

Original Research Article

A study of factors influencing the duration of stay in forensic psychiatric ward patients

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	International Archives of Integrated Medicine, Vol. 6, Issue 2, February, 2019. Copy right © 2019, IAIM, All Rights Reserved. Available online at http://iaimjournal.com/	
	ISSN: 2394-0026 (P)	ISSN: 2394-0034 (O)
	Received on: 28-01-2019 Source of support: Nil	Accepted on: 04-02-2019 Conflict of interest: None declared.
How to cite this article: Mukkara Rama Subba Reddy, CH. Prasanth, B. Sowmya Grace. A study of factors influencing the duration of stay in forensic psychiatric ward patients. IAIM, 2019; 6(2): 34-43.		

Abstract

Background: Psychiatric patients who are admitted in to forensic psychiatric ward have frequent hospital admissions and prolonged length of hospital stay, may be due to the growing demands in health services and the limitation of resources of patients and their care takers.

Aim and objectives: To study the mean duration of stay in psychiatric forensic wards and to study the socio demographic factors of the admitted patients and their clinical profile.

Materials and methods: A total of 150 case records fulfilling criteria for study were taken. Semi - structured proforma for socio demographic and clinical variables were used and analyzed using SPSS.

Results: Mean duration of hospital stay in closed ward patients was 92.47 and the mean duration of hospital stay was 21.9 days in patients whose reception order had a clear mention of free citizen and can be handed over to family members in comparison 38.9 days in “To be produced before the court”, 33.71 days in reception order having “Yet to be clarified”.

Conclusion: Socio-demographic factors like educational level, clinical diagnosis, details of the reception order regarding discharge status, residential status after discharge are significant factors which influenced the duration of hospital stay in forensic ward patients. We also noticed that certain phrasings of the reception order have much significantly influenced the delay in the discharge.

Key words

Closed ward admissions, Mean duration of stay, Reception order.

Introduction

Involuntary admission and management of psychiatric patients in a psychiatric nursing home or hospital is guided by mental health act 1987 [1]. A reception order can be issued by First class judicial magistrate or above rank. There is scarcity of literature in this connection regarding patient's perspectives of involuntary admission, mean duration of hospitalization, refusal of family members and community to integrate patient back in the society after treatment, because of poor liaison between different departments of State. With this background there is a need to look in to such factors influencing the duration of hospitalization and process of reintegration of these patients back in to the community. Identifying such factors might help in making better plans to reintegrate them as early as possible after their treatment. This reduces the burden on psychiatric hospitals in terms of conserving financial and human resources of the State. The process of reintegration of mentally ill patients admitted by a reception order back in to the community is more difficult as refusal by family members is significant factor [2, 3]. At times lack of clarity and ambiguity in judicial orders concerning the involuntary admission may itself cause the delay or further delay in addition to delay due to family refusal to accept patient back [4, 5]. Many previous studies have focused on the differences between patients admitted voluntarily and involuntarily. Involuntary admission procedures vary from country to country. Among these studies majority revealed differences in socio demographic characteristics, psychopathology, the likelihood of violence, diagnosis, history of admission to psychiatric facilities [6-7]. Suicidal and violent behaviours were more in involuntary patients [8]. Involuntary admission in other parts of the world has been reported to involve young and single people [9], as well as middle-aged men [10, 11]. In a study done by Kandrakonda, et al. 2014, in 113 case records of closed ward patients, found that, discharge status mentioned in the reception order is influencing the duration of hospital stay in closed ward patients [2].

Research on length of hospital stay in psychiatric patients in India is under-investigated issues which were done in other countries. The present study was a retrospective study conducted at tertiary psychiatric care hospital in Hyderabad.

Aim and objectives

- To study the factors influencing the duration of hospital stay in forensic psychiatric ward patients.
- To study the mean duration of stay of involuntary patients in forensic wards.
- To study the socio demographic factors of the admitted patients.
- To study the clinical profile.
- To study the relationship between these factors.

Materials and methods

Study design: This was a retrospective study and data was collected from medical records of 150 patients who were discharged from both male and female closed wards of this hospital during period of January 2018 to June 2018. This study was carried out at tertiary psychiatric centre, which is 800 bedded psychiatric hospital in Hyderabad, with prior approval from the concerned authorities. These case records were studied and the information about the socio demographic factors, details of the reception order, previous admissions, present family members at the time of admission, family history of mental illness, care taker contact tracing, total duration of illness, duration of hospital stay after discharge and where they are residing after discharge and co morbidity medical psychiatric illness were taken in a semi structured proforma.

