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The length of stay of psychiatric admissions in Al-Rashad training psychiatric hospital a retrospective study

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Abstract

Background: Prolonged hospital stays can signal underlying clinical, social, and systemic inefficiencies that contribute to delayed discharges. Factors such as clinical severity, social challenges, and the organization of healthcare systems are pertinent to the duration of hospitalization. Objective: This study was designed to explore the average length of stay (LOS) at Al-Rashad Training Psychiatric Hospital and to analyze sociodemographic as well as certain clinical characteristics associated with extended psychiatric admissions.

Methods: We conducted a retrospective review of patient records over a three-year span from 2019 to 2021 at Al-Rashad Training Psychiatric Hospital, focusing on patients discharged during this timeframe. Data collection encompassed sociodemographic details and clinical attributes of the psychiatric admissions.

Results: Our findings indicate that 58% of patients experienced hospital stays exceeding six months, whereas 42% were hospitalized for shorter durations. Extended stays were notably correlated with the following factors: a younger age demographic (≤ 35 years) at 67.3%, education at primary level or below (62.3%), unemployment status (55.4%), psychiatric comorbidity (87.5%), medical comorbidity (66.1%), diagnosis of schizophrenic disorder (58.8%), necessity for mood stabilizers (65.2%), presence of extrapyramidal symptoms (80.0%), and the requirement for psychotherapy (78.0%).

Conclusions: The long hospitalization in Al-Rashad Training Hospital may be due to lack of social and family support, the lack of availability of community care services. Large proportions of patients were single young-aged, unemployed, and poorly educated. There were significant proportions of our patients were experiencing a psychosis with a chronic course, and with a comorbid psychiatric and medical disorder.

Keywords: Length, stay, psychiatric, admissions, a retrospective study

Introduction

Mental health services in low-income countries face significant barriers, including insufficient infrastructure, inadequate funding, and a lack of psychiatric beds, leading to challenges like early discharges and high readmission rates ^[1-4]. The cost of mental health disorders is rising globally, projected to reach US\$ 6.0 trillion by 2030 ^[4]. Mental health expenditure in low and middle-income countries is less than 1% of total health budgets ^[4], contributing to low treatment access, as seen in Iraq where only 6.12% of those with disorders receive treatment ^[5]. The deinstitutionalization movement, which started in the 1950s, shifted the focus from large asylums to community-based care, to avoid the poor conditions and ill-treatment in asylums ^[6]. However, this shift has led to "bed blocking" due to the lack of community services, with 35% of all discharges being delayed, predominantly affecting the poorest ^[7]. In psychiatry, delayed discharges are frequent, with reasons ranging from patients' refusal of assistance to lack of outpatient services ^[8]. Long hospital stays in psychiatry are influenced by several factors. Studies suggest shorter stays can be as effective as longer ones and reduce costs, but there's a risk of increased relapse and readmission ^[9]. Variables like age, gender, and socioeconomic status show inconsistent associations with readmission rates across different studies ^[10]. Family involvement can expedite discharge, but stigma and caretaking burdens often lead to reluctance in family support ^[11]. Treatment barriers for severe mental disorders include non-adherence due to side effects, stigma, lack

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of knowledge, inadequate resources, and financial instability^[12]. Schizophrenia, a core concern in psychiatry, is a complex disorder with variable manifestations and profound impact on cognition, emotion, and behavior^[13]. Despite the availability of various pharmacological and psychological treatments, the management is primarily symptomatic, and medication side effects, especially extrapyramidal symptoms (EPS), pose significant challenges to treatment adherence and quality of life^[14]. This study aimed to investigate the average length of stay (LOS) at Al-Rashad Training Psychiatric Hospital. To evaluate the Sociodemographic and some clinical characteristics factors of psychiatric admissions that associated with prolonged hospitalizations.

