Original Paper

The Rate and Correlates of Readmission Within 6 Months After Discharge From Inpatient Psychiatric Units: Prospective Observational Cohort Study

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Abstract

Background: Hospital readmission rates have been proposed as an indicator of quality of care within inpatient psychiatric services. Numerous factors may predict readmissions to acute psychiatric care. Minimizing the risk factors linked to psychiatric readmissions can help develop preventive intervention strategies that enhance patient safety, improve quality of care and well-being, and help control health care costs.

Objective: The objective of this paper was to assess the rate and correlates of readmission within 6 months after discharge from inpatient psychiatric units.

Methods: This study used a prospective observational cohort design. The study covered all acute mental health units in Edmonton, Calgary, and Grande Prairie, Alberta, Canada. Admissions to inpatient care during the 6 months prior to the index admission and readmissions within 6 months after discharge from the index admission were assessed using medical records from adult inpatient psychiatric units to identify factors associated with patients' readmission within 6 months of discharge. A stepped-wedge recruitment approach was used. REDCap was used as the data collection tool, and the data were exported to SPSS for Mac (version 25) for analysis. Descriptive statistics, as well as univariate analysis using chi-square tests, were conducted to assess the association between demographic and clinical factors and readmission within 6 months after discharge. Multiple binary logistic regression models were fitted to examine associations between predictors and readmission within 6 months of discharge.

Results: Of the 1070 participants, 823 (76.9%) were not admitted to inpatient psychiatric care during the 6 months prior to the index admission. Most participants were White (661/1070, 61.8%). The 6-month postdischarge readmission rate was 23.1% (247/1070). Participants who were admitted within 6 months prior to the index admission were almost twice as likely to be readmitted (odds ratio [OR] 1.76, 95% CI 1.27-2.44; $P \leq .001$) as participants with no prior admission during that period. Additionally, unemployed participants were almost twice as likely (OR 1.69, 95% CI 1.15-2.47; $P=.007$) to be readmitted as employed participants.

Conclusions: These findings suggest that policies and intervention programs should focus on improving employment opportunities and strengthening postdischarge support systems, which could be instrumental in reducing readmission rates.

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Introduction

Psychiatric hospitals have transformed significantly over the past several years [1,2]. The debate has always been about determining which model of care improves patients' outcomes: improved and rigorous inpatient care or well-organized community follow-up care [2-4]. Contemporary inpatient psychiatric programs are now predominantly focused on shorter length of stay (LOS) and intensive crisis stabilization for patients who present with acute psychiatric conditions, with the majority of ongoing treatment responsibilities shifted to community-based services [5,6]. Despite the reduction in the average LOS, inpatient psychiatric care continues to constitute a substantial portion of mental health expenditures [7,8].

As long-term hospitalization has declined and many state-operated facilities have either closed or significantly reduced their capacity, psychiatric readmission rates have concurrently increased. Hospital readmission rates have been proposed as a potential indicator of the quality of care within inpatient psychiatric services [9,10]. The definition of the readmission period varies considerably across studies. These variations have caused inconsistencies in reporting readmission rates. For example, some studies have defined readmission as occurring within 90 days [11], 6 months [12], or 3 years [13], whereas others have defined it as ≥3 admissions within 30 months [14] or 2.5 years [15]. Consequently, reported readmission rates also vary widely, ranging from 14% to 16% [14] to 20% to 30% [13], and reaching 45% to 53% [12]. Similarly, some studies define readmission as occurring within 30 days [16], whereas others define it as occurring within 90 days [17] or 6 months [18], or as ≥3 admissions within 25 to 36 months [19]. Consequently, reported readmission rates vary widely, ranging from 16% to 21.4% [20,21] to 30% [18] and reaching 78.3% to 87.5% [19].

