

Relationships Between Causes of Psychiatric Readmission and To Validate Psychoeducational Module

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ABSTRACT

Background: Readmission rate can provide an important indicator of the global functioning of the health system such as, the articulation between inpatient treatment and community interventions. It provides an important tool in planning mental health services. The present study highlights the causes of readmissions for psychiatric patients with a view to prepare psychoeducational module. It has scope in various fields like medical and paramedical. It will help to prevent relapse and readmissions in psychiatric patients and to the nurses in providing psychoeducation to the patient and family.

Materials and Methods: The study was conducted 100 psychiatric patients who were re-admitted in 2 selected inpatient mental health setups in Pune, Maharashtra. Semi-structured questionnaire based on causes of psychiatric readmissions was used which consisted of 30 questions with multiple options. Descriptive and inferential statistics were planned to analyze the data obtained through interviews. Findings of previous functional pattern of readmitted patients– It was analyzed by mean, median, mode, standard deviation and mean %. The relationship between causes of psychiatric readmissions and selected demographic variables were found out by using Chi Square test.

Results: The data presented in the table 2, figure 1 shows that highest affected functional pattern in previous 3 months is self activity (35.07%) followed by dietary pattern (36.5%), health promotional activities (42.3%), relation with family

(49.1%), social adjustment (52.7%) and self care (61.6%). The most non affected functional pattern is economical adjustment (69.11%).

Conclusion: Schizophrenia is the common condition of which maximum readmissions are found. With the help of psychoeducational module, the staff nurses, student nurses can provide psychoeducation to the patients and caregivers about the comprehensive care of psychiatric patients at the home including the psychosocial rehabilitation. Thus, the relapse and readmission of psychiatric patients can be prevented in mental health setups.

Keywords: Mental Illness; Psychosocial Rehabilitation; Psychiatric Patients.

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INTRODUCTION

According to WHO report 2001, 450 million people worldwide are suffering from mental disorders. Among them 24 million suffer from schizophrenia and 121 million from depression.¹ It is estimated that in India 1% of the population suffers from severely incapacitating mental illnesses which require urgent intervention and 10% from mild mental illnesses.

Mental illness services in India are seriously under resourced though certain change has started to occur. There are only 42 mental hospitals with about 20,000 beds. Of these more than 50% beds are occupied by long stay patients. The incidence of schizophrenia are 10-20 lakhs per year and its prevalence is 1%.²

If we see today's manpower in India, engaged in providing psychiatric services, In India total patients prevalence rate 58/1000, total psychiatric beds per 10000 population – 0.3 (world – 4.36) and psychiatrist available ~ 3500, 0.3 per 100000 population (world – 3.96), Psychiatric nurses < 0.1 per 100000 population (world – 12.6). This manpower is quite disproportionate to the population of the patients with mental illnesses. Therefore one of the main objectives formulated in National Health program, 1982 was "To promote community participation in the mental health services development and to stimulate efforts towards self help in the community".³

Readmission rate can provide an important indicator of the global functioning of the health system such as, the articulation between inpatient treatment and community interventions. It provides an important tool in planning mental health services.⁴

The present study highlights the causes of readmissions for psychiatric patients with a view to prepare psychoeducational module. It has scope in various fields like medical and paramedical. It will help to prevent relapse and readmissions in psychiatric patients and to the nurses in providing psychoeducation to the patient and family.

MATERIALS AND METHODS

In the present study, descriptive exploratory research design was used to achieve the set objectives among 100 patients. The study was conducted 100 psychiatric patients who were re-admitted in 2 selected inpatient mental health setups in Pune, Maharashtra. The researcher measured a wide range of possible causes at one point in time and then examined an overall outcome.

The rating scale was prepared to know the patient’s functional pattern in last 3 months of the present readmission. The scale included 40 statements which were divided under 7 sub sections like self care, dietary pattern, self activity, relationship with family, social adjustment, emotional adjustment, economical adjustment and health promotional activities. For all the sections, the researcher had taken the interview of patient and care giver.

