

**BRIEF REPORT**

WILEY

# Sociodemographic, clinical and help-seeking characteristics of homeless young people with recent onset of psychosis enrolled in specialized early intervention services

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**Abstract**

**Aim:** To examine differences in demographic, clinical, social, functional and help-seeking characteristics of homeless vs housed individuals enrolled in specialized early intervention teams in the United States.

**Methods:** Participants comprised 1349 individuals enrolled across 21 teams. Teams report individual-level data including homelessness status at admission. Bivariate differences between homeless and housed participants were analysed using Wilcoxon-rank, chi-square, Fisher-exact and *t* tests, as appropriate.

**Results:** Approximately 5% of participants were homeless at admission. Homeless participants were less likely to be enrolled in school and/or employed (12.2% vs 43.4%); to have more involvement in the legal system (23.0% vs 6.2%); and to have had a more restrictive pathway to care, than housed participants.

**Conclusions:** Homeless young people with recent-onset psychosis have a substantially greater need for a diversity of services for psychosocial needs. Homeless individuals may also have a more adverse pathway to care and directed outreach to engage this population may be needed.

**1 | INTRODUCTION**

Approximately 20% of individuals diagnosed with schizophrenia may experience homelessness in a given year (Folsom et al., 2005) but little is known about the prevalence of, risk factors for and outcomes related to homelessness for young people who are experiencing their first episodes of psychosis (FEP). A few early intervention services (EIS) studies have reported 5%-26% of participants are homeless at admission and/or during the first 2 years of EIS (Doré-Gauthier, Côté, Jutras-Aswad, Ouellet-Plamondon, & Abdel-Baki, 2019a). One epidemiological study of FEP reported that 15% of participants had experienced at least one episode of homelessness before or within 24 months of their first hospitalization (Herman, Susser, Jandorf, Lavelle, & Bromet, 1998). Research on EIS for young people experiencing FEP have shown improved outcomes while engaged

with EIS, particularly for those who access EIS soon after onset of symptoms (Correll et al., 2018; Nossel et al., 2018). However, initial findings from Canada indicate homeless youth with FEP who access EIS have different social and clinical characteristics (notably addiction) and worse treatment outcomes than their housed counterparts (Doré-Gauthier, Miron, Jutras-Aswad, Ouellet-Plamondon, & Abdel-Baki, 2019b; Lévesque & Abdel-Baki, 2020).

The primary aims of this exploratory study are to describe sociodemographic, clinical, social, functional and help-seeking characteristics of homeless young people enrolled in OnTrackNY, a type of team-based EIS, and to examine how they may differ from their housed counterparts, at admission. Over 20 OnTrackNY teams provide multidisciplinary, evidence-based psychosocial interventions and medication throughout New York State in urban and nonurban areas.<sup>1</sup>

## 2 | METHODS

### 2.1 | Participants

The sample was comprised of 1349 individuals who were enrolled at one of 21 OnTrackNY programs between 2013 and 2019. Eligibility criteria include age 16 to 30, diagnosis of nonaffective psychosis, onset of psychosis  $\leq 2$  years and New York State resident.

### 2.2 | Measures

OnTrackNY clinicians collected individual-level data at admission, using standardized forms, from participants, families and other collateral contacts.

Clinicians reported homelessness status (yes/no) but were not provided a definition of homelessness.

Sociodemographic characteristics included age, gender, race and ethnicity, sexual orientation, health insurance, income/disability benefits, involvement with legal system and family related variables (contact with, fiscal support, preference regarding involvement).

Clinical characteristics included age of onset of psychosis; and whether prescribed antipsychotic, substance use and suicidal or violent ideation and/or attempt, in the 90 days prior to admission. Licensed OnTrackNY clinicians who were trained on differential diagnosis provided DSM-5 diagnoses. Functional characteristics included school and/or employment at admission; and the MIRECC Global Assessment of Functioning (Niv, Cohen, Sullivan, & Young, 2007) occupational, social and symptom scales in the month prior to admission.

Clinicians were trained to conduct clinical interviews using a timeline approach to determine date of onset of psychosis and of first mental health contact. Three measures of time (in days) of different facets of duration of untreated psychosis (DUP) were collected: (a) time from onset of psychosis to enrolment in OnTrackNY; (b) time from onset to first mental health contact; and (c) time from first mental health contact to OnTrackNY. Other help-seeking variables include type and referral source of first mental health contact and number of contacts before admission.