The underlying causes of this trend remain a subject of considerable debate. Some scholars attribute rising readmission rates to the broader process of deinstitutionalization and the limitations of existing community mental health systems [1,22]. Others suggest that elevated readmission rates may indicate that initial hospitalizations were ineffective or terminated prematurely due to systemic time constraints [23,24]. However, some prospective studies report contrary findings, indicating that neither poor inpatient care during index hospitalizations nor early discharge alone significantly contributes to the risk of readmission.

An alternative perspective holds that hospitalization is a necessary and appropriate intervention during acute exacerbations of chronic psychiatric disorders [25]. From this standpoint, recurrent hospitalizations may reflect the episodic and relapsing nature of mental illnesses rather than a failure of care [23,25]. Nonetheless, frequent readmissions are generally viewed as suboptimal, and efforts to reduce them remain a central focus of strategies aimed at enhancing the quality and continuity of psychiatric care [26].

The existing literature on psychiatric readmission has primarily emphasized individual-level predictors [10]. A range of clinical factors has been identified as being associated with an increased risk of readmission, including diagnoses such as schizophrenia, psychotic and mood disorders [27], personality disorders, and substance use disorders [28]. Additional risk factors include medication nonadherence [23], unemployment, early age of illness onset, a history of prior hospitalizations, and prior violent or criminal behavior [23,29]. Research has also examined the role of service delivery factors, such as access to postdischarge follow-up and the availability of outpatient care. However, findings regarding their impact on readmission rates have been inconsistent [23].

Mental health services are generally integrated into the public health care system across most regions of Canada [30,31]. In Alberta, administrative data from the 2007-2008 fiscal year show that 208,167 individuals, representing approximately 6% of the province's population, received mental health services for depression during that time [30,32]. The total annual cost of providing these services was approximately $114.5 million, averaging approximately $550 per patient. However, the distribution of costs was notably uneven. The top 1% of patients, representing the highest expenditures, had an average annual cost of $25,862 per person [30,32].

According to the Alberta Health Services Annual Report Supplementary Information 2021-2022, the year-to-date percentage of unplanned mental health readmissions in the third quarter was 12.6%, reflecting a deterioration of 0.5 percentage points compared to 12.1% during the same period in the previous year [33]. This indicator is reported one quarter in arrears to allow the necessary patient follow-up after the reporting period ends. Alberta continues to outperform the national average in this area. Nationally, most provinces are observing a rising trend in mental health readmissions [33]. In 2020 and 2021, Alberta had the second lowest 30-day readmission rate for mental illness among 9 provinces, at 13%, compared to the national average of 14.2% [33]. The best-performing province reported a rate of 12% [33].

Numerous factors may predict readmissions to acute psychiatric care. Minimizing the risk factors linked to psychiatric readmissions can help inform the development of preventive intervention strategies that enhance patient safety, improve the quality of care and well-being, and help control health care costs [34]. The main objective of this paper is to assess the rate and correlates of readmission within 6 months after discharge from inpatient psychiatric units. Specifically, this study examines demographic and clinical factors associated with psychiatric inpatient readmission within 6 months after the index admission.

Methods

Overview

This study was conducted in Alberta, Canada, which has a population of 4.7 million [35]. In 2018, there were 28,571 adult discharges from psychiatric inpatient units across Alberta [36,37]. The study used a prospective cohort design and used data collected as part of an ongoing pragmatic stepped-wedge cluster-randomized trial. The parent trial recruited participants from 10 acute mental health units in Edmonton, Calgary, and Grande Prairie, with the primary aim of evaluating the effects of supportive text messages (ie, Text4Support) and peer support services (PSS) for patients with mental illness discharged from acute psychiatric hospitals. The full study protocol is available online [36,37].

