

Socioeconomic Determinants of Psychotropic Drug Utilization at a Tertiary Hospital In Dhaka City

Any OH¹, Parveen F², Sultana R³, Iqbal MJU⁴

Abstract

Background: Mental illness is the most neglected disease in Bangladesh with a large number of people suffering from different types of mental illness. **Objectives:** The purpose of the present study was to find out socioeconomic determinant of psychotropic drug in tertiary level hospital. **Methodology:** This cross sectional descriptive study was carried out at the Sir Salimullah Medical College and Mitford Hospital (SSMC & MH), Dhaka from the period of July 2009 to June 2010. All the patients attended at psychiatry outpatient department were included as study population. The collected data include socio-demographic details by depth interview; Informed consent was obtained verbally from the patient or legal guardian. The psychiatry out-patient departments are selected because both rural and urban population of different classes and different socioeconomic status daily come to these out-patient departments for their treatment purposes. They predominantly represent poor rural and urban population. **Result:** A total 300 patients were included in this study. Out of 300 patients 158 patient (52.66%) were female, most of the patients were age group 18-27 years, 108(36%) patient were house wife. Schizophrenia and other psychotic disorder are most common complaint among the patient attending the psychiatry OPD, 293(97.67%) patient came from rural areas, 175(58.33%) patient were married. Most of the patients are illiterate. It was observed that less educated, illiterate, housewife, unemployed and lower income group of patients generally attend psychiatry out-patient department. **Conclusion:** In conclusion less educated, illiterate, house wife, unemployed and lower income group of patients generally attend psychiatry out-patient department. [J Shaheed Suhrawardy Med Coll, 2015;7(1):10-13]

Keywords: Socioeconomic determinants, psychotropic drugs, drug utilization study

Received: March 2014; **Revised:** July 2014; **Accepted:** December 2014

Introduction

Mental health problem is a major public health issue in the world across the developed and developing countries¹. According to WHO at least 40 million people in the world suffer from mental disorders. Bangladesh is a densely populated area where prevalence of psychiatric illness is not less than that of any other country in the world². In Bangladesh, socio-political situation is insecure and unstable with poverty and vulnerability to natural disasters. These factors are related to psychiatric morbidity¹. Socioeconomic determinants like poverty and lack of social support influence health. Low socioeconomic status is associated with a higher

prevalence of overall morbidity, including psychiatric morbidity³⁻⁵; however also a decreased access to high-quality care and a lower consumer demand⁶⁻⁷. Further, marital status and social support is associated with health and health behaviour⁸⁻¹⁰. Health care quality differs between socioeconomic groups, particularly regarding the extent of preventive care, the cost of treatment procedures, and appropriate drug utilisation^{6,11-13}. Marriage is positively associated with health and health behaviour⁸⁻¹⁰. In a somewhat younger population, divorced women and widowed men had an increased utilisation of psychotropic drugs compared to married or single men and women¹⁴.The

1. Dr. Omma Hafsa Any, Assistant Professor, Department of Pharmacology & Therapeutics, Z.H. Sikder Women's Medical College, Dhaka
2. Prof. Dr. Feroza Parveen, Professor & Head, Department of Pharmacology & Therapeutics, Green life Medical College, Green Road, Dhaka
3. Dr. Rezina Sultana, Assistant Professor, Department of Pharmacology & Therapeutics, Z. H. Sikder Women's Medical College, Dhaka
4. Dr. Md. Jalal Uddin Iqbal, Assistant Professor, Department of Pharmacology & Therapeutics, Sir Sallimullah Medical College, Dhaka

Correspondence

Dr. Omma Hafsa Any, Assistant Professor, Department of Pharmacology & Therapeutics, Z.H. Sikder Women's Medical College, Dhaka, Bangladesh; E-mail: omma.hafsa.anee@gmail.com; cell no.: +8801676714083

Funding agency: None

Contributions by authors: All authors designed the study acquired the data, conducted the data analysis, interpreted the data, and revised the manuscript, also participated in the language editing. All the authors approved the final document.

differing levels of health knowledge and behaviour among the various socioeconomic groups need to be acknowledged in clinical practice. Efforts to increase good communication between prescribers and patients striving for concordance as well as patient empowerment should be promoted¹⁵.