Content validity is a self evident measure which shows that the researcher can demonstrate an adequate coverage of the related topic and an expert should be able to judge whether or not the tool is adequate.⁵ It was done by the 9 experts like 2 nurse educators, 3 psychiatrists, 2 counselors and 2 psychiatric social workers. The tool was also shown to bio-statistician. Content validity was calculated as per scoring done by various experts and discussion with guide.

Baseline proforma consisted of 20 items. There was 100% agreement for all the items except for the item number 16 (96.29%). In item number 16, the alternatives for recent diagnosis of patient were modified as 16.1 Schizophrenia, 16.2 Mood disorder from previous 4 alternatives as study highlights on these major psychiatric disorders.

Semi-structured questionnaire based on causes of psychiatric readmissions. It consists of 30 questions with multiple options. There was 100% agreement for all the items. Rating scale for patient’s functional pattern in previous 3 months comprised of 40 statements. There was 100% agreement for all the items.

The reliability of the tool was established out of 15 samples using Cronbach’s alpha method. The reliability of the correlation coefficient was 0.7 and reliability obtained was 0.78. The normal range of reliability is 0.7 for descriptive studies.

The pilot study was conducted among 15 patients with their care givers who fit into criteria were selected by non probability purposive sampling technique and interview was conducted. The analysis for pilot study was done by descriptive and inferential statistics mainly by frequency and percentage method. At the end of the analysis the study was found to be feasible and practical.

The research tool was also translated into Marathi. The validity was established by experts in Marathi. A formal permission letter from college and researcher including brief details of the study were sent to the 2 selected inpatient mental health setups of Pune. Before starting the actual data collection, the researcher had introduced herself to patient and caregiver. A well-informed consent was taken from the care giver for participation in the study. The researcher had conducted interview at a separate place where there were no disturbances and whenever needed separate interview was conducted for patient and care giver. It took approximately 20-25 minutes for each participant for the interview. The researcher had scored each question as per the answers given by the patient and care giver and where applicable scoring was done for multiple answers.

Data analysis is conducted to reduce, organize and give meaning to the data.⁵ After the data collection master data sheets were prepared for 1st and 2nd sections and master scoring sheet for 3rd section under the guidance of research guide and statistician.

Descriptive and inferential statistics were planned to analyze the data obtained through interviews. Findings of previous functional pattern of readmitted patients– It was analyzed by mean, median, mode, standard deviation and mean %. The relationship between causes of psychiatric readmissions and selected demographic variables were found out by using Chi Square test.

Table 1: Range of patient’s functional pattern in previous 3 months

S. No.	Grade	Range of functional pattern	No of Patients	%
1	Very Good	91-120	0	0
2	Good	71-90	16	16
3	Average	50-70	73	73
4	Poor	Below 50	11	11

Table 2: Area wise functional pattern of previous 3 months of readmitted patients

S. No.	Functional Areas	Range	Max Score	Min Score	Mean	Median	Mode	SD	Mean %
1	Self-care	0 - 21	21	8	12.94	12	9	3.701	61.62
2	Dietary Pattern	0 - 12	10	3	4.39	3	3	1.754	36.58
3	Self-Activity	0 - 15	11	1	5.26	5	4	2.194	35.07
4	Relation with family	0 - 15	10	3	7.37	8	9	1.869	49.13
5	Social Adjustment	0 - 18	15	3	9.5	10	11	2.508	52.78
6	Emotional Adjustment	0 - 18	18	7	12	12	12	2.366	66.67
7	Economical Adjustment	0 - 9	8	3	6.22	6	6	0.89	69.11
8	Health promotional activities	0 - 12	10	2	5.08	5	5	1.419	42.33

Table 3: Association between age of the patient and regular follow up

S. No.	Age (Years)	Regular Follow up		χ^2	Table Value	df	Result
		Yes	No				
1	20-29	25	4	5.49	7.81	3	NS
2	30-39	17	7				
3	40-49	19	10				
4	50 and above	16	2				

Table 4: Association between age of the patient and regular medicines

S. No.	Age (Years)	Regular medicine		χ^2	Table Value	df	Result
		Yes	No				
1	20-29	7	22	2.95	7.81	3	NS
2	30-39	6	18				
3	40-49	7	22				
4	50 and above	8	10				