Data are available on request. The NYS Psychiatric Institute's Institutional Review Board approved the study procedures.

### 2.3 | Analysis

Descriptive information on demographic, clinical, functional, DUP and help-seeking measures are presented for the overall sample, and by homelessness status. For continuous, normally distributed measures, means and standard deviations are presented with group differences assessed using *t* tests. For continuous, skewed measures, medians and interquartile ranges are presented with group differences assessed using Wilcoxon-rank tests. For categorical measures, frequencies and proportions are presented with group

differences assessed using chi-square tests, however, if  $\geq 20\%$  of cells had expected values less than 5, then Fisher-exact tests (FET) were utilized. All statistical tests were two-sided with 5% significance level. Tests were not corrected for multiple comparisons given the exploratory nature of these analyses.

## 3 | RESULTS

Of the 1349 participants, 74 (5.5%) of the sample reported being homeless at admission.

### 3.1 | Sociodemographic characteristics (Table 1)

Homeless participants were on average 1 year older, more likely to be Black, non-Hispanic, to be uninsured or to access public insurance, to access public income support; and to have more legal issues, and/or be on probation/parole than housed participants. Regarding family characteristics, housed participants had significantly more daily contact with family and preferred more family involvement than homeless participants. Homelessness status was not significantly associated with gender, sexual orientation, highest education level, family fiscal support or type of site (urban vs nonurban); however, for some between-group comparisons the sample size was small.

### 3.2 | Clinical, social and functional characteristics (Table 2)

There was no significant relationship between primary diagnosis, being prescribed antipsychotic medication, substance use, and suicidal or violent ideation/attempts and homelessness status. Homeless participants were significantly more likely to have aco-morbid DSM-5 mental health disorder, experienced onset of psychotic symptoms at older age and had lower MIRECC GAF social, occupational and symptom scores. Homeless participants were also less likely to be enrolled in school and/or employed.

### 3.3 | Help-seeking characteristics (Table 3)

There were no significant differences between homeless and non-homeless participants in time from onset of symptoms to enrolment with an OnTrackNY team, and the total number of mental health contacts before program enrolment. Nor were the two groups significantly different in time from onset of symptoms to first mental health contactor from first mental health contact to enrolment in OnTrackNY. However, as homeless participants made their first mental health contact, they were significantly more likely to self-refer, to be referred by law enforcement or emergency services, and less likely to be referred by a family member, than housed participants.

