Clubhouse Model and Its Impact on Psychiatric Hospitalization in Canada: A Cohort Study

Matthew Joseph Russell
PolicyWise for Children & Families; University of Calgary

Natasha Lifeso
PolicyWise for Children & Families

Jordan Fazio
Potential Place Society

Carley Piatt
PolicyWise for Children & Families

Frank Kelton
Potential Place Society

Xinjie Cui
PolicyWise for Children & Families; University of Calgary

Izu Nwachukwu
University of Calgary

Matthew Joseph Russell, PolicyWise for Children & Families, Edmonton, AB, University of Calgary, Community Health Sciences, Cumming School of Medicine, Calgary, AB, University of Calgary, School of Public Policy, Calgary, AB; Natasha Lifeso, PolicyWise for Children & Families, Edmonton, AB; Jordan Fazio, Potential Place Society, Calgary, AB; Carley Piatt, PolicyWise for Children & Families, Edmonton, AB; Frank Kelton, Potential Place Society, Calgary, AB; Xinjie Cui, PolicyWise for Children & Families, Edmonton, AB, University of Calgary, Community Health Sciences, Cumming School of Medicine, Calgary, AB; Izu Nwachukwu, University of Calgary, Department of Psychiatry, Calgary, AB.

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Correspondence concerning this article should be addressed to Matthew Russell, 1000-9925 109 St NW, Edmonton, AB, T5K 2J8. Email: mrussell@policywise.com

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ABSTRACT

We investigated the relationship between membership in an accredited Clubhouse for mental health support and psychiatric hospitalization in Canada using linked administrative data. Results show that Clubhouse members were less likely to be hospitalized after enrollment and after longer-term enrollment, and younger members diagnosed with schizophrenia and/or bipolar disorders were at increased risk of hospitalization compared to older members without such diagnoses. These findings provide evidence of the possible benefits of Clubhouses in Canada and the characteristics of members who may benefit from support.

Keywords: mental health, community health service, Clubhouse, schizophrenia, hospitalization

RÉSUMÉ

Nous avons étudié la relation entre l'adhésion à un *clubhouse* (accrédité par *Clubhouse International*) et les hospitalisations psychiatriques au Canada à partir de données administratives. Résultats : les membres de *clubhouses* sont moins susceptibles d'être hospitalisés après leur adhésion, et ce, d'autant plus s'ils sont membres depuis longtemps. Les jeunes membres avec un diagnostic de schizophrénie ou de troubles bipolaires sont plus à risque d'hospitalisation que les plus âgés sans ces diagnostics. Les résultats traduisent de possibles effets positifs du soutien apporté par les *clubhouses* canadiens à leurs membres.

Mots clés : santé mentale, service de santé communautaire, *clubhouse*, schizophrénie, hospitalisation

People who live with serious and persistent mental illnesses (SPMI) often experience poor outcomes. They are more likely to be hospitalized (Masso, 2001; Wilkinson, 1992), be incarcerated (Johnson & Hickey, 1999), be employed less (Macias et al., 1995), have poor physical health (Leff, 2004), and have lower overall well-being than the general population (Warner et al., 1999). Persons with SPMI also often encounter barriers that prevent them from fully integrating into community settings (Clubhouse International, 2018; Wahl, 1999). For example, individuals with SPMI may be unwilling to seek the support they need due to concerns that they will face stigma and discrimination in the process (Wahl, 1999).

Some of the stigma that people with SPMI face relates to a history of institutionalization in North America (Dear, 1987; Lamb & Bachrach, 2001; Niles, 2013; Rose, 1979; Simmon, 1990; Talbott, 1979). Throughout the 19th century and into the early-to-mid 20th century, individuals with mental illnesses were deliberately removed from society and placed in institutional care settings. Many reports were made about the poor conditions of institutional care settings. Individuals in these settings were sometimes subject to invasive and experimental procedures. Overcrowding, high costs, and poor staffing also led to distaste for institutional settings in North America. As public awareness increased regarding the poor conditions experienced by people with SPMI in institutional care settings, a movement began to take individuals out of these settings, which was termed *deinstitutionalization*.

