**
United Stated of America (Caucasian)	2
Europe	21
Africa	10
Caribbean	24
Mexico, Central and South America	14
Middle Eastern and North Africa	15
Asia	8

* For second-generation immigrant, country of birth of parents was used.

** 120 Caucasian-Canadians and 9 mixed origin (6 Canada-Europe, 1 Canada-USA, 2 Canada-Africa)

Table 2 Comparison of first episode psychosis non-immigrants v. immigrants' characteristics at admission

	Non-immigrants		First-generation immigrants		Second-generation immigrants		P value
	n=129	%	n=56	%	n=38	%	
Socio-demographic							
Age (M+/-SD)	22.9+/-0.31		23.3+/-0.47		22.7+/-0.57		.688
Male	106	82	39	70	35	92	.021
Single	113	88	47	84	34	87	0.638[F]
Years of education (M+/-SD)	11.1+/-0.26		11.0+/-0.26		10.9+/-0.47		.870
Mother tongue							< .001[F]
French/English	129	100	10	18	10	27	
Other	0	0	46	82	27	73	
Living with parents	56	45	28	55	28	74	.024
Homelessness history	25	20	8	15	1	3	.026[F]
Occupation (school or work)	55	43	25	45	14	37	.743
Legal problems history	39	31	13	25	10	26	.669
Diagnosis,**							.981[F]
Schizophrenia-spectrum	84	65	37	66	26	68	
Affective Psychosis	30	23	13	23	7	18	
Other Psychosis	15	12	6	11	5	13	
Substance use disorder	80	63	21	39	18	47	.008
Symptoms							
PANSS (M+/-SD)	74.5+/-1.45		78.4+/-2.23		73.3+/-2.61		.245
CDS (M+/-SD)	5.9 +/-0.36		6.1+/-0.56		5.3+/-0.65		.652
CGI (M+/-SD)	4.9 +/-0.08		5.0+/-0.12		4.7+/-0.15		.344
Functioning							
GAF (M+/-SD)	33.0+/-0.96		29.6+/-1.46		28.3+/-1.77		.030*
SOFAS (M+/-SD)	35.1+/-1.11		32.1+/-1.69		32.7+/-2.05		.256
QOL (M+/-SD)	47.3 +/-2.07		46.6+/-3.15		47.0+/-3.69		.982
Medication adherence at 3 months >90%	108	86	47	84	32	84	.836

*The statistical difference is between non-immigrants and second-generation immigrant.
** Schizophrenia-spectrum (schizophrenia, schizophreniform, schizo-affective), affective psychosis (bipolar disorder, psychotic depression), other psychosis disorder (brief psychosis, delusional disorder).
Abbreviation: s.d= Standard deviation. [F] Fisher exact test used due to small group.