Table 5: Association between number of readmissions and burden on family

S. No.	No of readmission	Burden on Family		χ^2	Table Value	df	Result
		Yes	No				
1	1 - 3	70	9	1.75	7.81	3	NS
2	4 - 5	12	3				
3	6 - 7	4	0				
4	More than 7	2	0				

Table 6: Association between age and functional pattern

S. No.	Age (Years)	Range of functional pattern				χ^2	Table Value	df	Result
		Poor	Average	Good	Very Good				
1	20-29	2	25	2	0	2.34	12.59	6	NS
2	30-39	6	12	6	0				
3	40-49	3	23	3	0				
4	50 and above	0	13	5	0				

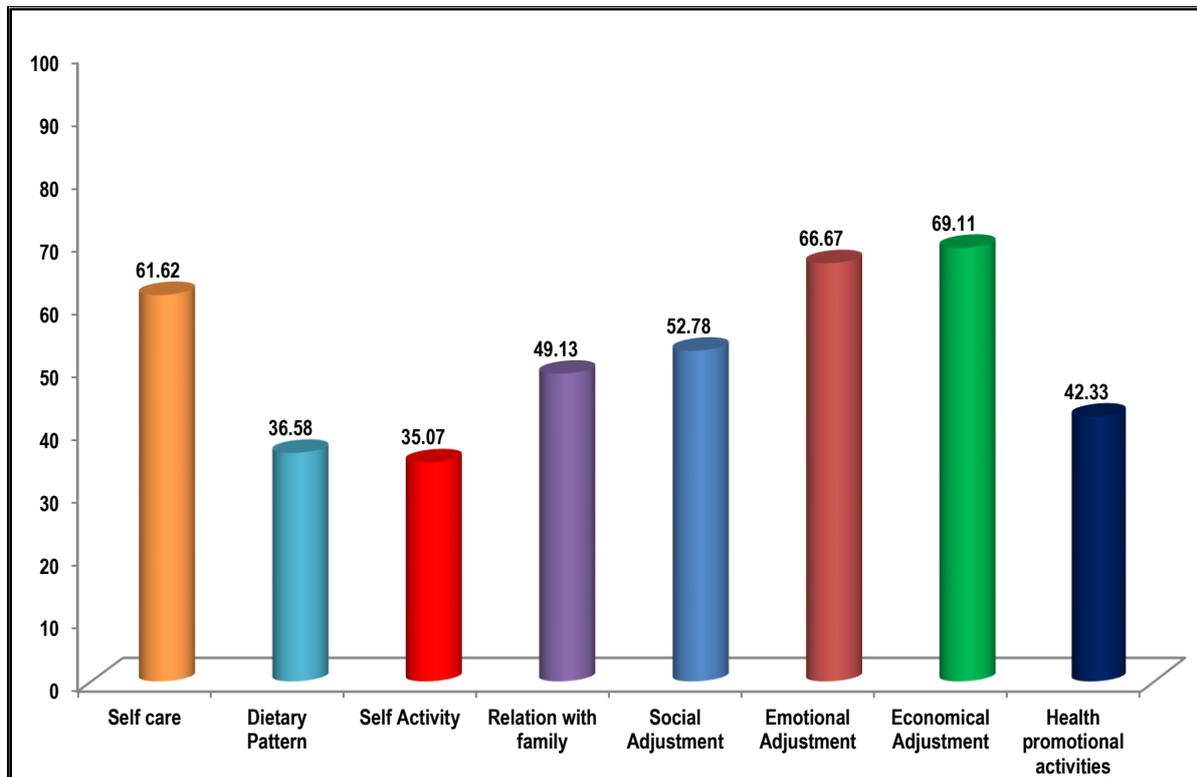


Figure 1: Bar diagram representing the various functional areas of readmitted patients in previous 3 months of admission

RESULTS

The data has been scored as per marks obtained for each statement. The positive statements are scored as 1- rarely, 2- sometimes and 3- regularly. The negative statements are scored as 3- rarely, 2-sometimes and 1- regularly. The total score was calculated and patient's functional pattern was categorized as very good (91-120), good (71-90), average (50-70) and poor below 50 (table 1). The data presented thus shows that maximum of patient's functional pattern in previous 3 months is in average category (73%) where as few in good category (16 %) and remaining in poor category (11%).