Deinstitutionalization involved moving individuals with SPMI from large mental hospitals into community settings (Lamb & Bachrach, 2001; McKay et al., 2018; Talbott, 1979). Deinstitutionalization changed how mental illnesses were perceived and treated, resulting in a shift from a medical to a more social model of care/support (Lamb & Bachrach, 2001). However, after deinstitutionalization patients were often discharged

back into community settings without the necessary planning to provide access to needed supports. As such, individuals with SPMI were more likely to end up back in the hospital, become homeless, or be incarcerated due to a lack of support, which is still often the case (Folsom et al., 2005; Johnson & Hickey, 1999; Lamb & Bachrach, 2001; Stergiopoulos et al., 2015). In response to these patterns, support models have been developed to improve outcomes for individuals with SPMI.

The Clubhouse Model of Mental Health Support

One such support model is the *Clubhouse Model* of mental health support (Clubhouse International, 2018). The Clubhouse Model was developed throughout the deinstitutionalization period in response to the changing needs of individuals with SPMI. One of the first mental health consumer-operated programs was the WANA Society (We Are Not Alone Society). The WANA Society was formed in the 1940s by a group of psychiatric patients who had been discharged from Rockland State Hospital (Doyle, 2013). In 1948, WANA Society became Fountain House in New York City and in 1955 it began implementing parts of what has become the Clubhouse Model today (Dougherty, 1994; Doyle, 2013; Mowbray et al., 2002; Moxley, 1997).

Clubhouses are consumer-oriented psychosocial rehabilitation centres that focus on personal empowerment (Clubhouse International, 2018) and are non-clinical, work-oriented environments for individuals with SPMI (Doyle, 2013; Macias et al., 2001; Mowbray et al., 2002; Wilkinson, 1992). Typically, any individual with a history of mental illness (not just individuals with SPMI) is eligible to become a Clubhouse member. Clubhouses are organized around the work-ordered day—which means that programs are structured like a typical workday (Doyle, 2013; Mowbray et al., 2002). During the day, Clubhouse members and staff work alongside one another in the operation of the Clubhouse program (Doyle, 2013). The Clubhouse Model emphasizes that individuals with SPMI have strengths and can make meaningful contributions to the Clubhouse.

Evidence suggests that the Clubhouse Model can have benefits (Battin et al., 2016; McKay et al., 2018). In particular, Clubhouses can help to provide necessary supports to prevent individuals with SPMI from being re-hospitalized—although results to date have been somewhat mixed. Wilkinson (1992) and Masso (2001) found that participation significantly reduced hospitalization rates among Clubhouse members. Moreover, Grinspan (2015) and Solís-Román (2016) found that Fountain House members were less likely to use emergency services or be admitted to the hospital, although Accordino (2000) did not find a significant effect of Clubhouse participation on hospital readmission rates. One significant limitation of this research in the Canadian context is that most research on Clubhouse participation has taken place in the United States. This difference is particularly salient due to the differences in the two healthcare systems (Drake & Latimer, 2012; Ridic et al., 2012). For example, Canada has more focus on public healthcare vs. the focus on private healthcare in the United States. This body of research suggests that health outcomes are better for Canadians than Americans, which may affect the generalizability of previous Clubhouse findings to Canada (Guyatt et al., 2007). While some Clubhouse research in other countries with public healthcare similar to Canada also suggests a connection to reduced hospitalization (Bouvet et al., 2020), our goal was to investigate hospitalization in Canada.

Potential Place Society, a Clubhouse in Canada

Our study focuses on Potential Place Society, which uses an accredited Clubhouse Model to support individuals with SPMI in Canada (Potential Place Society, 2020). Potential Place is part of more than 300 Clubhouses worldwide known as Clubhouse International (Clubhouse International, 2018, 2020). Potential Place members often deal with SPMI that create barriers to success in their lives. Potential Place's goal is to reintegrate members back into the larger community and provide them with skills for a successful and sustainable lifestyle. Potential Place provides advocacy for members with respect to social entitlements, housing, education, and employment. Potential Place members are also provided with opportunities to engage in Clubhouse work, develop support networks to facilitate continuous recovery, and foster meaningful relationships.

Research Objectives and Hypotheses

The focus of this study was the relationship between enrollment in Potential Place and patterns in psychiatric hospitalization for Clubhouse members. Our investigation also identified members who were at a higher risk for hospitalization.