Inclusion criteria

- Medical case records of patients who got admitted into forensic ward with reception order under section 20-25 of MHA.
- Patients who were discharged from both male and female closed wards during January 2018 to June 2018.

Exclusion criteria

- Admission of patients into closed wards through requisition from state homes without reception orders.
- Patients admitted without reception orders like patients who were relatives of hospital staff requesting for admission.

Statistical analysis: Statistical analysis was done using statistical package for the social sciences (SPSS) for windows version 19. Quantitative data was analyzed using percentages and bar

graphs; Qualitative data was analyzed using chi-squared test. p value <0.05 was considered significant.

Results

All the patients in forensic psychiatric ward were divided in to two groups based on the duration of stay in the hospital. They were classified in to two groups. Group I are patients who stayed for less than 90 days and Group –II are patients stayed for more than 90 days and data was tabulated.

Table - 1: Socio Demographic details of Forensic Psychiatric in Patients (n=150).

VARIABLES	DURATION OF HOSPITAL STAY		Total (n=150)
	Group-I (0- 90 days)	Group-II (>90 days)	
Mean age	33.36 +/-9.63	35.25 10.617	
Gender			
Male	79(52.6%)	48(32%)	127(84.6%)
Female	10(6.66%)	13(8.6%)	23(15.33%)
Religion			
Hindu	64(42.6%)	49(32.6%)	113(75.33%)
Muslim	15(10%)	10(6.66%)	25(16.6%)
Christian	10(6.66%)	2(1.33%)	12(8%)
Sikh and others	0	0	0
Education			
Illiterate	24(16%)	10(6.66%)	34(22.6%)
Primary school	4(2.6%)	6(4%)	10(6.66%)
Middle school	16(10.6%)	4(2.6%)	20(13.3%)
High school	32(21.3%)	27(28%)	59(39.33%)
Intermediate	6(4%)	7(4.6%)	13(8.6%)
Graduate	4(2.6%)	7(4.6%)	11(7.33%)
Post graduate/professional Courses	3(2%)	0	3(2%)
Employment			
Un employed	36(24%)	32(21.33%)	68(45.33%)
Unskilled	18(12%)	8(5.3%)	26(17.33%)
Semi-skilled	9(6%)	6(4%)	15(10%)
Skilled	4(2.6%)	5(3.33%)	9(6%)
Clerical/shop owner/farmer	16(10.6%)	5(3.33%)	21(14%)
Semi professional	2(1.3%)	1(0.66%)	3(2%)
Professional	4(2.6%)	4(2.6%)	8(5.3%)
Domicile			
Rural	59(39.3%)	43(28.6%)	102(68%)
Urban	30(20%)	18(12%)	48(32%)
Socioeconomic status			
Upper	0(%)	0	0

Upper middle	0(%)	0	0
Middle	5(3.33%)	3(2%)	8(5.3%)
Upper lower	14(9.3%)	14(9.33%)	28(18.6%)
Lower	70(46.6%)	44(29.33%)	114(76%)
Marital status			
Unmarried	36(24%)	29(19.33%)	65(43.33%)
Married	35(23.3%)	23(15.33%)	58(38.6%)
Separated	13(8.6%)	6(4%)	19(12.6%)
Divorced	5(3.33%)	3(2%)	8(5.3%)

Table - 2: Total Duration of Hospital Stay.

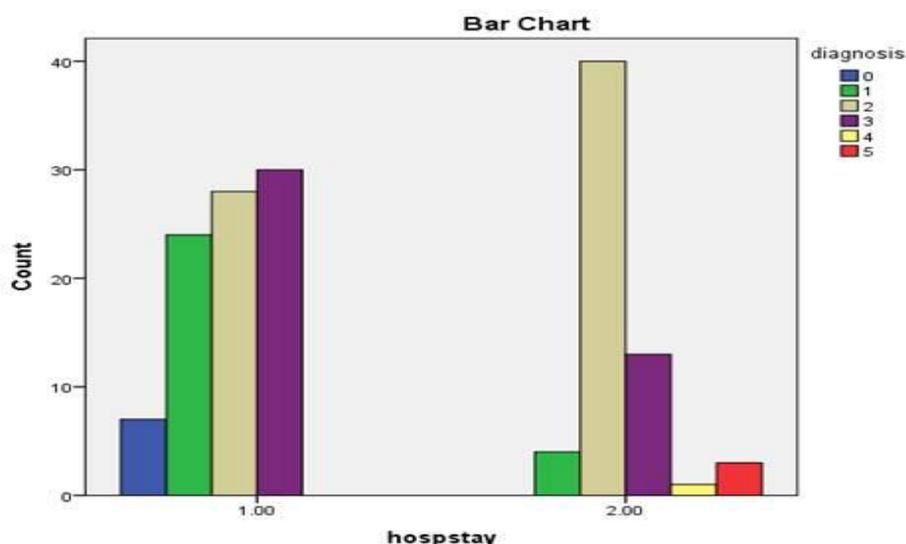
Mean	N	Std. Deviation	Median	Range	Minimum	Maximum
92.47	150	63.223	75.00	518	22	540