Study Setting and Design

The research was conducted across all acute mental health units in 3 main cities: Edmonton, Calgary, and Grande Prairie. These facilities provide specialized psychiatric services for individuals experiencing acute mental health crises requiring hospitalization, including those associated with mood disorders, anxiety disorders, psychotic disorders, personality disorders, and substance use disorders. The units serve both voluntary and involuntary patients and provide 24-hour assessment, stabilization, treatment, and discharge planning services. Multidisciplinary teams comprising psychiatrists, psychologists, nurses, social workers, occupational therapists, pharmacists, and other mental health professionals work collaboratively to support patient recovery and facilitate the transition to community-based care following discharge. Admissions typically occur through emergency departments or referrals from other hospital services for individuals requiring acute psychiatric care.

The study used a prospective observational cohort design using data collected as part of an ongoing pragmatic stepped-wedge cluster-randomized longitudinal trial [36]. The parent trial evaluated the effects of Text4Support and PSS among individuals discharged from acute mental health facilities in Alberta [36]. The present study used baseline data from the trial and followed participants for 6 months after discharge to examine factors associated with psychiatric readmission. Participants were drawn from all trial groups, including Text4Support (using SMS), SMS plus PSS, and treatment as usual (TAU).

Data Collection Tool and Procedure

The data for this study were collected using REDCap (Vanderbilt University) [38], an online platform for data collection.

Participants were eligible if they were aged ≥18 years, had been diagnosed with a mental health condition, were ready for discharge from an inpatient mental health unit, owned a mobile device, could read English text messages, and could provide informed written consent. A stepped-wedge recruitment approach was used, whereby all patients who met the eligibility criteria and were approaching discharge were recruited. Eligible patients were approached by trained research personnel prior to discharge, provided with information about the study, and enrolled after providing written informed consent.

The sociodemographic data collected included age, sex, ethnicity, education level, relationship status, and employment status. Clinical variables, such as mental health diagnosis, depression, anxiety, resilience, and well-being were collected prior to discharge using the Patient Health Questionnaire–9 (PHQ-9), Generalized Anxiety Disorder–7 (GAD-7), Brief Resilience Scale (BRS), and World Health Organization (WHO) scale, respectively. The sample size for this study was determined by the number of eligible participants recruited into the parent pragmatic stepped-wedge cluster-randomized trial during the study period. Data for this paper included patients recruited between March 8, 2022, and February 10, 2024. Participants were followed up for 6 months after discharge through reviews of administrative and electronic medical records. Admissions during the 6 months before the index admission and the 6 months after discharge from the index admission were extracted from adult inpatient psychiatric unit records. The index admission was defined as the inpatient psychiatric admission during which the participant was recruited and enrolled in the study prior to discharge. After signing a paper-based consent form, data were collected from respondents before their discharge from the acute care units. All participants completed an online baseline survey, with technical assistance from research team members as needed. Efforts were made to minimize potential bias by maintaining confidentiality throughout data collection. In addition, data collectors received standardized training to ensure consistent data collection procedures and to encourage accurate self-reporting by participants.

Phone numbers and health care numbers were used as primary identifiers to track responses across follow-up time points. Medical records from the adult inpatient psychiatric units were also assessed for the 6-month period prior to the index admission and the 6-month period after discharge from the index admission. These records were used to assess factors associated with patients' readmission within 6 months of discharge.

Ethical Considerations

The Health Research Ethics Board of the University of Alberta granted ethics approval for this study (Pro00111459). Additional operational approval was obtained from the

relevant regional health authority governing the participating acute mental health units. The research was conducted in accordance with the Declaration of Helsinki. Prior to data collection, all participants were fully informed about the purpose, procedures, risks, and benefits of the study. Written informed consent was obtained from all participants before inclusion in the study. Participants were informed that participation was voluntary and that they could withdraw at any time without any impact on the care they received. Consent was documented through signed paper-based consent forms. Participants also provided consent for designated members of the research team to access their medical records for study purposes. To ensure confidentiality, all participant information was deidentified prior to analysis. Unique study identifiers were used in place of personal identifiers, and all electronic data were stored in secure, password-protected databases accessible only to authorized research personnel. Survey responses were linked using coded identifiers, including phone numbers solely for follow-up tracking purposes. No financial or material compensation was provided to participants for participation in the study. Participants were informed that their involvement would not result in direct personal benefit; however, the findings would contribute to improving mental health services and postdischarge support systems.

