

A Study of Psychiatric Morbidity and Comorbidity in Patients Primarily Attending Neurology OPD

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1. Introduction

Psychiatric disorders in neurology are more frequent than verified in routine exam, not only in the less developed but also in large and very developed neurological departments. ⁽¹⁾ Furthermore, psychiatric symptoms in neurological disorders among primary health care physicians and other specialties are often neglected ⁽¹⁾. A high incidence of psychiatric disorders is found in patients attending neurologists ⁽²⁾. Frequent co - occurrence of psychiatric with neurologic symptoms should come as no surprise, since psychiatric disorders, such as schizophrenia and the mood disorders, can be induced by structural brain disease ⁽³⁾. Presumably, brain dysfunction from conditions that cause neurologic symptoms—such as seizures, and impairments in movement, sensation, speech, or language—also affects areas of the brain that regulate mood, emotion, cognition, and perception.

2. Review of Literature

- 1) In the similar study of “psychiatric morbidity in patients attending neurological outpatient department” by Javid Ahmed et al. ⁽⁴⁾ psychiatric morbidity/co - morbidity was common amongst age group of 16 - 30 years and above 60 years age groups, more common in females ⁽⁷⁾, more common in illiterates and more common in housewives. Most common neurological diagnosis were migraine and epilepsy and psychiatric co - morbidity was most common amongst them also ⁽⁹⁾.
- 2) In the study of psychiatric comorbidity in patients with headache ⁽¹⁶⁾ using a short structured clinical interview in a rural neurology clinic in Western India, 49 out of 101 (48.5%) patients with headache suffered from depressive disorders (dysthymia or depression or suicidality), 18 out of 101 patients with headache (17.90%) suffered from anxiety related disorders (generalized anxiety disorder or agoraphobia or social phobia or panic disorder). (MINI scale used)
- 3) In the study of Psychiatric Comorbidity in Neurological Disorders in UAE ⁽³⁹⁾. Of the total 395 patients, seen individually, 154 (39%) patients showed symptoms of clinical depression, while 137 (34%) patients showed symptoms of generalized anxiety disorder within the clinical range. Of the 140 patients with concurrent symptoms of both disorders. (PHQ - 9, GAD - 7)
- 4) In the study of Psychiatric Comorbidities and Outcomes in Epilepsy Patients in U. S ⁽⁴⁰⁾, the most

prevalent psychiatric comorbidities present in epilepsy were depression (13%) followed by psychosis (10.4%).

Study Hypothesis

In this study we hypothesize that the patients visiting primarily neurological opd having coexisting psychiatric illness is frequent and often undiagnosed.

Aims and Objectives

- Estimate prevalence of psychiatric morbidities in patients primarily attending neurology OPD.
- Know the most prevalent of psychiatric co - morbidities in neurological patients in OPD.
- Find relation of specific psychiatric morbidities to specific neurological disease.
- Find relation between age, gender, occupation, education, marital status, Socioeconomic status and occurrence of psychiatric morbidities or co - morbidities.

3. Materials & Methods

Study Design

Sample Size: 100

- Type of study: Cross sectional study
- Site of study: Neurology OPD at Civil Hospital, Ahmedabad
- Study duration: May 2019 – September 2020

Subject Selection

Inclusion criteria: Consenting the patients and relatives primarily attending the neurology OPD.

Exclusion criteria: Unwillingness to participate in the study.

Methodology

- The study was approved by the Institutional Ethics Committee, BJ Medical College and Civil Hospital Ahmedabad.
- The samples were collected from out - patient section of Department of neurology.
- Out of 300 patients every 3rd patient willing to give consent were included in the study.
- Semi - structured proforma was then filled for each patient.
- Brief psychiatric rating scale 4.0 (BPRS) was then applied to each patient.
- Based on the BPRS scoring, participants were divided into groups of pure neurological disorder (no psychiatric

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symptoms - score 24) and patients with psychiatric morbidity/co - morbidity in form of symptoms or disorder (score more than 24).

- Patients with score more than 24 were interviewed using DSM - V structured clinical interview looking for a particular disorder.
- Data was entered into Microsoft excel data sheet and was analysed using **SPSS 22 version software**.
- Categorical data was represented in the form of Frequencies and proportions. **Chi - square test or Fischer’s exact test** (for 2x2 tables only) was used as test of significance for qualitative data.
- **Graphical representation of data:** MS Excel and MS word was used to obtain various types of graphs.
- **P value** (Probability that the result is true) of <0.05 was considered as statistically significant after assuming all the rules of statistical tests.
- **Statistical software:** MS Excel, SPSS version 22 (IBM SPSS Statistics, Somers NY, USA) was used to analyse data.