Table - 3: Diagnosis Of Patients in Forensic Psychiatric Ward.

		Diagnosis					Total	
		Not yet diagnosed	Alcohol related disorders	schizophrenia	BPAD mania	depression		Organic mental disorders
Hospital stay	0-90 days	7	24	28	30	0	0	89
	>90 days	0	4	40	13	1	3	61
Total		7	28	68	43	1	3	150

Graph - 1: Duration of Hospital Stay in Patients with Different Diagnosis.

0: not diagnosed (blue), 1- alcohol related disorders (green), 2- schizophrenia (grey), 3- BPAD mania (purple), 4- depression (lemon yellow), 5- organic mental disorders (red).



Among total 150 patients, mean age was 34 years (range 18-65 years). Majority of the patients were males 127(84.6%), were in the age group of 26- 35 years, whereas females were only 23(15.3%) and mostly in the age group of 36-55 years. Most of the patients were hailing from rural background (68%) this implies rural areas

might have high risk of involuntary admission requirement may be due to poor access to mental health care facilities, which can cause delay in initiation of early treatment to these patient and greater number of patients were unmarried constituting (43%) because their single status might be related to the chronic mental illness and

this may also imply that unmarried or separated people from their spouses were likely to have high risk of involuntary admission comparing to those who are having stable marital relationship. Hindu religion predominates across the group. Nearly three fourth of the patients were illiterates

and below high school level, this indicated that, people with less formal education were at greater risk of getting admitted in to the closed wards and **Table - 1** also shows that majority of them were unemployed and belonged to low socioeconomic status (76%).

Table - 4: Comparison of Variables Across Groups.

Variables	Duration of hospital stay			P value
	0-90 days	> 90 days	Total (n=150)	
Certified by psychiatrist				
certified	41	29	70	0.869
Not certified	48	32	80	
Previous admissions				
Yes	19	19	38	0.187
No	70	42	112	
Family members present at the time of admission				
present	68	45	89	0.713
absent	21	16	61	
Discharge status				
Free citizen	39	15	54	0.04
To be produced before court	16	18	34	
Yet to be clarified	34	28	62	
Is section of mental health act mention in the reception order				
mentioned	64	42	106	0.686
Not mentioned	25	19	44	
Caretaker contact tracing				
Done	78	47	125	0.087
Not done	11	14	25	
Residential status after discharge				
With family	75	39	114	0.006
Others	14	22	36	

The mean duration of stay was 92.47 days. In this study, we found that there were huge variations in the period of hospitalization (**Table - 2**). Hence, median duration and range were chosen to describe the duration of hospitalization. **Table - 2** shows that median duration of stay in these patients was 75 days with a minimum of 22 days to maximum of 540 days.

Table - 3 shows diagnosis of schizophrenia about 45.3% followed by affective disorders

BPAD. This study also implied that schizophrenic patients were at high risk of requiring involuntary admission than patients with mood and alcohol related disorders.

Graph - 1 shows diagnosis of bipolar disorder mania (n=30; 21%) predominated across the first group i.e. patients staying < 90 days followed by schizophrenia (n=28; 18.6%); In the second group i.e. patients staying >90 days, schizophrenia (n=40; 26.6%) predominated followed by bipolar disorder mania (n=13;8.6%);

alcohol related disorders in the second group were only n=4 (2.6%), when compared to (n=24; 16%) in the first group. This implied that patients suffering alcohol related disorders and mood

disorders were getting discharged earlier when compared to schizophrenia and other psychotic disorders.

Table - 5: Co-morbidities of patients in forensic psychiatric ward.