Outcome Measures

The primary outcome of interest was readmission within 6 months after discharge from the index admission to an acute mental health care facility in Alberta. Medical records from eligible patients were reviewed to identify factors associated with readmission within 6 months of discharge.

Statistical Analysis

Data analysis for this study was performed using SPSS for Mac (version 25; IBM Corp) [39]. Data cleaning involved the removal of duplicate records and errors to ensure accuracy. The extent of missing data was assessed before analysis. Complete case analysis was performed because the amount of missing data was minimal. Descriptive statistics were used to summarize the respondents' sociodemographic and clinical characteristics by readmission status. Univariate analysis using a chi-square test was conducted to assess the association between demographic and clinical factors and readmissions within 6 months after discharge. Multiple binary logistic regression models were fitted to examine the associations between the selected predictor variables and the likelihood of readmission within 6 months after discharge. Variables with significant ($P \leq .05$) or near-significant ($P < .10$) associations in univariate analysis were included in the binary logistic regression models. Correlation analysis was also used to rule out strong intercorrelations between variables, defined as Spearman correlation coefficients of 0.7 to 1.0 or –0.7 to –1.0. The logistic regression model was used to identify predictors significantly associated with readmission within 6 months after discharge. CIs and odds ratios (ORs) were reported.

Results

Among the 1070 participants included in the study, 823 (76.9%) were not readmitted within 6 months of the index admission, whereas 247 (23.1%) were readmitted. Among the 432 participants in the TAU group, 111 (25.7%) were readmitted within 6 months, while 321 (74.3%) were not readmitted. Most participants were White (661/1070, 61.8%), followed by Asian (121/1070, 11.3%), Black (116/1070, 10.8%), Indigenous (98/1070, 9.2%), and other ethnicities (74/1070, 6.9%). Additionally, the majority were aged ≤25 years (395/1070, 36.7%), were female (586/1070, 54.8%), had a high school diploma (554/1070, 51.8%), were single (633/1070, 59.2%), were unemployed (568/1070, 53.1%), and lived with family or friends (447/1070, 41.8%). The majority had anxiety or mood problems (639/1070, 59.7%) and low resilience (604/1070, 56.4%), as shown in Table 1, split by readmittance status.

Table 1. Chi-square test between the demographic and clinical antecedents and likely not admitted and admitted 6 months after discharge (N=1070)[a].

Variables	Not admitted (n=823)	Admitted (n=247)	Chi-square (*df*)	*P* value
Demographic characteristics				
Age (y), mean (SD)	32.8 (9.2)	32.8 (9.2)	1.5 (2)	.48
Age groups (y), n (%)			1.5 (2)	.48
≤25	300 (75.9)	95 (24.1)		
26-40	277 (75.9)	88 (24.1)		
>40	246 (79.4)	64 (20.6)		
Sex, n (%)			1.0 (2)	.59
Male	347 (76.8)	105 (23.2)		
Female	449 (76.6)	137 (23.4)		
Other	27 (84.4)	5 (15.6)		
Ethnicity, n (%)			3.4 (4)	.50
Asian	90 (74.4)	31 (25.6)		
Black	93 (80.2)	23 (19.8)		

