Socio-Demographic Characteristics and Psychiatric Morbidity of outpatients in Institute of Mental Health and Research

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Summary:

Socio-demographic characteristics and psychiartic morbidity in all the patients who have attended psychiatric outpatients department of Institute of Mental Health psychiatric interviewed by a semistructured questionnaire. Socio-demographic information revealed that mean age of the cases was 30.35 years and more than a half of the total number of patients fall into 20-39 years age group. Most of the cases were illiterates muslims, cultivators, housewives or employees and came from poor economic class with urban background. 42.57% cases came from rural areas. Patients coming from urban areas have many advantages over their rural counterpart in getting psychiatric service. By using ICD-9 criteria in assessment of psychiatric conditions were schizophrenia and affective disorders with 32% and 30 % respectively and neurotic disorders comprised 14 % childhood and adolescence disorders comprised 8 %, drug & alcohol dependece comprised 3 %, sexual disorders comprised 3 %, mental retardation comprised 1 % and rest 3 % comprised of others group of disorders. Among the neurotic group anxiety state formed the largest group with 40 % and hysteria was the next common group with 30 % cases. Among the sexual disorders, almost all the cases were sexual dysfunction in male and all these male cases presented themselves with symptoms of passage of whitish discharge in urine described

as"Dhatu". Almost all the drug addicted were male and most of the cases were heroin dependent 61 % of these group. Of the childhood and adolescence disorders, emotional disorders and conduct disorders were found 32.50% and 18.75% respectively, and recognisable cases of mental retardation (16.25%) was found. Most of the cases in the present study were referred by the treated psychiatric patients and or their relatives which was certainly due to increased awareness of the people through positive effect of the psychiatric services.

Introduction:

Psychiatric disorder is common in Bangladesh as in any other country but psychiatric service in our country at present is confined into one mental hospital, one Institute of Mental Health and Research, Medical College Hospital, three other hospitals and IPGM&R.

Expert Committee on Mental Health of the World Health Organistation (WHO) has made a global statement that in any society at least 1% of the people are need of psychiatric treatment at any given time and at least 10% of the population will require treatment sometime in their lives.

In fact, all the surveys done in the developing countries have amply brought out again and again that serious mental illness is at least 1 per 100 of population is as common in developing countries as in the affluent western countries. The prevalence of

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the so called minor' but nonetheless seriously disabling psychological and emotional problems are 5 to 6 times more.¹

Though a large countrywide survey of psychiatric morbidity has not yet been attempted in Bangladesh, enough evidence exists from small surveys that psychiartic disorders is widely prevalent in our country both in the urban and rural communities and it is not less than what has been reported in the other countries. In a survey in rural population in the Dasherkandi village near Dhaka it was found that 29 per thousand people suffered from psychiatric disorder while additional 36 per thousand had both psychiatric and physical disorder together. Out of this 65 per thousand, at east 11 per thousand were cases of serius psychiatric disorder like psychosis, epilepsy and mental retardation². Evidence from surgvey of general practice in Dhaka is equally impressive. In one study it was found that 29% of all cases seen in a medical general practice during the course of one year, were suffering from purely functional disorders' i.e. psychological or emotional disorder. In another 6% there were both physical and psychological symptoms present together3. In a study done at medical outpatients department of IPGMR, Dhaka it was found that 31% had purely psychogenic condition while additional 15% had both organic and psychogenic features.4 In another study in 600 psychiatric patients attending in a psychiatric clinic in Chittagong, schizophrenia and affective disorder were found 30% and 25% respectively. Neurosis and personality disorder were found 30%. Organic disorder and mental retardation were found 7% and 3% respectively5.

The aim of the present study is to determine the socio demographic characteristic and pattern of psychiatric morbidity in psychiatric patients who have attended outpatients department during January to December 1990, at the Institute of Mental Health and Research, Dhaka.

The present study may give some idea about the characteristics of psychiatric patients attending in

the psychiatric outpatients department and the pattern of their psychiatric morbidity which may ultimately be useful for mental health service in Bangladesh.