**TABLE 1** Sociodemographic characteristics

Measures	Grouped by baseline homelessness							
	Total		Not homeless (n = 1275)		Homeless (n = 74)		Difference between groups	
	N	% or M (SD)	N	% or M (SD)	N	% or M (SD)	Test statistic	P value
Age (years)	1349	21.1 (3.3)	1275	21.0 (3.4)	74	22.1 (2.5)	t(1347) = 2.72	.007
Gender							$\chi^2(2) = 1.82$	.402
Female	349	25.9%	334	26.2%	15	20.3%		
Male	992	73.5%	933	73.2%	59	79.7%		
Other	8	0.6%	8	0.6%	0	0.0%		
Race							$\chi^2(4) = 10.48$	.033
White (Non-Hispanic)	375	27.8%	360	28.2%	15	20.3%		
Black (Non-Hispanic)	489	36.2%	450	35.3%	39	52.7%		
Asian	112	8.3%	109	8.5%	3	4.1%		
Hispanic	356	26.4%	339	26.6%	17	23.0%		
Other	17	1.3%	17	1.3%	0	0.0%		
Sexual orientation							FET	.083
Heterosexual	1086	80.5%	1029	80.7%	57	77.0%		
Gay or lesbian	39	2.9%	33	2.6%	6	8.1%		
Bisexual	38	2.8%	36	2.8%	2	2.7%		
Other/unknown	186	13.8%	177	13.9%	9	12.2%		
Highest education level <sup>a</sup>							$\chi^2(3) = 5.06$	.167
<HS	385	28.6%	363	28.5%	22	30.6%		
HS or GED	267	19.8%	247	19.4%	20	27.8%		
At least some college	542	40.3%	516	40.5%	26	36.1%		
College grad or higher	152	11.3%	148	11.6%	4	5.6%		
Insurance status							FET	<.001
Uninsured	71	5.3%	61	4.8%	10	13.5%		
Public	680	50.4%	630	49.4%	50	67.6%		
Private	512	38.0%	501	39.3%	11	14.9%		
Other	86	6.4%	83	6.5%	3	4.1%		
SSI/SSD or other disability benefits							FET	.069
No	1308	97.0%	1239	97.2%	69	93.2%		
Yes	41	3.0%	36	2.8%	5	6.8%		
Temporary aid to families in need or other income assistance							FET	<.001
No	1334	98.9%	1265	99.2%	69	93.2%		
Yes	15	1.1%	10	0.8%	5	6.8%		
Legal issues, probation and parole							$\chi^2(2) = 32.57$	<.001
No	822	60.9%	791	62.0%	31	41.9%		
Yes	96	7.1%	79	6.2%	17	23.0%		
Unknown	431	31.9%	405	31.8%	26	35.1%		
Current family contact <sup>a</sup>							FET	<.001
Daily	1215	91.4%	1186	93.8%	29	44.6%		
Weekly	84	6.3%	63	5.0%	21	32.3%		
Monthly or less	30	2.3%	15	1.2%	15	23.1%		
Fiscal support from family							$\chi^2(1) = 1.57$	.211
No	1031	76.4%	970	76.1%	61	82.4%		
Yes	318	23.6%	305	23.9%	13	17.6%		

**TABLE 1** (Continued)

Measures	Grouped by baseline homelessness							
	Total		Not homeless (n = 1275)		Homeless (n = 74)		Difference between groups	
	N	% or M (SD)	N	% or M (SD)	N	% or M (SD)	Test statistic	P value
Preferences for family involvement in treatment							$\chi^2(4) = 56.34$	<.001
Team did not discuss preference	22	1.6%	18	1.4%	4	5.4%		
Prefers no involvement	74	5.5%	59	4.6%	15	20.3%		
Prefers involvement with restrictions	397	29.4%	365	28.6%	32	43.2%		
Prefers involvement with no restrictions	691	51.2%	671	52.6%	20	27.0%		
Unknown/missing	165	12.2%	162	12.7%	3	4.1%		
Type of site							$\chi^2(1) = 2.53$	.112
Urban	811	60.1%	760	59.6%	51	68.9%		
Nonurban	538	39.9%	515	40.4%	23	31.1%		

Abbreviation: FET, Fisher exact test.

<sup>a</sup>Measure contains small amount of missingness (<5%) and therefore does not sum to the total sample size.

**TABLE 2** Clinical, social and functional characteristics

Measures	Grouped by baseline homelessness							
	Total		Not homeless (n = 1275)		Homeless (n = 74)		Difference between groups	
	N	% or M (SD)	N	% or M (SD)	N	% or M (SD)	Test statistic	P value
Primary diagnosis							$\chi^2(3) = 7.34$	.062
Schizophrenia	410	30.4%	378	29.6%	32	43.2%		
Schizoaffective disorder	180	13.3%	174	13.6%	6	8.1%		
Schizophreniform disorder	326	24.2%	308	24.2%	18	24.3%		
Other	433	32.1%	415	32.5%	18	24.3%		
Age at onset (year) <sup>a</sup>	1341	21.0 (3.3)	1267	20.9 (3.3)	74	21.9 (2.7)	$t(1339) = 2.55$	.011
Comorbid mental disorder <sup>a</sup>							$\chi^2(1) = 3.94$	.047
No	972	72.2%	926	72.8%	46	62.2%		
Yes	374	27.8%	346	27.2%	28	37.8%		
Cannabis use							$\chi^2(1) = 0.59$	.441
No	805	59.7%	764	59.9%	41	55.4%		
Yes	544	40.3%	511	40.1%	33	44.6%		
Substance use (including tobacco)							$\chi^2(1) = 0.81$	.368
No	652	48.3%	620	48.6%	32	43.2%		
Yes	697	51.7%	655	51.4%	42	56.8%		
Adherence to antipsychotic medication							$\chi^2(3) = 5.51$	.138
Not adherent	191	14.2%	175	13.7%	16	21.6%		
Adherent	955	70.8%	910	71.4%	45	60.8%		
Not prescribed	71	5.3%	68	5.3%	3	4.1%		
Unknown	132	9.8%	122	9.6%	10	13.5%		
Violent ideation/attempt							$\chi^2(1) = 0.38$	.538
No	1042	77.2%	987	77.4%	55	74.3%		
Yes	307	22.8%	288	22.6%	19	25.7%		
Suicide ideation/attempt							$\chi^2(1) = 0.24$	.626
No	981	72.7%	929	72.9%	52	70.3%		
Yes	368	27.3%	346	27.1%	22	29.7%		