Hypothesis 1: We expected that Clubhouse members would have less psychiatric hospitalization after becoming a member.

Hypothesis 2: We expected that Clubhouse members with more years of enrollment would have less psychiatric hospitalization.

Hypothesis 3: We expected that there would be differences in the characteristics of members (e.g., gender, diagnosis, etc.) with and without a psychiatric hospitalization related to psychiatric hospitalization.

METHODS

This study was approved through the Conjoint Health Research Ethics Board (CHREB) of the University of Calgary (REB 17-1649).

Dataset

We used a retrospective cohort design, with a cohort based on all members who used Potential Place Clubhouse services at any point between January 1, 2016 and December 31, 2018, for a total of 656 members in the analysis (ranging from an enrollment duration of 0 to 21 years).

Clubhouse data were linked to administrative data from Calgary Alberta Health Service hospitals. Psychiatric hospitalization records were provided by the hospitals that spanned the jurisdiction of the Clubhouse. Data were linked and de-identified by health service staff. Linkage was deterministic (Zhu et al., 2015), with the matching process based on Alberta Personal Health Care Numbers (PHN). In the case of missing PHNs, a PHN lookup was performed using name and date of birth. To maximize relevance of the analysis to actual program design, relevant stakeholders provided context about how Clubhouse programs work and the issues faced by members.

Comparison Groups: Potential Place Clubhouse Use

Because a control group outside of Potential Place Clubhouse membership could not be established with our current data, comparison groups were defined based on members' use of Clubhouse services. We split groups by years of Clubhouse use, based on (1) those who enrolled during the data period and those who enrolled beforehand (i.e., *recent* [2016–2018] vs. *prior* use [before 2016]), and (2) by *number of years of enrollment*. As recent members were enrolled during the data period (2016–2018), we also split outcomes by when they started to use Clubhouse services (i.e., looking at outcomes before and after enrollment in the Clubhouse).

Outcomes: Psychiatric Hospitalization

The main study outcome was whether or not members had an in-patient psychiatric hospitalization in Calgary (i.e., placed in a psychiatric unit during their hospitalization). For Clubhouse members enrolled between 2016 and 2018 we report outcomes before and after enrollment: the percentage of members hospitalized, the number of hospitalizations, and the number of days hospitalized. Based on members' years of Clubhouse enrollment, we report the percentage of members that were ever psychiatrically hospitalized between January 1, 2016 and December 1, 2018. In addition, modelling analyses describe Clubhouse members who were ever psychiatrically hospitalized between 2016 and 2018.

Clubhouse Member Characteristics

Member characteristics reported on intake to the Clubhouse were used for descriptive and modelling analyses. These included self-reports of gender (reported as male or female), age (reported as date of birth and calculated in years on July 2017 by linkage staff, to preserve member identity), first language (reported as English vs. other languages), mental health diagnoses (members reported up to three free-text diagnoses, which were grouped by type of diagnosis that appeared in any of the fields; see Table 1 & 3), and source of diagnosis (reported as self-diagnosis or documented-diagnosis [i.e., by professional]).

ANALYSIS

Analysis Overview

SAS Enterprise Guide 8.2 was used for all statistical analyses. The focus of this study was the relationship between enrollment in the Clubhouse and patterns in psychiatric hospitalization for Clubhouse members. We also identified members who were at a higher risk for hospitalization.

First, we used descriptive statistics to provide evidence about which members were served by the Clubhouse, and whether changes in member characteristics were seen over time. Second, we looked at psychiatric hospitalization before and after enrollment to provide evidence of whether Clubhouse members were less likely to be hospitalized after enrollment. Third, we broke down psychiatric hospitalization by years of enrollment to investigate how length of Clubhouse enrollment related to psychiatric hospitalization. Last, we used multivariable modelling to provide evidence about which members were at risk to be psychiatrically hospitalized, to target future support decisions.

Analysis Details

First, we described Clubhouse members based on member characteristics. We describe patterns seen across all members who used services between 2016 and 2018. We also discuss patterns that differed when comparing recent members to those who enrolled before 2016. We split Clubhouse members to provide context on differences in populations over time that relate to the following analyses. We reported the number of missing values as "not reported."