The data presented in the table 2, figure 1 shows that the highest affected functional pattern in previous 3 months is self activity (35.07 %) followed by dietary pattern (36.5 %), health promotional activities (42.3%), relation with family (49.1%), social adjustment (52.7%) and self care (61.6%). The most non affected functional pattern is economical adjustment (69.11%).

Data presented in table 3 shows that the calculated value is ($\chi^2 = 5.49$) is lesser than table value ($(\chi^2 = 7.81, d.f. = 3)$) at 0.05 level of significance. Hence there is no significant association between age of patient and regular follow up.

Data presented in table 4 shows that the calculated value is ($\chi^2 = 2.95$) is lesser than table value ($(\chi^2 = 7.81, d.f. = 3)$) at 0.05 level of significance. Hence there is no significant association between age of patient and regular medicine.

Data presented in table 5 shows that the calculated value is ($\chi^2 = 1.75$) is lesser than table value ($(\chi^2 = 7.81, d.f. = 3)$) at 0.05 level of significance. Hence there is no significant association between number of readmissions and burden on family.

Data presented in table 6 shows that the calculated value is ($\chi^2 = 2.34$) is lesser than table value ($(\chi^2 = 12.59, d.f. = 63)$) at 0.05 level of significance. Hence there is no significant association between age and the functional pattern.

DISCUSSION

The patient's functional pattern was scored and categorized under various headings. It was found that 73% of patient's functional pattern in previous 3 months lies in average category (50-70) whereas 16% lies in good category (71-90) and 11% in poor category (Below 50) (table 1). The area wise functional pattern of all the patients indicates that the highest affected functional pattern in previous 3 months is Self activity (35.07%) followed by dietary pattern (36.5%), health promotional activities (42.3%), relation with family (49.1%), social adjustment (52.7%) and self care (61.6%).

The association between causes of psychiatric readmission and selected baseline variables of the patient were checked using Chi-Square test. Similar kind of study was done by Endicott J., Herz MI on "Readmission in socioeconomic and clinical correlates among psychiatric patients". The result indicated that readmission is not related to socioeconomic factor such as sex, mental structure, location and family type. The commonest causes are social stigma, financial problem, poor family support and drug non compliance.⁶

Based upon the above findings the researcher has prepared psychoeducational module on "Relapse prevention in psychiatry". Earlier, a systematic study was done on "Psychosocial interventions for the prevention of relapse in bipolar disorder, a

systematic review of controlled trials" by Beynon S, Soares-Weiser K, Woolcott N, Duffy S, Geddes JR. Pharmacological interventions alone do not provide sufficient benefit for some individuals with bipolar disorder. The aim was to determine the effectiveness of psychosocial interventions for the prevention of relapse in bipolar disorder. A systematic review and meta-analysis of randomized or quasi-randomized controlled trials were conducted. The results showed that cognitive-behavioral therapy or group psychoeducation was be effective for relapse prevention in stable individuals. Family therapy was no more or less effective than individual psychosocial therapy or crisis management. Finally it can be concluded that cognitive-behavioral therapy, group psychoeducation and possibly family therapy is be beneficial as adjuncts to pharmacological maintenance treatments.⁷ Another control study was done on "Program for relapse prevention in schizophrenia" by Herz MI, Lamberti JS, and Mintz J. This study examined whether a program for relapse prevention (PRP) is more effective than treatment as usual (TAU) in reducing relapse and re-hospitalization rates among outpatients with schizophrenia. Eighty-two outpatients with DSM-III-R schizophrenia or schizoaffective disorder were randomly assigned to receive either PRP (experimental group, n = 41) or TAU (control group, n = 41) and were followed up for an 18-month prospective controlled study. Patients in both groups were prescribed standard doses of maintenance antipsychotic medication. Treatment with PRP consisted of a combination of psychoeducation, active monitoring for prodromal symptoms with clinical intervention when such symptoms occurred, weekly group therapy for patients, and multifamily groups. The TAU consisted of biweekly individual supportive therapy and medication management. The results indicate that outcome rates over 18 months were 17% for relapse (7 patients) and 22% for re-hospitalization (9 patients) in the PRP group, compared with 34% for relapse (14 patients) and 39% for re-hospitalization (16 patients) in the TAU group. It was concluded that the PRP was effective in detecting prodromal symptoms of relapse early in an episode. Crisis intervention including increased antipsychotic medication use during the prodromal phase reduced relapse and re-hospitalization rates.⁸

