

# An observational study of drug utilization pattern in elderly psychiatry patients in a tertiary care hospital in south India

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## Abstract

The burden of multiple comorbidities and the concomitant polypharmacy compounds the psychiatric illness in the elderly. The reasons for polypharmacy depends upon patient's responsiveness to the primary medication and his comorbid illness. In this study we wanted to describe the drug utilization pattern in elderly psychiatry patients of a tertiary care hospital. The case files of all psychiatry out patients  $\geq 60$  years of age visited the OPD over a period of two months (March 2019 – May 2019) were studied. The date of visit to the hospital, prescribed generic name, brand name, dose, route of administration, duration of therapy and other demographic details were also noted. Of the 100 elderly patients, 62% were males and 48% were females. The most commonly used drugs in psychiatry department were antipsychotics (69.8%) followed by anxiolytics (19.1%) and antidepressants (11.1%). There was no statistical difference in drug utilization pattern between males and females.

**Key Word:** drug utilization.

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## INTRODUCTION

The antipsychotics are indicated for treating schizophrenia, delusional disorder, and psychotic symptoms in mood disorders and for a number of organic psychoses<sup>1</sup>. Antipsychotic drugs are among the most widely prescribed psychotropic medications for elderly people. With the availability of better health care services and decrease in mortality rates the elderly population has increased significantly over the last couple of decades<sup>2</sup>. Drug prescribing forms an important part of

medical treatment. The number of persons above the age of 60 years is fast growing, especially in India. India as the second most populous country in the world has 76.6 million people at or over the age of 60, constituting about 7.7% of total population. The problems faced by this segment of the population are numerous owing to the social and cultural changes that take place within the Indian society<sup>3</sup>. Psychiatric illness in the elderly is compounded by mental morbidities due to ageing of the brain, problems associated with physical health, socio-economic factors such as breakdown of the family support systems, and decrease in economic independence. The presence of comorbidities and the attendant polypharmacy makes management of these diseases a complex issue. Evaluation of the morbidity profile among elderly people, and the impact of chronic conditions on functional disability and psychological well-being are an essential part of comprehensive assessment of the elderly. It will have implications for providing health care for the elderly population and its costs<sup>4</sup>. Increasingly, atypical antipsychotic. Psychotropic medication polypharmacy is common and on the rise. There may be reasons for using

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combination or augmentation therapy, even in the absence of controlled studies. These reasons might be partial or nonresponse, acute treatment or switching processes<sup>5</sup>. Nevertheless, all possible benefits have to be weighed against increased risks for adverse effects and different alternatives to combination or augmentation therapy have to be considered. Psychotropic drugs are a common cause for potentially preventable adverse events such as delirium, depression and falls. Also, a gender based difference in the prescription of potentially inappropriate medication has been described with more use in elderly females.<sup>6, 7</sup> Consumption of psychotropic medication is more in females as compared to elderly males.<sup>8, 9</sup> Prescription Monitoring Program typically refers to a staterun program (in the United States) that serves as a registry to track prescriptions for controlled substances. These serve physicians who want to know if his or her patient is receiving 4 similar medications from other physicians<sup>10</sup>.

## OBJECTIVE

The purpose of this study is to describe the drug utilization pattern in elderly psychiatry patients in a tertiary care hospital in South India.

## RESULTS

A total of 100 elderly psychiatric patients were taken into the study. Of these, 62% were males and 48% were females. The mean age at hospital admission was 64.61±4.5 years in males and 61.32±4.06 years in females. A paired t-test was done to check the statistical significance in psychiatric drug use between males and females. The antipsychotic drug intake was more in men but anxiolytics and anti-depressants intake were more in females. The difference wasn't statistically significant. The descriptive statistics are as below.

Table 1: Psychiatry drug utilization elderly patient

Drug class	Males (N=62)	Female (N=48)	Total (N=100)	p value
Anti-Psychotics	44.5	25.3	69.8	p = 0.23
Anxiolytics	8.8	10.3	19.1	P = 0.34
Anti-depressant	3.2	7.9	11.1	P = 0.16

## DISCUSSION

This study done to assess the prescribing patterns of psychiatry drugs in the OPD. More males patients visited the psychiatry OPD than female in our study. The pattern of psychotropic drug utilization is assessed in a representative sample of subjects from Dhanalaskshmi Srinivasan Medical College and Hospital, Perambalur, Tamil Nadu. Among the antipsychotic drugs prescribed Risperidone was most commonly used, followed by olanzapine and quetiapine. Among the anxiolytics alprazolam and clonazepam were more commonly used than escitalopram and sertraline. Among the anti-depressants, amitriptyline is more commonly used than dothepine.

## METHODOLOGY

A prospective, cross sectional, observational study was done in all elderly psychiatry patients visiting the outpatient department of psychiatry at Dhanalakshmi Srinivasan Medical College and Hospital, Perambalur, Tamil Nadu. Drug classes were delineated as follows – antidepressants, antipsychotics, and anxiolytics. Polypharmacy is defined as prescription of more than one psychotropic medication or other concomitant medication.

### Inclusion criteria:

- Patients who were diagnosed as psychiatric patients.
- All the patients for whom psychotropic drugs are prescribed
- Persons who were on psychotropic drugs for >1month
- All the inpatients of age ≥ 60 years

### Exclusion criteria:

- Patients age < 60yrs
- Patients who were taking psychotropic drugs prescribed from outside the hospital
- Discharged prescription
- Prescription containing incomplete information

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