Methods

In a retrospective cross-sectional study conducted at Al-Rashad Training Psychiatric Hospital, the files of psychiatric inpatients discharged between 2019 and 2021 were reviewed. From April to September 2022, data for 350 psychiatric admissions diagnosed according to DSM-5 criteria were collected, excluding 20 patients due to either being returned to authorities or death during hospitalization. The study analyzed sociodemographic data (sex, age, marital status, occupation, and education) and clinical characteristics (discharge diagnosis, treatments, psychotherapy, comorbid medical conditions, comorbid psychiatric disorders, extrapyramidal symptoms, substance use disorders, duration of hospital stay, and outcome). Statistical significance was determined using p-values calculated for each data table with the help of a statistician. Ethical clearance was obtained from the ethical and scientific committee of the Iraqi Board of Psychiatric Department and Al-Rashad Training Psychiatric Hospital's health authority. Data were managed using Microsoft Excel 2016 and analyzed with SPSS v26. Descriptive statistics were presented in tables and graphics. The Chi-square test assessed the association between independent variables and the duration of hospital stay, which was categorized into stays of less than 6 months and more than 6 months. Primary logistic regression was performed to ascertain the effect of each independent variable on the duration of hospitalization, adjusted for other significant variables. A p-value of less than 0.05 was considered statistically significant.

Results

The results of this cross sectional study show that 330 cases were included. Table 1 and figure 1 display that 47%, 37% and 16% of studied patients aged less than 35 years, 35-50

year and more than 50 years respectively. It was found that 58% of patients were males. According to marital status 30% of patient were married, 62% were singles and 8% were either widowed or divorced, 16% of patients had jobs, and the educational status was primary school or below, in 42%.

Table 1: Socio-demographic characteristics

		N	%
Age	<35 year	156	47%
	35-50 year	121	37%
	>50 year	53	16%
Gender	Male	191	58%
	Female	139	42%
Marital Status	Married	99	30%
	Single	204	62%
	Other	27	8%
Job	Employed	54	16%
	Unemployed	276	84%
Education	Primary and below	138	42%
	Above primary	192	58%

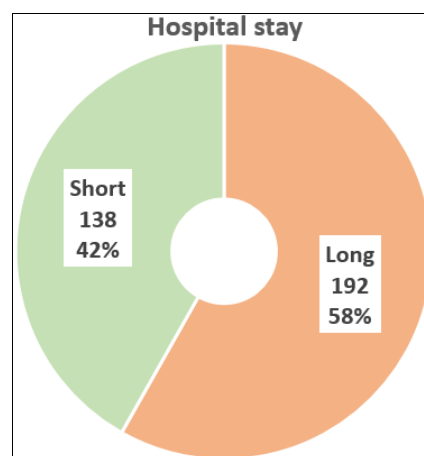


Fig 2: (Distributions of studied cases according to duration of hospital stay with less than 6 months in 41.8% of cases and more than 6 months in 58.2%.)

Table 2 shows that 77.9% of patients had schizophrenic disorder, 17% cases had comorbid psychiatric disorders, 33% had comorbid medical conditions, substance disorders used mentioned by 2.7% of cases, and 39.1% were treated with antipsychotic, 60.9% treated with antipsychotic plus mood stabilizers, 21.2% showed extrapyramidal disorders, 32.1% had remission at the end of treatment and 62.1% need psychotherapy.

Table 2: Distribution of studied cases according to medical variables

Diagnosis	Schizophrenic disorders	257	77.9%
	Other disorders	73	22.1%
Comorbid psychiatric disorder	Yes	56	17.0%
	No	274	83.0%
Comorbid medical condition	Yes	109	33.0%
	No	221	67.0%
Substance use disorder	Yes	9	2.7%
	No	321	97.3%
Treatment	Antipsychotic	129	39.1%
	Antipsychotic and mood stabilizer	201	60.9%
Extrapyramidal symptoms	Yes	70	21.2%
	No	260	78.8%

Outcome	Remission	106	32.1%
	No change	224	67.9%
Psychotherapy care	Yes	205	62.1%
	No	125	37.9%

Table 3: Distribution of studied cases according to psychiatric comorbid

Psychiatric Comorbid disorders	N (50)	Type of disorders	N (%)
No	274 (83%)		
Yes	56 (17%)	Sleep disorders	20(6%)
		Personality disorders	32(9.8%)
		Bipolar	4(1.2%)

Figure 3 shows that 274 (83%) case had no psychiatric disorders, while 56 (17%) had psychiatric comorbid

disorders: 20 (6%) had sleep, 4 (1.2%) bipolar disorder and 32 (9.8%) had personality disorders.