Variables	Not admitted (n=823)	Admitted (n=247)	Chi-square (*df*)	*P* value
White	503 (76.1)	158 (23.9)		
Indigenous	75 (75.5)	23 (23.5)		
Other	62 (83.8)	12 (16.2)		
Education level, n (%)			2.9 (3)	.41
<High school	26 (66.7)	13 (33.3)		
High school	426 (76.9)	128 (23.1)		
Postsecondary education	346 (78.1)	97 (21.9)		
Other	25 (73.5)	9 (26.5)		
Current relationship status, n (%)			8.9 (4)	.06
Partnered, married, or common law	252 (81)	59 (19)		
Single	474 (74.9)	159 (25.1)		
Separated or divorced	66 (79.5)	17 (20.5)		
Widowed	11 (91.7)	1 (8.3)		
Other	20 (64.5)	11 (35.5)		
Current employment status, n (%)			14.7 (4)	.005
Employed	260 (82.6)	55 (17.4)		
Unemployed	413 (72.7)	155 (27.3)		
Student	73 (83.9)	14 (16.1)		
Retired	50 (79.4)	13 (20.6)		
Other	25 (71.4)	10 (28.6)		
Current housing status, n (%)			5.7 (3)	.13
Own home	168 (79.6)	43 (20.4)		
Rented	257 (74.5)	88 (25.5)		
Family or friends	352 (78.7)	95 (21.3)		
Couch, shelter, or other	45 (68.2)	21 (31.8)		
Clinical characteristics, n (%)				
Mental health diagnosis			2.0 (2)	.37
Anxiety or mood disorder	500 (78.2)	139 (21.8)		
Psychosis	127 (73.4)	46 (26.6)		
Substance use disorder, personality disorder, or other	195 (75.9)	62 (24.1)		
Brief Resilience Scale category			0.4 (1)	.53
Normal to high resilience	354 (76)	112 (24)		
Low resilience	468 (77.6)	136 (22.4)		
World Health Organization category			0.1 (1)	.80
Good well-being	423 (77.2)	125 (22.8)		
Poor well-being	398 (76.5)	122 (23.5)		
Depression category			0.7 (1)	.40
Unlikely depression	357 (78.1)	100 (21.9)		
Likely depression	464 (75.9)	147 (24.1)		
Anxiety category			0.6 (1)	.45
Unlikely anxiety	513 (76)	162 (24)		
Likely anxiety	302 (78)	85 (22)		
Cluster			1.8 (2)	.41
SMS	239 (77.3)	70 (22.7)		
SMS+peer support services	282 (78.3)	78 (21.7)		
Treatment as usual	321 (74.3)	111 (25.7)		
Six months prior to index admission			21.4 (1)	<.001
No	380 (83.5)	75 (16.5)		
Yes	462 (71.5)	184 (28.5)		

[a]Percentages sum across readmittance status (across rows).

A chi-square test of association between the demographic and clinical variables and readmission status (not readmitted or readmitted within 6 months after the index admission) indicated that current employment status (χ^2_4=14.7; P<.005) and admission within 6 months prior to the index admission (χ^2_1=21.4; P<.001) were significantly associated with readmission. Current relationship status showed a near-significant association (χ^2_4=8.9; P<.06), as shown in Table 1.

Table 2 presents the results of a binary logistic regression model used to predict the likelihood of readmission within 6 months after discharge. All 14 variables—namely, age category, sex category, ethnicity category, education category, current relationship status, employment status, current housing status, mental health diagnosis, BRS category, WHO category, depression category, anxiety category, cluster category, and admission within 6 months prior to the index admission—were included in the regression model. The model was statistically significant (n=1069; χ^2_{31}=53.7; P<.007). The model accounted for 5.1% (Cox and Snell R^2) to 7.1% (Nagelkerke R^2) of the variance and accurately classified 76% of participants as likely to be readmitted within 6 months after discharge.

Table 2. Multivariate logistic regression model predicting the likelihood of readmission within 6 months after discharge among participants.