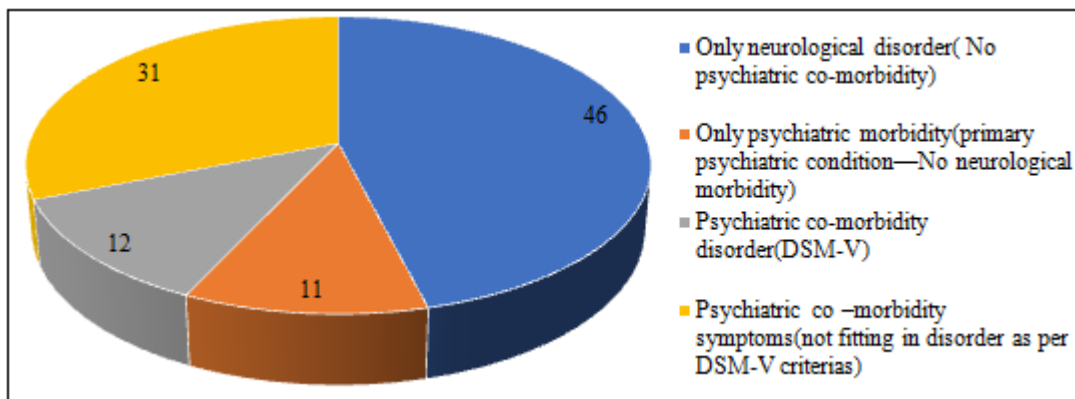
Instruments

- 1) **Semi - structured proforma** which was used for recording socio - demographic data, comprising of information about age, sex, marital status, education, occupation, family income, socioeconomic class and locality.
- 2) **Brief Psychiatric Rating Scale (BPRS) version 4.0**

4. Results

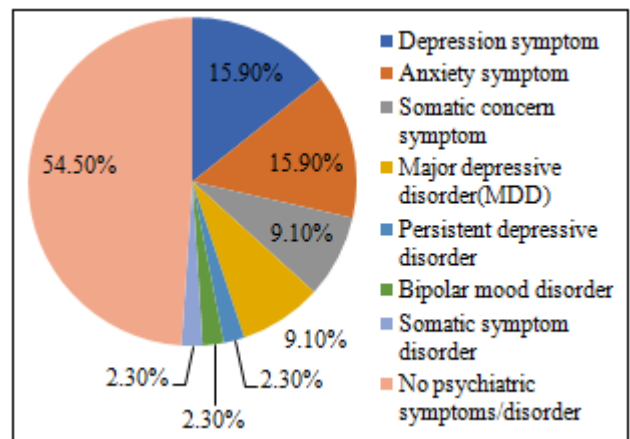
- Psychiatric co - morbidity/ morbidity amongst 100 patients attending neurology OPD

Psychiatric morbidity/co - morbidity	No. of patients
Only neurological disorder (No psychiatric co - morbidity)	46
Only psychiatric morbidity (primary psychiatric condition—No neurological morbidity)	11
Psychiatric co - morbidity disorder (DSM - V)	12
Psychiatric co - morbidity symptoms (positive in BPRS scale but not fitting in disorder as per DSM - V criterias)	31
Total	100



- Psychiatric diagnosis wise distribution of 44 patients attending neurology OPD having epilepsy/seizure disorder (as per BPRS scale and DSM - V)

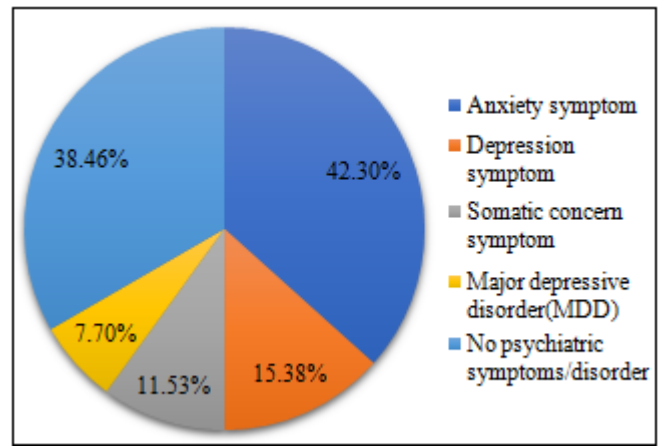
Psychiatric diagnosis	Epilepsy /seizure disorder patients with psychiatric co - morbidity (BPRS scale and DSM - V criteria)
Depression symptom	7 (15.9%)
Anxiety symptom	7 (15.9%)
Somatic concern symptom	4 (9.1%)
Major depressive disorder (MDD)	4 (9.1%)
Persistent depressive disorder	1 (2.3%)
Bipolar mood disorder	1 (2.3%)
Somatic symptom disorder	1 (2.3%)
No psychiatric symptoms/disorder	24 (54.5%)
Total	44