Present study was undertaken to analyze the socioeconomic determinant of psychotropic medications utilization in outdoor patients of psychiatry department of a tertiary care teaching hospital in Bangladesh. The purpose of the present study was to contribute to the understanding of the production of socioeconomic differences in mental health by examining the associations of socioeconomic circumstances with prescribed psychotropic medication in a multi-domain socioeconomic framework.

Methodology

This cross sectional descriptive study was conducted at the Sir Salimullah Medical College and Mitford Hospital (SSMC & MH), Dhaka which is a tertiary care hospital. The study was carried out between period of July 2009 to June 2010 at psychiatry outpatient department. All the patients attended at psychiatry outpatient department were included as study population. The collected data include socio demographic details such as age, gender, occupation, employment and monthly income. Informed consent was obtained verbally from the patient or legal guardian. Patient related information after obtaining their verbal informed consent, they are interviewed using a questionnaire. The method of duplicate questionnaire was used for analysis. The information in the questionnaire was then used to complete a customized proforma. The recorded information were name, registration number, age, sex, marital status, educational and socio-economic condition, whether any other drugs or treatment was taken by the patient for illness before coming to hospital and if yes, satisfaction under those advices or not. The data analysis was carried out by SPSS version 17.0. The data was expressed as frequency and percentage.

Results

A total number of 300 patients were interviewed by using a questionnaire. Out of 300 patients 142(47.33%) patients were male and 158(52.66%) patient were female (Table 1). Out of 300 patient 108(36%) patient was housewife (Table 2).

Table 1: Distribution of patients by gender (n=300)

Gender	Frequency	Percentage
Male	142	47.33
Female	158	52.66
Total	300	100

Schizophrenia and other psychotic disorder (40.0%) are most common complaint among the patient attending the psychiatry OPD (Table 3).

Table 2: Occupational status of the patient (n=300)

Occupation	Frequency	Percentage
Service holder	40	13.33
Laborer	21	7.00
House wife	108	36.00
Business	17	05.66
Unemployed	42	14.00
Student	6	2.00
Farmer	31	10.33
Others	35	11.66
Total	300	100

Total 293(97.67%) patient came from rural areas (Table 4). Most of the patients are illiterate (Table 5) and 175(58.33%) patient were married (Table 6).

Table 3: Distribution of Psychiatric disorder (n=300)

Psychiatric disorder	Frequency	Percentage
Schizophrenia and other disorder	120	40.0
Bipolar mood disorder	117	39.0
Depressive disorder	29	9.66
Anxiety disorder	8	2.66
Somatoform disorder	5	1.66
Mental retardation	5	1.66
OCD	6	2.0
Others	10	3.33
Total	300	100

* OCD=Obsessive compulsive disorder

Discussion

The study was carried out in psychiatry outpatient department in a teaching hospital in a Dhaka city named as Sir Sallimullah Medical College & Mitford Hospital. Sir Sallimullah Medical College & Mitford Hospital is a Government teaching and tertiary level of hospital in Bangladesh. The psychiatry outpatient departments are selected; both rural and urban populations of different classes with different socio-economic status come to these outpatient departments for their treatment purposes. They predominantly represent poor rural and urban population.

Table 4: Distribution of patient by residence (n=300)

Residence	Frequency	Percentage
Rural	293	97.67
Urban	7.00	2.33
Total	300	100

On the other hand, prescribing patterns of out-patient departments of tertiary level hospitals are often copied by community practioners and health workers who contribute to misuse and over utilization of drugs. It also provides an insight into the nature of the health care delivery system¹⁶. The role of the psychiatrist in ensuring compliance to the drug treatment cannot be over-emphasized. The capacity of the therapist to manage and control the treatment is an essential part of the therapeutic relationship between the doctor and patient¹⁷.

The maximum number of patients received tabiz, koboz

Table 5: Educational status of the Patients (n=300)

Educational status	Frequency	Percentage
Illiterate	204	68.0
Below S.S.C	50	16.66
S.S.C	6	2.0
H.S.C	33	11.0
Degree	3	1.0
Post graduate	4	1.3
Total	300	100

and panipora before coming to hospital. These patients are influenced by the advices given by neighbor, relatives and friends. However, information on patient diagnosis and severity of symptoms were not taken into account. In a study, 47.3% were male and 52.7% patient were female³¹; in another study the percentage of male patient was 48.1% and female patient was 51.9%³², in this study female patient were prescribed more psychotropic drugs than male³. This is very similar to the rate of present study. In study in Germany¹⁸ female was 54.0% patient which is more or less similar to the present study. In another study in Japan, female was 52% patient¹⁹. This rate is very similar to present study rate. Mant et al²⁰ have showed that psychiatric illness is more common among female patient.