Characteristics	β (SE)	Wald (*df*)	*P* value	Odds ratio (95% CI)
Age categories (y)				
≤25	Reference	1.97 (2)	.37	Reference
26-40	–0.059 (0.203)	0.085 (1)	.77	0.942 (0.633-1.40)
>40	–0.335 (0.257)	1.69 (1)	.19	0.715 (0.432-1.19)
Sex				
Male	Reference	1.96 (2)	.38	Reference
Female	0.123 (0.162)	0.575 (1)	.45	1.13 (0.823-1.55)
Other	–0.537 (0.530)	1.03 (1)	.31	0.585 (0.207-1.65)
Ethnicity categories				
Asians	0.207 (0.244)	0.725 (1)	.39	1.23 (0.763-1.98)
Black people	–0.348 (0.266)	1.71 (1)	.19	0.706 (0.419-1.19)
White	Reference	4.98 (4)	.29	Reference
Indigenous people	–0.138 (0.273)	0.256 (1)	.61	0.871 (0.510-1.48)
Other	–0.500 (0.347)	2.07 (1)	.15	0.607 (0.307-1.19)
Education categories				
Less than high school	Reference	1.52 (3)	.68	Reference
High school diploma	–0.440 (0.375)	1.38 (1)	.24	0.644 (0.309-1.34)
Postsecondary education	–0.348 (0.382)	0.826 (1)	.36	0.706 (0.334-1.49)
Other	–0.495 (0.558)	0.785 (1)	.38	0.610 (0.204-1.82)
Current relationship status				
Partnered, married, or common law	Reference	6.227 (4)	.18	Reference
Single	0.293 (0.196)	2.238 (1)	.14	1.34 (0.913-1.97)
Separated or divorced	0.040 (0.333)	0.015 (1)	.90	1.04 (0.542-2.00)
Widowed	–1.214 (1.082)	1.260 (1)	.26	0.297 (0.036-2.47)
Other	0.963 (0.517)	3.47 (1)	.06	2.62 (0.951-7.21)
Current employment status				
Employed	Reference	9.63 (4)	.047	Reference
Unemployed	0.522 (0.195)	7.18 (1)	.007	1.69 (1.15-2.47)
Student	–0.115 (0.357)	0.104 (1)	.75	0.891 (0.442-1.79)
Retired	0.523 (0.391)	1.79 (1)	.18	1.69 (0.785-3.63)
Other	0.328 (0.496)	0.436 (1)	.51	1.39 (0.525-3.67)
Current housing status				
Own home	Reference	6.94 (3)	.07	Reference
Rented accommodation	0.129 (0.242)	0.286 (1)	.59	1.14 (0.709-1.83)
Live with family or friends	–0.366 (0.267)	1.88 (1)	.17	0.693 (0.411-1.17)
Couch, shelter, street, or other	0.160 (0.357)	0.201 (1)	.65	1.17 (0.583-2.36)
Primary mental health diagnosis				
Anxiety or mood disorder	Reference	1.03 (2)	.59	Reference

Characteristics	β (SE)	Wald (*df*)	*P* value	Odds ratio (95% CI)
Psychosis	0.214 (0.219)	0.958 (1)	.33	1.24 (0.807-1.90)
Substance use disorder, personality disorder, or other	0.005 (0.187)	0.001 (1)	.98	1.01 (0.697-1.45)
Anxiety category				
Likely anxiety	Reference	Reference	Reference	Reference
Unlikely anxiety	–0.200 (0.186)	1.16 (1)	.28	0.818 (0.568-1.18)
Depression category				
Likely depression	Reference	Reference	Reference	Reference
Unlikely depression	0.126 (0.186)	0.458 (1)	.50	1.13 (0.788-1.63)
World Health Organization category				
Good well-being	Reference	Reference	Reference	Reference
Poor well-being	0.137 (0.178)	0.597 (1)	.44	1.15 (0.809-1.63)
Brief Resilience Scale category				
Normal to high resilience	Reference	Reference	Reference	Reference
Low resilience	–0.122 (0.171)	0.503 (1)	.48	0.886 (0.633-1.24)
Cluster				
SMS	Reference	3.09 (2)	.21	Reference
SMS+peer support services	–0.186 (0.203)	0.837 (1)	.36	0.830 (0.558-1.24)
Treatment as usual	0.145 (0.186)	0.607 (1)	.44	1.156 (0.803-1.67)
Six months prior to index admission				
No	Reference	Reference	Reference	Reference
Yes	0.566 (0.167)	11.51 (1)	<.001	1.76 (1.27-2.44)
Constant	–1.49 (0.523)	8.21 (1)	.004	0.224