(Continues)

**TABLE 2** (Continued)

Measures	Grouped by baseline homelessness							
	Total		Not homeless (n = 1275)		Homeless (n = 74)		Difference between groups	
	N	% or M (SD)	N	% or M (SD)	N	% or M (SD)	Test statistic	P value
MIRECC GAF social <sup>a</sup>	1330	57.1 (15.4)	1259	57.6 (15.1)	71	48.1 (17.0)	t(1328) = 5.12	<.001
MIRECC GAF occupational <sup>a</sup>	1328	36.3 (19.9)	1256	37.0 (20.1)	72	24.6 (11.3)	t(1326) = 5.20	<.001
MIRECC GAF symptoms <sup>a</sup>	1333	31.0 (15.4)	1261	31.4 (15.4)	72	24.8 (13.4)	t(1331) = 3.57	<.001
Employment <sup>a</sup>							$\chi^2(1) = 5.08$	.024
No	1129	83.9%	1060	83.3%	69	93.2%		
Yes	217	16.1%	212	16.7%	5	6.8%		
Education <sup>a</sup>							$\chi^2(1) = 20.46$	<.001
No	937	69.8%	868	68.4%	69	93.2%		
Yes	406	30.2%	401	31.6%	5	6.8%		
Education and/or employment							$\chi^2(1) = 28.03$	<.001
No	787	58.3%	722	56.6%	65	87.8%		
Yes	562	41.7%	553	43.4%	9	12.2%		

<sup>a</sup>Measure contains small amount of missingness (<5%) and therefore does not sum to the total sample size.

**TABLE 3** Help-seeking characteristics

Measures	Grouped by baseline homelessness							
	Total		Not homeless (n = 1275)		Homeless (n = 74)		Difference between groups	
	N	% or Median (IQR)	N	% or Median (IQR)	N	% or Median (IQR)	Test statistic	P value
Time onset to OTNY (days) <sup>a</sup>	1341	165.0 (79.0-339.0)	1267	164.0 (78.0-336.0)	74	200.0 (104.0-427.0)	Z = 1.76	.078
Time onset to first mental health contact (days) <sup>a</sup>	1333	26.0 (1.0-92.0)	1259	26.0 (1.0-91.0)	74	25.5 (1.0-94.0)	Z = 0.73	.468
Time first mental health contact to OTNY (days) <sup>a</sup>	1333	77.0 (34.0-222.0)	1259	77.0 (34.0-215.0)	74	86.0 (36.0-276.0)	Z = 0.68	.499
Type of first mental health contact <sup>a</sup>							$\chi^2(3) = 7.30$	.063
ER, no hospitalization	277	21.1%	266	21.5%	11	15.3%		
Psychiatric hospitalization (with or without ER visit)	719	54.9%	671	54.2%	48	66.7%		
Outpatient mental health treatment	202	15.4%	197	15.9%	5	6.9%		
Other	112	8.5%	104	8.4%	8	11.1%		
Referral source of first mental health contact							FET	<.001
Self	129	9.6%	118	9.3%	11	14.9%		
Family member	906	67.2%	883	69.3%	23	31.1%		
Partner or friend	25	1.9%	25	2.0%	0	0.0%		
School-related personnel	70	5.2%	66	5.2%	4	5.4%		
Mental health care provider	56	4.2%	53	4.2%	3	4.1%		
Law enforcement/emergency medical services	97	7.2%	80	6.3%	17	23.0%		
Other	51	3.8%	37	2.9%	14	18.9%		
Unknown	15	1.1%	13	1.0%	2	2.7%		
Number of mental health contacts							$\chi^2(6) = 5.11$	.529
OTNY is first contact	29	2.1%	28	2.2%	1	1.4%		
1	388	28.8%	361	28.3%	27	36.5%		
2	425	31.5%	406	31.8%	19	25.7%		