Second, we investigated the percentage of recent Clubhouse members who had an inpatient psychiatric hospitalization before they enrolled in Clubhouse, compared to after they enrolled. We used a McNemar's chi-square tests to investigate the significance of this change. As a sensitivity analysis, we used a longitudinal generalized estimated equation model to investigate this change, controlling for the month that members started. We also investigated the median and interquartile range for the number of hospitalizations and the days hospitalized among those with a visit before or after their enrollment. As these numbers did not follow normal distributions, we used Wilcoxon signed-rank tests to test for the significance of the changes in number of hospitalizations and hospitalization days.

Third, we described the percentage of Clubhouse members who were psychiatrically hospitalized between 2016–2018, based on their number of years of enrollment (e.g., 0 years means 0–.99 years of enrolment, 1 year means 1–1.99 years of enrollment, etc.).

Finally, we performed prevalence risk modelling using a robust log-Poisson method to describe the relative risk of psychiatric hospitalization in 2016–2018 (Zou, 2004). We used log-Poisson models as log-binomial models failed to converge. We used a simultaneous model, including various service-related factors (i.e., member characteristics and length of Clubhouse enrollment). We left all factors in the model to control for confounding effects from other factors (Jepsen et al., 2004). We also investigated potential two-way interactions and report all significant interactions. We report the numbers of members with each factor and their percentage, adjusted prevalence risks (controlling for other factors) and their 95% confidence intervals, and unadjusted prevalence risks (not controlling for other factors) and their 95% confidence intervals. As years of enrollment did not have a linear relationship to risk, we used the strata of years of enrollment from the third analysis to investigate how years of enrollment related to psychiatric hospitalization. Members with depression and anxiety were grouped together, and members with bipolar and schizophrenia disorder were grouped together, due to their similar relationships with psychiatric hospitalization. Members with missing data were not included in the model, which resulted in the removal of 42 members.

RESULTS

Clubhouse Member Characteristics

Of 656 Clubhouse members, 276 were enrolled in programming between 2016 and 2018 (recent) and 380 were enrolled before 2016 (prior). The average age of Clubhouse members was 44.32 years. A majority of members were male (64.9%) and spoke English as their first language (89.0%), and the greatest percentage of member reports for a diagnosis (among any of their three possible reported diagnoses) were for a

schizophrenia or related disorder (46.8%; compared to 7.3% with a bipolar disorder, 20.6% with a depression or related disorder, 28.2% with an anxiety or related disorder, and 20.1% with other diagnoses).

A few notable differences were seen between members enrolled recently (2016 to 2018) as compared to prior to 2016 (see Table 1). Recent members had fewer years of Clubhouse enrollment than those enrolled before 2016 (*recent*: mean 1.64 years vs. *prior*: mean 10.68 years). Recent members were also younger (*recent*: mean 38.6 years old vs. *prior*: mean 48.5 years old), more likely to report anxiety disorders (*recent*: 39.5% vs. *prior*: 20%), and more likely to report documented- vs. self-diagnosis than those enrolled before 2016 (*recent*: documented-diagnosis 65.9%, self-diagnosis 17.8%; *prior*: documented-diagnosis 26.8%, self-diagnosis 59.2%).

Table 1

Characteristics of Clubhouse Members Who Were Enrolled between 2016 and 2018

Clubhouse Member Characteristics	Recent Members (n = 276) 2016–2018		Prior Members (n = 380) < 2016	
Years Enrolled				
Mean (standard deviation)	1.64	(.85)	10.68	(5.64)
Gender				
Female	34.7%	(95)	34.7%	(131)
Male	65.3%	(179)	65.3%	(247)
Not reported	2		2	
Age				
Mean (standard deviation)	38.59	(13.59)	48.48	(12.44)
First Language				
English	85.5%	(236)	91.6%	(348)
Other	14.5%	(40)	8.4%	(32)
Not reported	13		1	
Diagnosis (among any of their reported diagnoses)[1]				
Anxiety and related disorders	39.5%	(109)	20.0%	(76)
Depression and related disorders	24.6%	(68)	17.6%	(67)
Bipolar disorders	8.0%	(22)	6.8%	(26)
Schizophrenia and related disorders	44.2%	(122)	48.7%	(185)
Other	26.1%	(72)	15.8%	(60)
Not reported	2		22	
Diagnosis Source				
Documented	65.9%	(182)	26.8%	(103)
Self	17.8%	(49)	59.2%	(225)
Not reported	16.3%	(45)	14.0%	(53)

Note. Member characteristics are split by when members enrolled.