Pie Chart: Psychiatric diagnosis in epilepsy patients attending neurology OPD

- Psychiatric diagnosis wise distribution of 26 patients attending neurology OPD having migraine /other headaches (as per BPRS scale & DSM - V)

Psychiatric diagnosis	Migraine/headaches patients with psychiatric co - morbidity disorder (BPRS scale & DSM - V criteria)
Anxiety symptom	11 (42.3%)
Depression symptom	4 (15.38%)
Somatic concern symptom	3 (11.53%)
Major depressive disorder (MDD)	2 (7.7%)
No psychiatric symptoms/disorder	10 (38.46%)
Total	26



Pie chart: Psychiatric diagnosis in Migraine/headaches patients attending neurology OPD

Demographic profile wise patient distribution - percentage wise and statistical significance

Demographic profile	Groups	No of patients in group	No of patients with pure neurological diagnosis	No of patients with psychiatric morbidity/co morbidity	(p - Value) Statistical significance
Age	< 40 years	60	28 (46.67%)	32 (53.33%)	0.87
	40 years and above	40	18 (45%)	22 (55%)	
Gender	Male	55	31 (56.37%)	24 (43.63%)	0.02 (significant)
	Female	45	15 (33.33%)	30 (66.66%)	
education	High school and above	48	21 (43.75%)	27 (56.25%)	0.66
	Below high school education	52	25 (48.08%)	27 (51.92%)	
occupation	Semiskilled and above	58	23 (37.94%)	36 (62.06%)	0.09
	Below semiskilled	42	23 (57.15%)	18 (42.85%)	
Family income	Below 18000 Rs per month	60	27 (45%)	33 (55%)	0.80
	18000 and above per month	40	19 (47.5%)	21 (52.5%)	
Socioeconomic class	Upper and middle class (score more than 10)	57	26 (45.62%)	31 (54.38%)	0.92
	Lower class (10 or less score)	43	20 (46.52%)	23 (53.48%)	
Marital status	Married	69	31 (44.9%)	38 (55.1%)	0.79
	Single (Unmarried/divorced/widow)	31	15 (48.39%)	16 (51.61%)	
Residence	Urban	85	38 (44.7%)	47 (55.3%)	0.54
	Non - urban	15	8 (53.33%)	7 (46.66%)	

5. Summary

In our study of 100 patients, we found 54 % of patients attending neurology OPD having psychiatric morbidities/co - morbidities, out of which 11 % had primary (pure) psychiatric diagnosis instead of having any neurological disorder suggestive of overlap of symptoms/perception of symptoms amongst neurology and neuropsychiatry.

The socio - demographic factors –age, education, family income, socioeconomic class, marital status had overall no statistically significant difference in prevalence of psychiatric morbidities/co - morbidities when divided into two equivalent subgroups.

Factors like occupation and residence had differences in prevalence of psychiatric morbidities/ co - morbidities but statistically these differences were insignificant (p value > 0.05).

Females had significantly higher prevalence of psychiatric illness than males and the difference was statistically significant when subjected to analysis (p - value 0.02).

Amongst psychiatric morbidities/co - morbidities, commonest was symptoms of anxiety (14%) followed by major depressive disorder (10%) and depressive symptoms (7%).

Most common neurological diagnosis were epilepsy/seizures (44%) followed by migraine/headaches (26%).

Symptoms of anxiety (16%) and depression (16%) were most common of prevalent psychiatric co - morbidities in epilepsy/seizure patients.

Symptoms of anxiety (42%) were most common of prevalent psychiatric co - morbidities in migraine/headache patients.

6. Conclusion

Psychiatric morbidities/co - morbidities account for more than half of neurology OPD patients even at tertiary hospital having separate departments for neurology and psychiatry. Symptoms of some neurological illness are overlapping with psychiatric diagnosis and hence it is common for a layman to attend neurology OPD seeking help despite of having psychiatric morbidity/ co - morbidity and it is quite evident

in our study also. Cross - reference in tertiary hospital from neurology to psychiatry, higher referral from primary health centre level to available psychiatrist, penetration of specialist services of psychiatrist in remote places up to primary health care level and awareness amongst patients/ layman regarding existence of psychiatric illnesses along with or without neurological illnesses are requirements of present era.

7. Future Scope

Larger studies in more than one institute could substantiate our findings because sampling in our study included patient attending tertiary hospital in urban locality. Data from health care facility at secondary or primary level and data including rural population might give additional findings.

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