**TABLE 3** (Continued)

Measures	Grouped by baseline homelessness							
	Total		Not homeless (n = 1275)		Homeless (n = 74)		Difference between groups	
	N	% or Median (IQR)	N	% or Median (IQR)	N	% or Median (IQR)	Test statistic	P value
3	258	19.1%	244	19.1%	14	18.9%		
4	129	9.6%	125	9.8%	4	5.4%		
5	104	7.7%	96	7.5%	8	10.8%		
6+	16	1.2%	15	1.2%	1	1.4%		

Abbreviation: OTNY, OnTrack New York.

<sup>a</sup>Measure contains small amount of missingness (<5%) and therefore does not sum to the total sample size.

## 4 | DISCUSSION

In this large cohort of young people enrolled in EIS across New York State, we found that 5.5% of participants were homeless at program initiation. Homeless participants had many disadvantages including a lower likelihood of accessing any type of public income resources or financial assistance from family, lower rates of employment and school participation despite similar educational attainment, and lower functioning across social, occupational and symptom domains. They also had greater involvement with the legal system. These findings underline the elevated psychosocial needs of homeless participants. As described by Doré-Gauthier, Côté, et al. (2019a), EIS teams serving homeless young people will need tools to address these needs and/or to partner with a wide range of community organizations to access social welfare (notably housing), income, justice-related and education and employment resources.

Homeless individuals also had greater rates of overall co-morbid DSM-5 mental disorders. This is concordant with previous research on a treated sample in Canada reporting very high rates of co-morbid disorders, specifically substance use and personality disorders in their homeless subsample, and associated poor outcomes. (Abdel-Baki, Lévesque, Ouellet-Plamondon, & Nicole, 2014). While our data showed similar rates of substance use between homeless and housed participants, we were unable to discern whether homeless participants have higher rates of substance use or personality disorders. This pattern of findings should be further explored in future studies.

For housed participants, family members were the overarching influence in first accessing any mental health treatment. For homeless participants, the family role is diminished and the role of law enforcement and emergency services are more prominent. Not only does this important first step to mental health treatment more often involve restrictive measures for homeless individuals (which in turn would likely influence future engagement with treatment); but housed individuals' psychosis may be identified earlier if family are involved. We did not detect differences in DUP between the two groups but homeless participants were found to be significantly older at age of psychosis onset. Reasons for this difference are unknown but may reflect differences between individual only vs individual and family's first

observations of psychosis. Strategies to identify and engage homeless youth with psychosis are needed.

This report is limited by the lack of systematic definition of homelessness and thus may not reflect the proportion of young people with FEP who are living in shelters or streets, 'couch surfing' or moving from a series of unstable options. Further, OnTrackNY, does not serve all individuals with FEP in NY and thus the 5.5% should not be considered an estimate of homelessness prevalence in the FEP population. Our data are cross-sectional and causal inferences cannot be drawn. This study focuses on those individuals who are already in a situation of homelessness at admission, and while psychosis likely contributes to the risk of becoming homeless, this study is not designed to address causes of homelessness or how to prevent it. However, these weaknesses are balanced by the fact that the program collects data on all participants with significant reach across the population, and in the context of the paucity of literature about homelessness and FEP.

## 5 | CONCLUSION

While a minority of participants in the EIS program were homeless, they likely have substantially greater need for a diversity of services. Further, it is likely that homeless individuals have a more adverse pathway to care, suggesting that additional efforts for directed outreach are needed to identify and engage this population.

### DATA AVAILABILITY STATEMENT

Data are available on request. The NYS Psychiatric Institute's Institutional Review Board approved the study procedures

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### ENDNOTE

<sup>1</sup> Urban areas have population density >10 000 people/mile<sup>2</sup> and non-urban areas have population density <10 000 people/mile<sup>2</sup>.

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