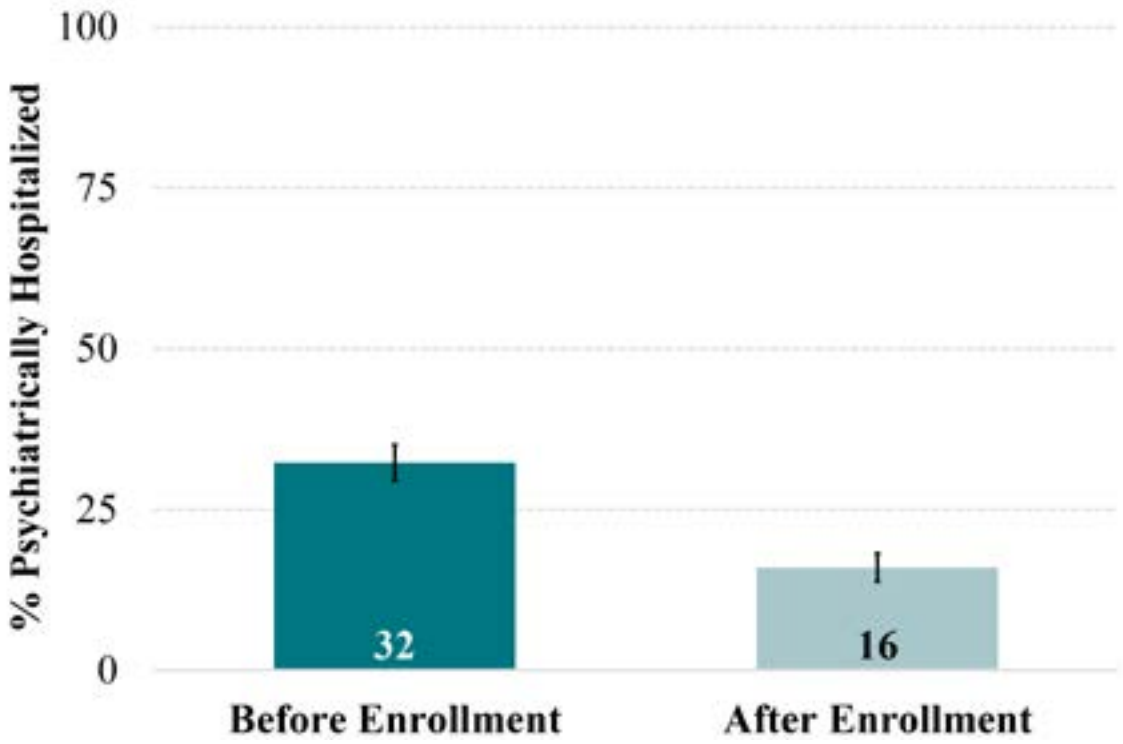
1. These percentages may add up to more than 100% as up to 3 diagnoses may be reported.

Psychiatric Hospitalization Before and After Clubhouse Enrollment

For members who enrolled in 2016 to 2018, the average years before enrollment to the Clubhouse was 1.49 years, and 1.51 years after enrollment. In general, Clubhouse members were less likely to be psychiatrically hospitalized after enrollment (Figure 1 & Table 2). The percentage of Clubhouse members hospitalized dropped significantly after enrollment (before: 32.3%, after: 15.9%; $p < .001$). Furthermore, when controlling for the month when members started, we still found a significant reduction in hospitalization ($p < .001$). Among those hospitalized, members had a median of 1 hospitalization for 22 days before enrollment, compared to 0 hospitalizations for 0 days after enrollment, with both the number of hospitalizations and length of hospitalization being significantly different (respectively; $p < .001$; $p < .001$).

Figure 1

Percentage of Clubhouse Members Who Were Psychiatrically Hospitalized Before and After Enrollment for Those Enrolled between 2016 and 2018



Note. Error bars represent 95% confidence intervals.