Regarding readmission within 6 months after discharge, unemployed participants were almost twice as likely to be readmitted (OR 1.69, 95% CI 1.15-2.47) as employed participants. Similarly, participants who were admitted within 6 months prior to the index admission were almost twice as likely to be readmitted (OR 1.76, 95% CI 1.27-2.44) as participants with no prior admission. Intervention group assignment was not significantly associated with readmission within 6 months. Compared with the SMS group, participants in the SMS plus PSS group (adjusted odds ratio [AOR] 0.83, 95% CI 0.56-1.24; *P*=.36) and the TAU group (AOR 1.16, 95% CI 0.80-1.67; *P*=.44) had similar odds of readmission.

Discussion

The study aimed to identify predictors of psychiatric readmission within 6 months of the index admission. Among participants who received no intervention (ie, TAU), the readmission rate was 25.7%. This is slightly higher than the 6-month readmission rate of 24.5% reported in a US study evaluating personality-related predictors of readmission [40]. Similarly, a cohort study from England reported that 21.4% of individuals discharged from acute mental health care were readmitted within 6 months [21]. The variations could be attributed to differences in the patient population, health care system, and the definitions and measures used to define and measure psychiatric readmission across studies. However, this rate is lower than the 30.6% readmission rate reported in a study conducted at Moi Teaching and Referral Hospital in Kenya that examined readmission among psychiatric inpatients [18]. The 25.7% readmission rate within 6 months after discharge in the TAU group is much lower than the 60.4% readmission rate among patients who had been admitted within 6 months prior to the index admission. Two variables emerged as significant predictors of readmission: unemployment and admission within 6 months prior to the index admission. The study outcomes call for health care professionals to identify patients at higher risk of readmission and plan more targeted support interventions, such as follow-up care, referrals to community resources, medication management, and social support [41,42]. Mental health services can also allocate resources more effectively by focusing on high-risk individuals, thereby improving outcomes and reducing costs. Other sociodemographic and clinical variables included in the model, such as age, sex, current relationship status, and mental health diagnosis, did not independently predict readmission. These factors are

known to contribute to psychiatric readmission to acute care settings in other studies [23,43,44].

First, unemployed participants were nearly twice as likely to be readmitted as those who were employed. The result is consistent with previous literature highlighting the protective effects of employment, not only in terms of financial stability but also in promoting structure, purpose, and social engagement, all of which can reduce mental health crises and support recovery [44,45]. Unemployment exacerbates financial insecurity, may reduce social support, and can increase the risk of other adverse life events that can trigger or worsen mental health conditions [45]. The stress and loss of structure associated with unemployment can lead to increased anxiety, depression, and even substance use, all of which can increase the likelihood of needing acute mental health care [45,46]. Supportive text messages and PSS have provided evidence of benefits in reducing depression and anxiety and supporting recovery and social engagement in the community after discharge [47,48].

Second, admission within 6 months before the index admission was also a strong predictor of future readmission. This finding is in line with previous literature describing the phenomenon of "revolving door" in psychiatric care, in which individuals recently discharged are at an elevated risk of relapse or deterioration, possibly due to insufficient community support, lack of adherence to treatment [23], or the nature of the underlying conditions, such as schizophrenia, substance use disorder, and personality disorder [23,43,44]. Previous hospitalizations have been among the most consistently reported significant predictors of readmission [43]. Strengthening support systems to build autonomy and coping skills and sustain meaningful recovery within the community is vital to reducing the likelihood of readmission [42].