Table 6: Distribution of Study Population according to marital status (n=300)

Marital status	Frequency	Percentage
Married	175	58.3
Unmarried	108	36.0
Widow/widower	13	4.3
Separation	4	1.3
Total	300	100

Majority of the patients attending the psychiatry OPD were below the age of 37 years; in a study²¹ in Nepal majority of the patients attending the psychiatry OPD were below the age of 36 years, this rate is very similar to present study. In a study in Germany, the average age was 47 years¹⁸. This rate is dissimilar to present rate. Another finding was reported by Maki et al²² and had reported that schizophrenia is commonly prevalent among the adolescence. Most of the patients (97.8%) came from the rural areas like Babubazar, Chalkbazar, Keranygonj, Norshingdi, Comilla, Nowakhali; on the other hand 2.3% patients came from urban area and as the second largest medical college hospital, the percentage of other districts are not satisfactory. This may be due to the inconvenient location and communication of this tertiary care hospital.

In the present study level of education was considered and it was found that 68% of patients were illiterate; 16.66% were below S.S.C, 2% were S.S.C, 11% were H.S.C, 1% was degree, 1.3% was postgraduate. In another study in Bangladesh²³ it was found that primary school (8.22%), secondary school (16.11%), SSC/HSC (66.6%) and graduate (19.0%) patients were attended with more or less

similar percentage. The rate is dissimilar to present study, because the study was carried out in a private clinic in Dhaka city. In this study service holder (13.3%), laborer (7.0%), housewife (66.0%), business (5.66%), unemployed (14.0%), student (2.0%), farmer (10.3%) and others (11.66%) were also attended in the OPD. Study in Pakistan²⁴, housewife (28.0%) was the largest occupational group followed by unemployed (25%), skilled laborers (16%) and students (11%). This rate is dissimilar to present study.

It was observed that less educated, illiterate, house wife, unemployed and lower income group of patients generally attend psychiatry outpatient department. This finding is analogous to the outcome of study done in Sweden by Lessen et al²⁴ as the data showed that utilization of psychotropic drugs were more among individuals with low income. Similarly schizophrenia appears to have socioeconomic and racial dimension. It is the most commonly seen amongst the poor in the United States, England, Japan, Norway, Ireland and Iceland, but in the contest of India and possibly in Italy it is more frequently witnessed among the rich²⁵. The disease is also common among urban dwellers and blacks in the United States²⁵.

Patient of OPD were more satisfied with consultation; the patients who were not supplied with free medicines from the hospital and most of the patients who were not incapable of buying drugs said that they would try to procure drugs by getting loan from relatives and friends. This is because of unemployed and lower income group of patients attended the outpatient department in teaching hospital. Continuing medical education and the strengthening of cooperation between medical staff and pharmacists are needed. In addition, health and drug use education programs for the public, especially for the poor in rural and remote areas should be organized to enhance their knowledge of and awareness about health issues.

Currently maximum people are out of modern treatment facilities due to poor economic condition, prevailing superstition, stigma and mental patients and lack of education and knowledge about scientific method of treatment of mental illness²⁶. This is a matter of concern and need to deal with by prescriber education, training campaigns are required to improve the therapeutic management of the patient and ensure better quality of life^{20,26}.

Conclusion

In present study, it was observed that less educated, illiterate, house wife, unemployed and lower income group of patients generally attend psychiatry out-patient department. Schizophrenia and other psychotic disorder are most common problem in this group. Poverty and lack of social support is the main problem in these areas.

References

1. Firoz AHM, Karim ME, Alam MF, Rahman AHMM, Zaman MM. Prevalence, Medical Care, Awareness and Attitude Towards Mental Illness