Thus it can be inferred from the current findings that the readmission rates in mental health setup has increased due to various factors mentioned in the present study. K Rangaswamy studied on "psychosocial treatment for the first episode schizophrenia to prevent progression and relapse". The comprehensive approach was used for the study consisting of social skills training, psychoeducation, stress management and vocational rehabilitation for a group of schizophrenic patients. Treatment was carried out 3 times in a week, each session lasting for an hour and carried out for six months. The results indicated significant reduction in the symptoms after psychosocial intervention in terms of excitability, tension, hostility and self management.⁹

"Randomized controlled trial of efficacy of teaching patients with bipolar disorder to identify early symptoms of relapse and obtain treatment" study was done by Alison Perry and Nicholas Tarrier. The main objective was to determine the efficacy of teaching patients with bipolar disorder (manic-depressive schizophrenia) to identify early symptoms of relapse and seek prompt treatment from health services. Main outcome measures were time to first manic or depressive relapse, number of manic or depressive

relapses, and social functioning. The result showed significant decrease in readmission rate among the group who receives psychoeducation in relapse prevention. The conclusion indicates that teaching patients to recognize early symptoms of manic relapse and seek early treatment is associated with important clinical improvements in time to first manic relapse, social functioning, employment and lowering the readmission rate of the patient.¹⁰

It was concluded that the PRP was effective in detecting prodromal symptoms of relapse early in an episode. Crisis intervention including increased antipsychotic medication use during the prodromal phase reduced relapse and re-hospitalization rates. Similar kind of study was done on "Prevention of Relapse in Residual Depression by Cognitive Therapy" by Eugene S. Paykel, Jan Scott and John D. Partially remitted with antidepressant treatment (mean daily doses equivalent to 185 mg of amitriptyline or 33 mg of fluoxetine) but with residual symptoms of 2 to 18 months' duration, was included in a controlled trial. Subjects were randomized to receive clinical management alone or clinical management plus cognitive therapy for 16 sessions during 20 weeks, with 2 subsequent booster sessions. Subjects were assessed regularly throughout the 20 weeks' treatment and for a further year. They received continuation and maintenance antidepressants at the same dose throughout. The results of the study were, cognitive therapy reduced relapse rates for acute major depression and persistent severe residual symptoms and readmission rate reduced from 47% to 29% with cognitive therapy.¹¹

Another study was done on "Psychoeducation in schizophrenia: new developments and approaches in the field." by Rummel-Kluge C, Kissling W. The aim of the study was to check the effect of psychoeducation on rate of readmission of psychiatric patient. Peer to peer education programs for families and patients were developed. The results indicated that there is a medium effect size for relapse and re hospitalization reduction if both the patient and the family participate.¹²

CONCLUSION

Based upon the research done and analysis findings it can be concluded that the rate of readmission of psychiatric patients is increasing and at present lies between 35-40% in government as well as private sectors. Schizophrenia is the common condition of which maximum readmissions are found. Males with primary education with majority of them unemployed are found to have maximum readmission. Many of the patients are having 1-5 years of duration of illness having maximum 2-3 times readmissions. 80% of the patients have faulty health habits which have increased after the onset of mental illness. With the help of psychoeducational module, the staff nurses, student nurses can provide psychoeducation to the patients and caregivers about the comprehensive care of psychiatric patients at the home including the psychosocial rehabilitation. Thus the relapse and readmission of psychiatric patients can be prevented in mental health setups.

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