Mental health services should implement structured discharge planning that includes the early identification of high-risk individuals, particularly those who are unemployed or have had recent prior admissions. These factors can be used to stratify patients by readmission risk and guide the intensity of postdischarge support. For example, patients with a history of recent admissions may benefit from enhanced case management, more frequent follow-up contacts, early outpatient reviews within 7 days of discharge, and targeted postdischarge interventions such as Text4Support, which can provide regular supportive messages and appointment reminders, and PSS, which can promote engagement with care and community resources during the high-risk postdischarge period. Unemployed individuals may require enhanced social, economic, and clinical support alongside routine mental health care following discharge from inpatient psychiatric units. Adequate resources and funding should be allocated to organizations and agencies that provide community-based services and follow-up care. Policies that strengthen access to appropriate social, vocational, and mental health support services may help reduce the risk of psychiatric readmission among this population. By incorporating these identified correlates into intervention planning, mental health services can develop more targeted and efficient strategies to support recovery and reduce the likelihood of readmission. Further studies should validate these findings in different clinical and geographic settings to assess the generalizability and robustness of unemployment and recent admission as predictors. Understanding patients' experiences after discharge could illuminate gaps in community support and service delivery.

Selection bias is a limitation of this study, as participation required having an active mobile phone. This may have led to the exclusion of certain groups of people, including homeless individuals and people with mental illness who did not have the capability to access mobile phones. The regression model also demonstrated limited explanatory power, indicating that important predictors of readmission may not have been captured. Factors such as medication adherence, social support, housing stability, substance use, and illness severity were not included and may have contributed to the outcome. Therefore, the results should not be interpreted as providing a complete explanation of the causes of readmission; rather, they identify factors associated with readmission. Consequently, recommendations based on these findings should be viewed as complementary to broader interventions that address the clinical, social, and service-related factors not examined in this study. Moreover, employment status was categorized broadly, and the datasets did not distinguish between individuals who were unemployed and actively seeking work, those receiving disability benefits, or those unable to work due to illness or functional limitations. Consequently, the association observed between unemployment and readmission should be interpreted with caution, as different subgroups within the unemployed category may have distinct pathways to readmission and may require different forms of support. Additionally, although sex identity was collected, data on biological sex were not obtained. This limitation prevented analysis of biological sex as a potential influencing factor and precluded consideration of individuals whose sex at birth differed from their sex identity and the potential implications of this difference for readmission. This is important because biological factors, treatment response, and patterns of mental health service use may vary by sex and influence psychiatric outcomes. Furthermore, the study sampled only patients receiving psychiatric care in Alberta; therefore, our findings may be applicable only to Alberta and not to psychiatric patients elsewhere. Despite these limitations, this large-scale study provides important insights into the prevalence and predictors of 6-month readmission into acute mental health facilities in Alberta.

These findings reiterate the need to target modifiable factors associated with psychiatric readmissions. Unemployment and prior hospitalization within 6 months before the index admission emerged as key predictors of readmission. Although interventions aimed at improving employment opportunities and strengthening postdischarge support systems may help reduce readmission risk, these findings should be interpreted alongside the study's limited explanatory power and the likelihood that other important clinical, social, and service-related factors contribute to readmission. Future research should focus on the role of community-based

services, vocational rehabilitation, individualized postdischarge care planning, medication adherence, social support, housing stability, substance use, and illness severity to develop more comprehensive models of psychiatric readmission and provide a stronger evidence base for intervention planning.

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Generative AI Use

Grammarly was used solely for grammar, spelling, and language editing of text written by the authors. The authors are fully responsible for the manuscript's content, interpretation, and conclusions.

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Data Availability

The data used in this study are not publicly available for ethical and privacy reasons but are available upon request from the corresponding author.

Authors' Contributions

Conceptualization: VIOA
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Project administration: VIOA
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Supervision: VIOA, AJG
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Conflicts of Interest

None declared.

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Abbreviations

AOR: adjusted odds ratio
BRS: Brief Resilience Scale
GAD-7: Generalized Anxiety Disorder–7
LOS: length of stay
OR: odds ratio
PHQ-9: Patient Health Questionnaire–9
PSS: peer support services
TAU: treatment as usual

WHO: World Health Organization

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