Neurology, Brain and Psychiatry: Open Access
Received: Nov 28, 2015, Accepted: Jan 11, 2016, Published: Jan 13, 2016
Neurol Brain Psychiatry, Volume 1, Issue 1
http://crescopublications.org/pdf/nbpoa/NBPOA-1-002.pdf
Article Number: NBPOA-1-002

Research Article Open Access

Achieving Discharge from In-Patient Psychiatric Rehabilitation Services of Neuropsychiatric Hospital ARO, Nigeria

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Citation: Onofa Lucky, Adebowale Timothy, David Efeomo, Latona Opeyemi and Olujobi Olutobi (2016) Achieving Discharge from In-Patient Psychiatric Rehabilitation Services of Neuropsychiatric Hospital ARO, Nigeria. Neurol Brain Psychiatry 1: 002.

Abstract

Background: Psychiatric rehabilitation is a therapeutic tool for individuals with severe and enduring mental illness such as schizophrenia which interferes with their quality of life. Knowledge of the factors associated with achieving discharge from in- patient rehabilitation services can assist in planning service structure to meet the needs of the patient population. This study was undertaken to determine the factors predicting discharge from in-patient rehabilitation services of Neuropsychiatric Hospital Aro, Abeokuta, Nigeria.

Methods: We conducted a case control study involving comparison of two groups: 15 patients who achieved discharge and 41 non discharged group of patient who were admitted within eleven (11) years period into rehabilitation services of Neuropsychiatric Hospital Aro, Abeokuta, Nigeria. Data was collected from the case records of 56 patients and were analysed using SPSS version 17.

Results: Among the patients, 15 (26.8%) achieved discharge into community living. The factors identified by cox' proportional hazard regression analysis that significantly influenced achieving discharge were high education, previous employment, good social and family support, good activities of daily living, younger age and vocational engagement.

Conclusion: Our study showed that good socio-demographic profiles and occupational engagement were associated with achieving discharge during the study period. Psychosocial rehabilitation as a therapeutic tool is under-utilized in developing countries and this deserves to be better understood and resourced.

Keywords: Rehabilitation;Explanatory variables;Achieving discharge; Nigeria.

Introduction

The growing recognition that serious and persistent mental disorders can be understood through the lens of disability has spurred the development of the field of psychosocial rehabilitation[1].

It is known that about 1% of people with severe and enduring mental illness such as schizophrenia requires in-patient psychiatric rehabilitation[2].

The provision of comprehensive in-patient rehabilitation services help disabled individual to develop the emotional, social and intellectual skills needed to live, learn and work in the community with the least amount of professional support[3].

Achieving discharge from in-patient rehabilitation services is a good outcome as it marks an important stage in the individual's recovery. The individual would have gained the skill needed for daily living, self-medication management, engagement with the community support to gain help and sense of identity[4].

Some studies on schizophrenia and related psychotic disorders found only limited evidence that socio-demographic, illness and treatment variables predict outcome[5, 6] while in another study, serious self-harm, suicide attempt, high dose antipsychotics and antipsychotic poly- pharmacy predicted non-discharge from rehabilitation in-service [7].

Rehabilitation psychiatry is an emerging discipline in Nigeria with dearth of literature on this field. The Neuropsychiatric Hospital ARO, the foremost psychiatric Hospital in Nigeria established rehabilitation unit over a decade ago for the effective rehabilitation and community re-integration of patients.

We observed a gap in the literature for a case-control study of outcome following admission to the in-patient rehabilitation unit and this we aimed to address. Knowledge of the factors that are associated with achieving discharged can be used to guide treatment for individual patients and also to optimize the structure of services to meet the needs of the patient population. The current study was therefore carried out to evaluate the factors predicting discharge from in-patient rehabilitation services of a specialist Neuropsychiatric Hospital Aro, Abeokuta, Nigeria.

Methods

Setting: the study was carried out in Neuropsychiatric Hospital Aro, Abeokuta, Ogun State, Nigeria.

The population of Ogun State was 3.7 million and Abeokuta, the capital city has a population of 0.45 million (2006 national census).

The Neuropsychiatric Hospital Aro, started at the Lantoro annex which was colonial Local government prison until 13th April, 1944 when it was transformed into an asylum for the care of mentally ill soldiers repatriated from the Second World War. The asylum was converted to Neuropsychiatric Hospital (526 bed space) ARO in 1954.