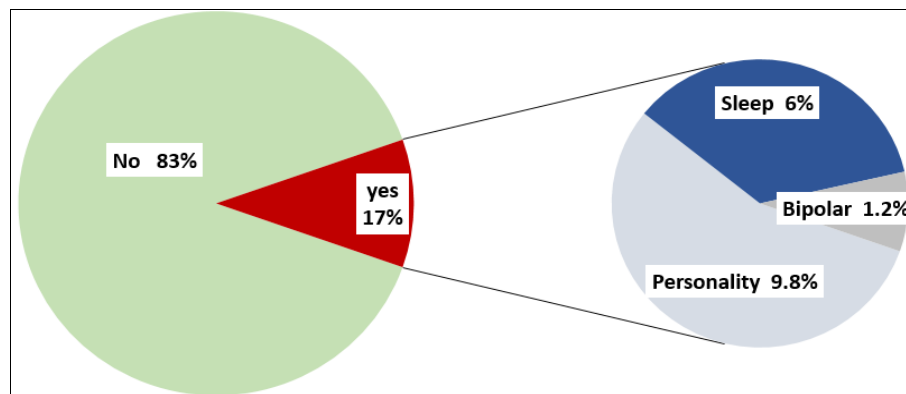
**Fig 3:** Distributions of studied cases according to history of psychological morbidity

Table 4 shows that longer period of hospital stay (More than 6 months), was needed by younger age patients (Less than 35 years) than that of middle (35-50 year), and old age (50 year), p value 0.006. Patients with physical and psychiatric comorbidity, patients need mood stabilizer, patients with job, patients with Extrapyramidal symptoms and patients need psychotherapy were found to be significantly

associated with longer duration of hospital stay, p value >0.05 in all conditions. No significant association were noticed between duration of stay and: gender, marital status, educational level, diagnosis, substance use disorders and outcome of patient treatment, p value more than 0.05 in all condition.

Table 4: Association between studied independent variables and duration of hospital stay

		> 6 month		<= 6 month		P value
		N	%	N	%	
Age	<35 year	105	67.3%	51	32.7%	0.006
	35-50 year	59	48.8%	62	51.2%	
	>50 year	28	52.8%	25	47.2%	
Gender	Male	108	56.5%	83	43.5%	0.480
	Female	84	60.4%	55	39.6%	
Marital Status	Married	51	51.5%	48	48.5%	0.286
	Single	124	60.8%	80	39.2%	
	Other	17	63.0%	10	37.0%	
Job	Employed	15	27.8%	39	72.2%	0.022
	Unemployed	153	55.4%	123	44.6%	
Education	Primary and below	86	62.3%	52	37.7%	0.196
	Above primary	106	55.2%	86	44.8%	
Substance use disorder	Yes	4	44.4%	5	55.6%	0.397
	No	188	58.6%	133	41.4%	
Need for mood stabilizer	Yes	131	65.2%	70	34.8%	0.001
	No	61	47.3%	68	52.7%	
Continue to Table 4 association between studied independent variables and duration of hospital stay						
						P value
		N	%	N	%	
Extrapyramidal symptoms	Yes	56	80.0%	14	20.0%	0.001
	No	136	52.3%	124	47.7%	
Comorbid psychiatric disorder	Yes	49	87.5%	7	12.5%	0.001
	No	143	52.2%	131	47.8%	
Comorbid medical condition	Yes	72	66.1%	37	33.9%	0.042

	No	120	54.3%	101	45.7%	
Diagnosis	other disorders	41	56.2%	32	43.8%	0.692
	Schizophrenic disorders	151	58.8%	106	41.2%	
Outcome	Remission	60	56.6%	46	43.4%	0.669
	No change	132	58.9%	92	41.1%	
Psychotherapy care	Yes	99	78.0%	28	22.0%	0.001
	No	93	45.8%	110	54.2%	

Table 5 shows that after adjustment of all other variables, the following variables are risk factors for longer hospital stay: younger age (OR=1.831, $p=0.006$), comorbid psychotic disorders (OR=8.975, $p=0.001$), treatment with mood stabilizer (OR=2.001, $p=0.001$), presence of extrapyramidal symptoms (OR=2.358, $p=0.025$), and need for psychotherapy (OR=5.164, $p=0.001$).