Table 2

Clubhouse Members with Psychiatric Hospitalization Before and After Enrollment for Those Enrolled between 2016 and 2018

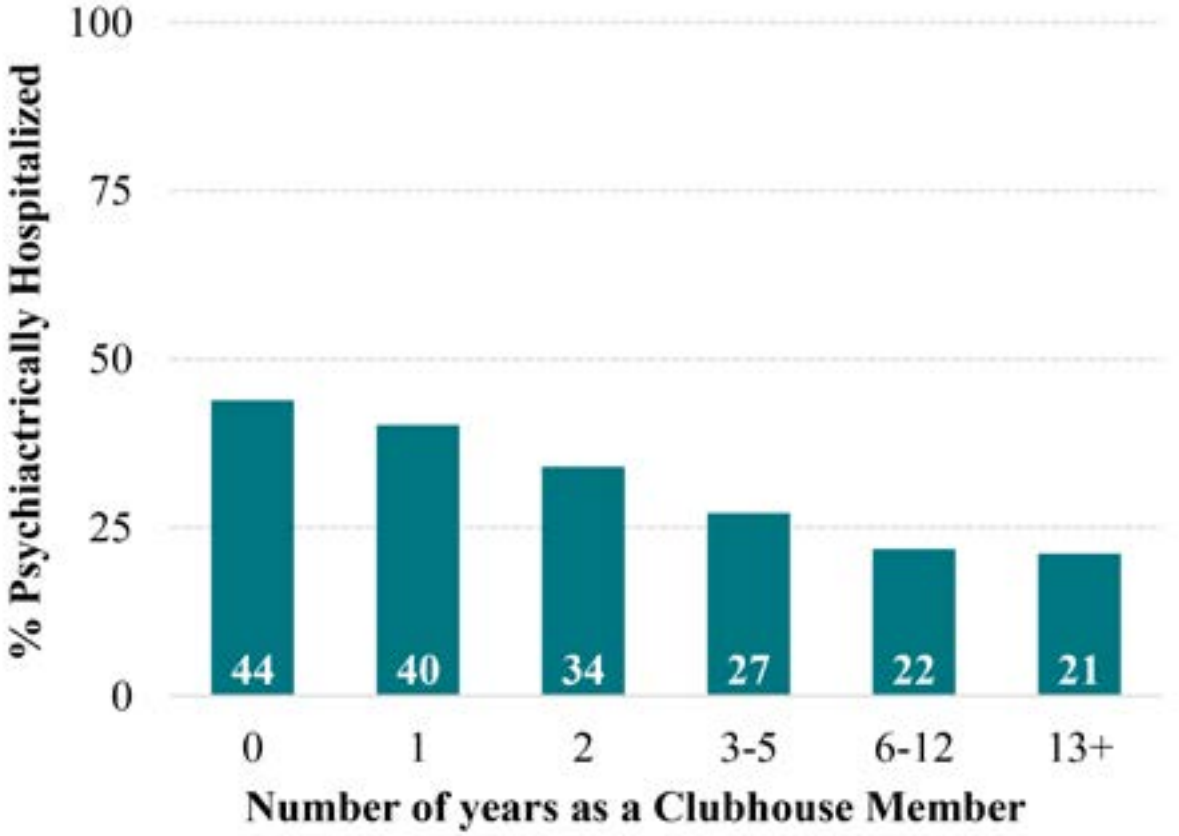
Psychiatric Hospitalization	Before		After	
Number of members hospitalized	89		44*	
Median visits (IQR) of those hospitalized	1	(1)	0*	(1)
Median length (IQR) of visit of those hospitalized	22	(42.5)	0*	(14)

Psychiatric Hospitalization by Years of Clubhouse Enrollment

The longer that Clubhouse members were enrolled, the less likely they were to be psychiatrically hospitalized (from 43.9% for 0 years of enrollment to 21.2% for those enrolled more than 13 years; Figure 2). Another interesting pattern is that most members who used services between 2016 and 2018 were not psychiatrically hospitalized in that period. We note that for members enrolled between 0–2 years, hospitalization also occurred before enrollment (discussed below).