- in Bangladesh. *J Psychiatry* 2006;20(1):9-36
2. Fahmida A, Wahab MA, Rahman MM. Pattern of psychiatric morbidity among the patients admitted in a private psychiatric clinic. *Bangladesh J Med Sci* 2009;.8(1-2):23-28
 3. Banks J, Marmot M, Oldfield Z, Smith JP. Disease and disadvantage in the United States and in England. *JAMA* 2006;295(17):2037-2045
 4. Mackenbach JP, Stirbu I, Roskam A-JR, Schaap MM, Menvielle G, Leinsalu M, Kunst AE, the European Union Working Group on Socioeconomic Inequalities. Socioeconomic inequalities in health in 22 European countries. *N Engl J Med* 2008;358(23):2468-2481
 5. Lorant V, Deliege D, Eaton W, Robert A, Philippot P, Ansseau M. Socioeconomic inequalities in depression: a meta-analysis. *Am J Epidemiol* 2003;157(2):98-112
 6. Fiscella K, Franks P, Gold MR, Clancy CM. Inequality in quality: addressing socioeconomic, racial, and ethnic disparities in health care. *JAMA* 2000;283(19):2579-2584
 7. Kuno E, Rothbard AB. The effect of income and race on quality of psychiatric care in community mental health centers. *Community Ment Health J* 2005;41(5):613-622
 8. Williams K. The transition to widowhood and the social regulation of health: consequences for health and health risk behavior. *J Gerontol B Psychol Sci Soc Sci* 2004;59(6):S343-349
 9. Umberson D. Gender, marital status and the social control of health behavior. *Soc Sci Med* 1992;34(8):907-917
 10. Iwashyna TJ, Christakis NA. Marriage, widowhood, and health-care use. *Soc Sci Med* 2003;57(11):2137-2147
 11. Fialova D, Topinkova E, Gambassi G, Finne-Soveri H, Jonsson PV, Carpenter I, Schroll M, Onder G, Sorbye LW, Wagner C, et al. Potentially inappropriate medication use among elderly home care patients in Europe. *JAMA* 2005;293(11):1348-1358
 12. Laurier C, Moride Y, Kennedy WA. Health survey data on potentially inappropriate geriatric drug use. *Ann Pharmacother* 2002;36(3):404-409
 13. Haider SI, Johnell K, Weitoft GR, Thorslund M, Fastbom J. The influence of educational level on polypharmacy and inappropriate drug use: A register-based study of more than 600,000 older people. *J Am Geriatr Soc* 2009;57(1):62-69
 14. Empereur F, Baumann M, Alla F, Briancon S. Factors associated with the consumption of psychotropic drugs in a cohort of men and women aged 50 and over. *J Clin Pharm Ther* 2003;28(1):61-68
 15. Spinewine A, Swine C, Dhillon S, Franklin BD, Tulkens PM, Wilmotte L, Lorant V. Appropriateness of use of medicines in elderly inpatients: qualitative study. *BMJ* 2005;331(7522):935
 16. Laporte JR. Towards a healthy use of Pharmaceuticals Development Dialogue 1985;2:48-55
 17. Olivier MR. Psychological factors compliance and resistance to antidepressant treatment. *Encephale*1986;12:197-203
 18. Bernd R.Br?ggemann,Hermann Elgeti, and Marc Ziegenbein.Patterns of drug prescription in a psychiatry outpatient care unit.German J Psychiatry 2008: V.11:1-6
 19. Keohavong B, Syhakng L, Sengaloundeth S, Nishimura A, Ito K. *Pharmacoepidemiology and drug safety* 2006;15:344-247
 20. Shankar PR, Roy S. Patterns of Prescription and Drug use in a Psychiatry out-patient department in a teaching hospital in Western Nepal. *Internal J Pharmacol* 2002;1:2
 21. Mant A, Lansbury G, Bridges-Webb C. Trends in psychotropic drug prescribing in Australia. *Med J Aust* 1987;146(4):208-10
 22. Maki P, Veijola J, Jones PB, Murray GK, Koponen H, Tienari P, et al. Predictors of schizophrenia-a review. *Br Med Bull* 2005 Jun 9, 73-74:1-15
 23. Ahmer S, Salamat S, Khan RAM, Iqbal SP, Haider II. Khan AS, Zafar M. *Clinical Practice and Epidemiology in Mental Health* 2009;5:9
 24. Lesen E, Andersson K, Petzoid M, Carlsten A. Socioeconomic determinants of Psychotropic drug utilization among elderly: a national population based cross sectional study. *BMC Publ Health* 2010;10:118
 25. Foster HD: The Geography of Schizophrenia: Possible Links with Selenium and Calcium Deficiencies, Inadequate Exposure to Sunlight and Industrialization. *J Orthomolecul Med* 1988;3(3):135-40
 26. Bret P, Bret MC, Queuille E. Prescribing patterns of antipsychotics in 13 French psychiatric hospitals. *Encephale* 2009;35(2):129-38