Variables	Duration of hospital stay			P value
	0- 90 days	> 90 days	Total	
History of past psychiatric illness				
Present	14	4	18	0.89
Not present	75	57	132	
History of co morbid medical illness				
present	21	16	37	0.713
not present	68	45	113	
Family history of psychiatric illness				
present	23	10	33	0.170
not present	66	51	117	

Table - 6: Relation Of Reception Order Details With Mean Duration of Hospital Stay After Discharge

Discharge status	Mean duration of hospital stay after discharge	No. of patients	Std. Deviation
Free citizen	21.91	54	28.310
To be produced before court	38.91	34	55.598
Yet to be clarified	33.71	62	38.231
Total	30.64	150	40.190

Table - 7: Mean Duration of Stay in Patients with Various Discharge Status Mentioned in Reception Order.

VARIABLES	MEAN	STANDARD DEVIATION	MEDIAN	RANGE
Total duration of hospitalization status after discharge mentioned in the reception order	92.47	63.3	75	22-540
a) free citizen	77.59	44.19	66	27-200
b)to be produced	99.91	60.85	90	28-270
c) yet to be clarified	101.35	75.86	80	22-540

In the **Table – 4**, we analyzed whether patient was already certified by a psychiatrist before getting admitted and we could not find any significant difference and we could concluded from **Table - 4** that

- Patients who were not having previous admissions (n=70; 46.6%)
- Patients having family members at the time of admission (n=68; 45.33%)

- Patients for whom their care taker was contacted (n=78; 52%)
- Patients who were mentioned as free citizens in the reception order (n=39; 26%)
- For whom the section of mental health act was mentioned in the reception order given by honorable magistrate (n=64; 42.6%) were discharged earlier i.e. within 90 days. It also showed that,

about 76% of patients were staying along with family members after discharge and remaining were rehabilitated at homes and we found that patients who were having good family support were being discharged earlier (50%) and it was found to be statistically very significant ($p= 0.006$).

When we analyzed the reception order details which was used for referring these patients to psychiatric hospital for involuntary admission, important finding was that mention of how should be patient handled once his or her treatment finishes i.e. how a patient should be sent back to the community after their recovery and what process should be adopted for that? In about one thirds it was mentioned that they should be handed over to their family members, 22% should be produced before the same magistrate for revaluation and remaining 41 % it was mentioned as yet to be clarified.

In our study, we found that such wordings have significance in either prolonging or restricting the patient's hospital stay even after their improvement and declaration as fit for discharge by the hospital board.

Table - 5 shows that patients who were not having any past history of psychiatric illness ($n=75$; 50%), patients who were not having co morbid medical illness ($n=68$; 45.33%), patients who were not having the family history of psychiatric illness ($n=66$; 44%) were discharged earlier i.e. within 90 days of admission in to hospital.

Table - 6 showed that mean duration of hospital stay after discharge was 30.64. It was less (21.91) in patients with the discharge status as free citizen mentioned in their reception order and more in patients with reception order showing to be produced court (38.91) and yet to be clarified (33.71).

Mean duration of stay in patients with various discharge status mentioned in reception order was as per **Table – 7**.

Discussion

This study showed longer duration of stay in involuntary admission patients was found to be associated with various factors like socio demographic variables, clinical diagnosis and residential status after discharge and reception order details were found to be more significant which are comparable to the previous studies. In socio demographic factors, most of the patients are hailing from rural back ground, this implies rural areas might have high risk of involuntary admission requirement may be due to poor access to mental health care facilities, which can cause delay in initiation of early treatment to these patients resulting in longer duration of stay. Greater number of patients was unmarried because their single status might be related to the chronic mental illness and this may also imply that unmarried or separated people from their spouses are likely to have high risk of involuntary admission and delay in discharge comparing to those who are having stable marital relationship. Nearly three fourth of the patients are either illiterates or below high school level, implies that, people with less formal education are at greater risk of getting admitted in to the closed wards and discharged late when compared with literates. This study also implies that schizophrenic patients are at high risk of staying longer duration than patients with mood and alcohol related disorders because of its course and prognosis.

It was seen that, who are not having previous admissions, patients having family members at the time of admission patients for whom their care taker was contacted during the hospital stay were discharged earlier. In this study, although we have assessed the co morbid conditions, the duration of stay was not significantly associated with past and family history of psychiatric illness and presence of medical co morbidities.