Figure 2

Percentage of Clubhouse Members Who Were Psychiatrically Hospitalized between 2016 and 2018, by Years of Enrollment



Factors Involved with Members Who Were Hospitalized between 2016 and 2018

We report adjusted prevalence risks for psychiatric hospitalization between 2016 and 2018 for Clubhouse members in Table 3. Members with more years of enrollment were less likely to be hospitalized than prior members (adjusted prevalence risks, compared to 0 years enrollment: 1 year, .95, a -6% risk; 2 years, .78, a -29% risk; 3–5 years, .63, a -59% risk; 6–12 years, .49, a -102% risk; 13+ years, .56, a -78% risk) and members who had a schizophrenia or bipolar diagnosis (similar patterns) and were 50 years of age or younger were more likely to be hospitalized (adjusted prevalence risk: 1.81, a +81% risk). However, we note that the mere presence of a schizophrenia or bipolar diagnosis, or being 50 years of age or younger alone were not a predictor of members being hospitalized.

Table 3

The Prevalence Ratio (PR) for the Association between Clubhouse Member Characteristics and Any Psychiatric Hospitalization between 2016 and 2018

Clubhouse Member Characteristics	% Members Hospitalized (# hospitalized/total)	Adjusted Prevalence Risk (95% Confidence Interval); *p*	Unadjusted Prevalence Risk (95% Confidence Interval); *p*
Sex (Male)	28.2% (120/426)	0.80 (.63-1.02); $p = 0.07$	0.87 (.68-1.11); $p = .27$
(reference: Female)	32.3% (73/226)		
Language (English speaker)	29.3% (171/584)	1.04 (.72-1.49); $p = .84$	0.94 (.63-1.41); $p = .77$
(reference: other/unknown)	31.0% (18/58)		
Age (<50 years old)	35.4% (138/390)	0.92 (.60-1.42); $p = .72$	1.62 (1.25-2.11); $p < .001$
(reference: 50+ years old)	21.8% (58/266)		
Diagnosis (had anxiety/depression diagnosis)	29.0% (76/262)	1.08 (.80-1.45); $p = .61$	0.93 (.73-1.19); $p = .58$
(reference: had different diagnosis)	31.1% (115/370)		
Diagnosis (had schizophrenia/bipolar diagnosis)	34.6% (120/347)	0.92 (.55-1.54); $p = .75$	1.39 (1.08-1.78); $p < .01$
(reference: had different diagnosis)	24.9% (71/285)		
Start Clubhouse (<2007)	21.2% (33/156)	.56 (.36-.87); $p < .009$	.48 (.33-.71); $p < .001$
(2007–2012)	21.8% (24/110)	.49 (.31-.78); $p < .003$	.50 (.32-.76); $p < .002$
(2013–2015)	27.2% (31/114)	.63 (.42-.93); $p < .03$	.62 (.42-.91); $p < .02$
(2016)	34.0% (33/97)	.78 (.53-1.14); $p < .19$	.77 (.54-1.12); $p < .18$
(2017)	40.2% (39/97)	.95 (.67-1.34); $p < .76$	.92 (.65-1.29); $p < .62$
(reference: 2018)	43.9% (36/82)		
Interaction (Age by Diagnosis)			
50+ & did not have schizophrenia/bipolar diag.	24.0% (29/121)	1.00 (reference)	1.00 (reference)
<50 & did not have schizophrenia/bipolar diag.	25.6% (42/164)	0.92 (.60-1.42); $p = .72$	1.07 (.71-1.61); $p = .75$
50+ & had schizophrenia/bipolar diag.	19.1% (25/131)	0.92 (.55-1.54); $p = .75$	0.80 (.50-1.28); $p = .35$
<50 & had schizophrenia/bipolar diag.	44.0% (95/216)	1.81 (1.20-2.72); $p < .01$	1.84 (1.29-2.61); $p < .01$

Note. Reported interaction terms are significant. PRs reflect a comparison to the listed reference. Adjusted (multivariable) PRs control for all other presented variables. The adjusted model excludes all missing values and focuses on 614 individuals.