Table 5: Effect of independent studied variables on duration of hospital stay after adjustment of effect of other variables using binary logistic regression

	B	S.E.	Sig.	Odds ration
Age	.605	.193	.002	1.831
Job	.680	.376	.071	.823
Comorbid psychiatric disorder	2.194	.476	.000	8.975
Comorbid medical condition	-.055	.309	.858	.998
Treatment with mood stabilizer	.694	.274	.011	2.003
Extrapyramidal symptoms	.858	.383	.025	2.358
Psychotherapy care	1.642	.293	.000	5.164
Constant	-14.172	1.768	.000	.000

Discussions

Hospital over three years (2019-2021), to understand the characteristics contributing to the length of stay (LOS) for psychiatric patients. It was found that 58% of the patients had an LOS of more than 6 months, often due to a lack of social and familial support and community care services, leading to institutional dependency. Comparatively, an Australian study at Alfred Hospital reported a shorter LOS, with 38% discharged within 7 days and 85% within 28 days^[15]. The Alfred study also noticed a rise in hospitalizations for the younger demographic, which may reflect an increased availability of hospital beds and a rising prevalence of psychiatric disorders. Sociodemographic factors such as age showed a correlation with LOS, with younger patients (≤ 35 years) making up 67.3% of long stays, mirroring findings in an Australian study where long hospitalization was associated with patients under 39 years^[15]. Unemployment also emerged as a significant factor, with unemployed patients more likely to have extended stays. Marital status and education did not show a significant association with LOS, consistent with findings in a Brazilian study^[16]. However, being single was associated with longer hospitalizations, which could be linked to less family support. Psychiatric comorbidities were significantly associated with longer hospital stays, with 87.5% of long-stay patients having comorbid psychotic disorders, a finding aligned with studies from southern Brazil^[16]. Comorbid medical conditions were prevalent in 66.1% of long-stay patients but did not significantly affect LOS, a pattern also seen in an Ethiopian study^[17]. Substance use disorders were not well-represented due to data limitations. However, treatment modalities like the need for mood stabilizers were linked to longer stays. This was consistent with an Italian study that found polypharmacy to be a factor in extended hospitalization^[18]. According to diagnostic criteria, schizophrenia predominated among long-stay patients;

nevertheless, there were no significant variations in LOS throughout the illness distribution. Extrapyramidal symptoms (EPS) were, however, far more common in long-stay patients (80%), indicating a possible correlation with prolonged hospitalization and consistent with data from Ethiopia^[17]. Results showed that longer hospital stays were linked to greater rates of remission, which may be explained by the chronic nature of the illnesses being treated and the need for more time for a medication to take effect. A dearth of aftercare services made this worse and postponed discharge until remission. Longer length of stay (LOS) was also associated with the requirement for psychotherapy and rehabilitation programmes, suggesting the importance of psychological treatments in patient recovery. Similar emphasis was placed on the value of these services in ward settings for patients who would need prolonged stays by an Italian research^[18].

Conclusion

Complicated and diverse factors influence the length of hospital admissions for psychiatric patients. Numerous researchers have observed that the importance of these factors transcends managerial and financial implications and encompasses clinical, ethical, and societal ramifications. There is evidence to suggest that prolonged psychiatric admissions may be correlated with specific sociodemographic factors and clinical attributes that serve as indicators of the illness's severity. Furthermore, there is a possibility that extended periods of remain are associated with social isolation or a decline in socioeconomic standing, both of which may be consequences of the incapacitating effects of severe and chronic mental health disorders.

Conflict of Interest

Not available

Financial Support

Not available

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