The hospital established rehabilitation Unit comprising one male and one female ward in September 2002 and Hope Villa transitional home in 2009.

Patients who fulfilled placement criteria were admitted into the unit. The unit utilizes a multi-disciplinary team approach to administer psycho-pharmacological, psychosocial, vocational and other structured intervention to patients in the unit. Patients had supervised vocational engagements both within and outside the Hospital settings.

Sample: The sample consisted of two groups. Both of the groups were admitted to the rehabilitation wards in an Eleven (11) years period from September 2002 till August, 2013. During the period, there were 62 admissions of which 56 case files had well documented and recorded variables.

The first group were admitted and discharged within the same period (n=15) and the second group were admitted during the same time, but had not achieved discharge by the end of the eleven (11) years of the study (n=41). Both groups have chronic illness with similar clinical profiles.

Study Design: we used a case control study design to compare the two groups with respect to socio-demographic, clinical and rehabilitation variables.

Data Collection: Data collection was done using a semi-structured proforma containing sections on socio-demographic, clinical diagnoses, rehabilitation and outcome variables. The psychiatric diagnoses were made according to ICD 10 diagnostic criteria.

Data Analysis: Data analysis was done using the Statistical Package for Social Sciences (SPSS) version 17. Frequency tables and cross tabulations of relevant socio-demographics, clinical, rehabilitation and outcome variables were drawn-up.

Chi-square test was used to assess association between categorical variables with fisher's exact correction for cell count less than 5 and the independent student t- test to compare the difference in the means of quantitative variables. The factors influencing discharge were evaluated using cox proportional Hazard regression. The factors in the model were socio-demographic variables, clinical diagnoses and rehabilitation variables. P-values of significance was set at $P \leq 0.05$

Ethics: Confidentiality of data was assured and approval for the study was obtained from the ethical committee of Neuropsychiatric Hospital Aro.

Results

Fifty-six (56) case records were analysed out of which 36(64.3%) were males. The mean (SD) age of patients was 54.6(14.4%) years.

Table 1: Comparison of socio-demographic profile between discharge and non-discharge group

Variable	Discharged Group N=15(%)	Non-Discharged Group N=41(%)	Total N = 56(%)	Test Statistics (Chi-Square)	P- value
Gender					
Male	11(73.3)	25(61.0)	36(64.3)	0.810	0.368
Female	4(26.7)	16(39.0)	20(35.7)		
Age (yrs)					
20-39	12(80.0)	4(9.8)	16(28.6)		
40-59	3(20.0)	18(43.9)	21(37.5)	15.079	0.001
Over 60		19(46.3)	19(33.9)		
Mean (SD)			54.6(14.4)		
Marital Status					
Single	8(53.3)	30(73.1)	38(67.9)		
Married	5(33.3)	2(4.9)	7(12.5)	9.212	0.027
Divorced	2(13.3)	6(14.6)	8(14.3)		
Widowed		2(4.9)	2(3.6)		
Education					
No formal	3(20.0)	21(51.2)	24(42.9)		
Primary	1(6.7)	11(26.8)	12(21.4)	21.882	0.001
Secondary	1(6.7)	7(14.6)	7(12.5)		
Tertiary	10(66.7)	3(7.3)	13(23.3)		
Previous Employment					
Yes	9(60.0)	6(14.6)	15(26.8)		
No	6(40.0)	35(85.4)	41(73.2)	36.842	0.001
Social and Family Support					
Poor	5(33.3)	36(87.8)	41(73.2)		
Good	10(66.7)	5(12.2)	15(26.8)	41.837	0.01
Activities and Daily Living					
Poor	-	25(61.0)	25(44.6)		
Good	15(100.0)	16(39.0)	31(55.4)	22.347	0.001
Vocational Engagement					
Yes	15(100.0)	20(48.8)	35(62.5)		
No		21(51.3)	21(37.5)	9.184	0.002

The discharged group was found to be statistically younger ($x^2 = 15.079$; P = 0.001), more educated ($x^2 = 21.888$; P = 0.001), employed ($x^2 = 36.84^2$; P = 0.001), married ($x^2 = 9.212$; P = 0.027), had good family support ($x^2 = 41.837$; P = 0.001), had more engagement in vocational activities ($x^2 = 9.184$; P = 0.002),

Table 2: Comparison of clinical diagnoses between discharged and non-discharged group of patient