Some of the mentally ill patients were found to be wandering on the roads are brought to the mental hospital by local police, through the reception order. After treatment, as the

psychopathology reduces, few are able to give their address details and some patient's couldn't able to give any contact details. This type of patients was staying for very long duration. So care taker tracing was found to be one of the important factors for duration of hospital stay.

In our study, we found that, some patients were kept involuntarily in closed wards even for more than one year and some were kept only as few as 22 days while analyzing the details of the reception order given by the honorable magistrate, we found that when it was mentioned as free citizen in the discharge status were only retained for a mean duration of 77 days with a maximum of 200 days, this is mainly because there is clear direction saying that patient can be handed over to family members after the treatment and this appears to be simple procedure without involvement of concerned police officer in charge and magistrate, but often resistance from the family members was also observed (as per case records, multiple calls were made by the hospital staff, but they have not responded), who are reluctant to take the patient back to home, in these cases hospital staff has to travel for hundreds of kilo meters and took the local police help to hand over the patient back in their home. This hospital does not have any community social worker who can liaise with the family members to address their fears and to facilitate their early reintegration back into home.

When it was mentioned that patients should be produced before magistrate after treatment patients were detained for a median duration of 99 days with a maximum of 270 days. This is mainly because the patient has to produce before the same magistrate by the concerned police station from which he was brought to the hospital. So after declaring the patient as fit for discharge it has to be communicated to the in charge police officer of the corresponding police station that patient is recovered from mental illness and he may be produced before magistrate as per the reception order. In certain cases it was observed that police were reluctant to take

patient back complaining lack of adequate staff (as per case records).

In certain orders it was mentioned that discharge status as yet to be clarified were retained for a mean duration of 101 days with a maximum of 540, this is mainly due to lack of clarity about his post discharge status. The hospital staff has to make discharge intimation to the in charge police officer of corresponding police station and to the honorable magistrate to give suitable directions whether the patient should be handed over to the family members or to be produced before him. In certain cases the family members have to go around magistrate and police stations for their orders to take patient along with them, and as this type of procedure is time and money consuming.

One of the significant finding in our study which will have future implications are when there is mention as free citizen after his/her treatment, the median duration of stay was 66, whereas 90 days and 80 days, when there is mention of to be produced before court and yet to be clarified respectively. This is very significant in our opinion that if there is a clear mention as a free citizen after their treatment a patient is less likely to spend in hospital. This reduces the cost on State care facility both in terms of financial and medical resource expenditure. This also has implication as the person leaves early back in to the community he or she is more likely to return to work thus improving the overall productivity at the community. In our study we noticed that this delay in the discharge also because of certain phrasings of orders in addition to the type of illness. These results are comparable with study done by Kandrakonda, et al. discharge of patients with mental illness [10].

This type of studies should be conducted in other psychiatric institutions all over the country to understand the pattern of issuing reception orders. In new mental health care act 2017, there is a provision to revoke the reception order at any point of time by the review board consisting of judiciary and medical personnel; this might have

help in minimizing the duration of hospital stay in forensic ward patients.

Limitations

- This study was a retrospective study, from medical records of discharged patients.
- This study was carried out in a single centre hence generalization is questionable.

Conclusion

Our study was an attempt to throw some light on Indian context as most of the studies are from other countries, the mean duration of stay is 92.4 days with a standard deviation of 63.2 days, there are huge variation in the period of hospitalization, socio demographic factors like educational level, clinical diagnosis, details of the reception order regarding discharge status, residential status after discharge are significant factors, which influenced the duration of hospital stay in closed ward patients. We also noticed that certain phrasings of the reception order have much significantly influenced the delay in the discharge along with above said factors. Finally we conclude that there are significant factors which favour short stay hospitalization for good social functioning.

Future directions

Duration of stay in closed ward patients was associated with many factors which include socio demographic factors, diagnosis of the patient, details of the reception order and the co morbidities. Hence, adherence of proper procedure while issuing reception order like mentioning the act, appropriate sub section and also discharge status of the patient after giving treatment is important and legal professionals need to be sensitized about discharge status and provisions of mental health act while making reception orders. This study represents only current problem there is a chance for betterment if we implement new mental health care act 2017 as soon as possible .So that there is a provision for a review board consisting judiciary and

medical personnel, who can revoke the reception order at any time to minimize the duration of involuntary hospitalization to protect the violation of mentally ill patient rights. Early discharge and reintegration back in to community reduces the financial and medical resource expenditure of the State as illness severity is the not only the reason for prolonged hospitalization as in this study.

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