DISCUSSION

We found support for all three study hypotheses. Using linked administrative data from a Clubhouse for mental health support in Canada (Potential Place Society) and local psychiatric hospitalization data, our analysis found initial support for potential benefits of Clubhouse services in Canada and identified groups within the membership who were at a higher risk for hospitalization. In particular, we found that members were less likely to be psychiatrically hospitalized after enrolling in services, longer term members were less likely to be hospitalized than those more recently enrolled, and most Clubhouse members were not hospitalized. These findings add to growing literature that provides evidence of the relationship between Clubhouse services and healthcare use (Accordino, 2000; Battin et al., 2016; Grinspan, 2015; Masso, 2001; McKay et al., 2018; Solís-Román, 2016; Wilkinson, 1992), with a novel finding of this work being an understanding of Clubhouses in the Canadian context. This finding is important due to the differences in the healthcare systems between previous studies and Canada (Drake & Latimer, 2012; Ridic et al., 2012).

We also investigated member characteristics related to the risk for psychiatric hospitalization. To our knowledge, these patterns are a novel addition to Clubhouse literature. We found that younger members with schizophrenia and/or bipolar diagnoses were at increased risk of psychiatric hospitalization. This finding may be partially explained by the process that people often go through in their early years of learning about their diagnosed condition as they begin to optimize how to live with their condition, including use of medicine, supports, etc. (Barnes & Paton, 2011; Lally & MacCabe, 2015). Because some research suggests that rehospitalization rates do not differ much with age (Perlman et al., 2015), the finding that older members with schizophrenia and/or bipolar diagnoses had less hospitalization than younger members may reflect a potential benefit of Clubhouse services over time. Regardless, providing additional support and guidance to newly diagnosed members might help speed up this process and lead to better outcomes.

Finally, we note that recent Clubhouse members were more likely to report a documented diagnosis than members enrolled earlier, which tend to report a self-diagnosis. This finding may suggest many things, including a change in members' attitudes towards mental health services over time, diagnosis rates, or how members were being referred to Clubhouse services. In particular, future investigation into the referral process of individuals with SPMI to community organizations may help streamline access to support. In addition, as community-based services are not isolated from other service providers, an investigation is warranted into members' use of other mental health services.

Limitations and Future Directions

First, we note that administrative data often contains reporting errors and can be difficult to interpret (Tang et al., 2017). For example, more hospitalizations could mean that a member used services to satisfy their needs; however, more hospitalizations could also be due to a member's increased ability to access services. To properly dissociate this issue, future research should supplement findings with qualitative data to help better understand why patterns were seen (Fielding, 2012). Qualitative data could explore many rich descriptions of member experiences, such as barriers to access, challenges faced by members, etc.

Second, we note that in the absence of a control group, it is not possible to definitively state that the change in the psychiatric hospitalization rate after enrollment was due to support from Clubhouse services

(Austin, 2011; Walker, 2016). For example, the findings may relate to regression towards the mean. To provide a stronger connection of service use to outcomes, we note that future research would benefit from analysis of how attendance and meaningful use of Clubhouse services relates to outcomes. We did an exploratory matching analysis to strengthen our conclusions, but the analysis was underpowered (it did not have a sufficient sample size) due to the rare nature of psychiatric hospitalization. As an alternative to the matching analyses, we used modelling to control for the presence of other factors presented concurrently in the model (Jepsen et al., 2004). To make rigorous matching possible, future studies should include more years of data to increase sample size and include all hospital service utilization data (cross-provincial and not just psychiatric inpatient visits). Using all hospital service utilization data would increase outcome rates as many mental health-related hospital visits do not result in being placed in psychiatric hospitalization (i.e., being placed in a psychiatric-unit, instead of other inpatient hospitalization settings for support). In addition, if this data included outpatient/ambulatory services data, it might be able to reveal positive healthcare use patterns, such as where members were diverted from hospitalization.

Finally, we note that these findings may not generalize as well to contexts outside of Canada or other public healthcare systems. That said, this is also a strength of this study, as it provides evidence outside of the United States about how Clubhouse use relates to healthcare use.

CONCLUSION

To close, this research found initial evidence about how accredited Clubhouse supports in Canada related to a reduction in psychiatric hospitalization. It also identified characteristics of members at increased risk of hospitalization. Such evidence is important as it informs community mental health service delivery by illustrating how community services relate to healthcare outcomes. This evidence is important as it may be used to inform the delivery of mental health services in Canada to improve the outcomes of individuals with mental illness. In a broader context, this research also shows the importance of using community data linked to healthcare data to evaluate service delivery. As community organizations increasingly demand accountability for programs, research using linked data is one method to inform program decisions.

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