Variables	Discharged N = 15 (%)	Non - Discharged N = 41 (%)	Total N= 50(%)	P-value
Psychiatric Diagnosis				
Schizophrenia	13(86.7)	35(85.4)	48(85.7)	0.491
Bipolar affective disorder	1(6.7)	4(9.8)	5(9.8)	0.226
Co-morbid Medical Condition				
Hypertension	3(20.0)	10(24.4)	13(23.3)	0.523
Epilepsy	2(13.3)	5(12.2)	7(12.5)	0.667
Medication Use				
Conventional antipsychotics	12(80.0)	32(78.0)	44(78.6)	0.867
Depot antipsychotics	4(26.7)	11(26.9)	15(26.8)	0.988
Atypical Antipsychotics	1(6.7)	3(7.3)	4(7.1)	0.703
Mood Stabilizer	1(6.7)	4(9.8)	5(8.9)	0.226
Antidepressants	1(6.7)	2(4.9)	3(5.4)	0.488
Anti-cholinergic	6(40.0)	18(43.9)	24(42.9)	0.243
Report of non-adherence	1(6.7)	5(12.2)	6(10.7)	0.068

The distribution of psychiatric diagnoses and co-morbid medical condition showed that schizophrenia was the commonest (85.7%) and hypertension (23.2%) was the commonest medical comorbidity. There was no significant difference in clinical diagnoses and medication used between the discharged and non-discharged group of patients.

Table 3: Distribution of vocational activities engagement among the patients N=56

Variable	Frequency	Percentage (%)
Barbing	5	8.9
Shoe making	5	8.9
Fashion designing	5	8.9
Hair designing	4	7.1
Food and catering	3	5.4
Retail/ Business	3	5.4
Vulcanizing	2	3.6
Computer Programme	2	3.6
Paid Sheltered work	15	26.8

With respect to engagement in vocational activities, the discharged group (100.0%) were significantly more engaged ($x^2 = 9.184$; P = 0.002), compared to the non-discharged group (48.8%) of patients.

Table 4: Variables affecting discharge using cox' proportional Hazard regression

Variables	Hazard Ratio (HR)	95% Confidence Interval (CI)
Low Education	0.030	0.002-0.287
Unemployment	0.046	0.0231-0.736
Good Social Support	3.352	0.897 – 12.553
Poor activities of daily living	0.02	0.001 – 0.290
Age < 40 years	2.631	0.675 – 10.261

The factors identified by cox' proportional hazard regression analysis that significantly influenced time to discharge(increase or decrease) included; low education, unemployment, good social and family support, poor activities of daily living and being lesser than 40 years old.

The median duration of stay in the rehabilitation unit was 41.3 months with the discharge group staying lesser (10.1months) while 43.9% of the patients were abandoned in the unit.

Discussion

In our study, we found that the socio- demographic variables predicting discharge were high education, holding employment previously, being married, younger age, having good social and family support good activities of daily living and engagement in vocational activities. Theses finding were however in variance with some other studies that found limited evidence that socio-demographic profile predict rehabilitation outcome.

The non-discharged group had poorer socio-demographic profile which could be a reflection of illness severity with consequent interference with normal role performance [8].

The finding of schizophrenia being the commonest diagnosis among in-patient rehabilitation services is congruent with previous finding [7].

All the patients that achieved discharge were engaged in vocational activities. Vocational activities promote gains in related areas such as self- esteem and quality of life as work and employment are a step to integration into society.

The group that achieved discharge had a lesser duration of stay in the rehabilitation unit. The factors found to significantly prolong duration of stay in the rehabilitation unit were unemployment, low education, poor social support, poor activities of daily living and older age. These poor socio-demographic factors could be a reflection of the severity of mental illness which had negative impact on the functional domains of the sufferers [9].

Limitations

We did not do baseline rating and correct for symptoms severity. It was therefore possible that some of the associations of non-discharge were as a result of more severe illness. However, this effect was minimized as the two groups had similar clinical diagnosis. The use of discharge as the main outcome measure does have limitations as this may not adequately decipher the level of disability.

Conclusion

In our study, we conclude that good socio-demographic profiles and engagement in vocational activities were associated with achieving discharge during the eleven (11) years period of the study. Psychosocial rehabilitation of people suffering from mental disability is a proven way of improving quality of life. In developing countries, it is under-utilized as a therapeutic tool and deserves to be better understood and resourced.

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