This study would hopefully act as a useful guid to find out the actual situation of psychiatric morbidity in our country and would stimulate further research in this aspect.

Materials and Methods:

The study was carried out in the Institute of Mental Heatlh & Research (IMHAR) which is situated in Sir Salimullah Medical College Mitford Hospital. Dhaka. All the patients attending out patients department for the first time from January to December 1990 with psychiatric illness were included in the study. A pretested psychiatric history taking proforma was designed for the purpose of the study which consisted of socio-demographic information, Psychiatric history and mental state examination. Each case was interviewed by Outpatient Medical Officer who had good psychiatric background in supervison with one of the Investigators. Informations were also obtained from attendents of the patients. Psychiatric diagnosis was done on the basis of ICD-9 criteria of WHO6. Relevant informations were carefully recorded. The data so collected were processed and analysed.

Results:

A total of 928 patients interviewed. The distribution of psychiatric patients according to their socio-demographic characteristic and psychiatric diagnosis are reported in the present communication.

Table1 shows the age and sex distribution of the psychiatric patients studied. Among the 928 patients, 599 (64.55%) were males and 329 (35.45%) were females. The male to female ratio here was 1.82:1. There age ranged between 7 and 75 years with a mean of 30.35 years. Largest number of patients were in the age of 20-29 years for all types of cases and next was the 30-39 years of age group with 21.01% of the total number of patients.

Table—I

Distribution of psychiatric patients according to their age and sex.

Age group	Ma	ale		Fe	mal	е	T	otal	17277
in year	Numb	oer	%	Numl	oer	%	Num	ber	%
Below 9	29	4.	84	11	3	3.34	40	ES.	4.31
10-19	79	13	.19	491	4	4.89	128		13.79
20-29	218	36	.39	129	3	9.21	347		37.39
30-39	124	20	.70	71	2	1.58	195	·	21.01
40-49	85	14	.19	44	1	3.37	129	EE.	13.90
50-59	43	7.	18	21	(6.38	64		6.90
60-69	16	2.	67	3	(0.91	19		2.05
70 & abov	e5	0.	84	1	(0.30	6		0.65
Tatal	599	100	0.00	32	910	0.00	92	2810	00.00
Mean Age	: 30.	76		2	9.6	1	3	30.3	35
The same	(SD=	14.1	(8)	(SD	=12	.53)	(SD	=13	3.58)

Range: 7 to 75 years

Table-II Shows the distribution of the psychiatric patients on the basis of religion. Largest number of cases were Muslims (87.82%). Hinduism is the second largest religious group (10.35%). Christian and Buddhist patients were found about 1.08% and 0.75% respectively.

Table— II

Distribution of psychiatric patients according to their religion.

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Religion	Ma	Male		ale	Total		
	Numb	per %	Numbe	er %	Numb	er %	
Muslim	527	87.98	288	87.54	815	87.82	
Hindu	62	10.35	34	10.33	96	10.35	
Buddhist	4	0.67	3	0.91	7	0.75	
Christian	6	1.00	4	1.22	10	1.08	
Total	599	100.0	0 329	100.0	00 928	100.00	

Table-III Shows the educational status of our patients. Most of the patients in both male and female group were either illiterate (33.95%) or primarily educated (18.10%). Graduate and above were found only 6.25%.

Table—III

Distribution of psychiatric patients according to their education background

Education	Ma	ile	Fer	male	Tot	al
a-Ver.X	Numb	per %	Numb	er %	Numbe	er %
Illiterate	177	29.55	138	41.95	315	33.95
Primary	117	19.53	51	15.50	168	18.10
Secondary	96	16.02	41	12.46	137	14.76
SSC	93	15.53	36	10.94	129	13.90
HSC	79	13.19	42	12.77	121	13.04
Graduate	26	4.34	16	4.86	42	4.53
Post- graduate	11	1.84	5	1.52	16	1.72
Total	599	100.00	329	100.00	928	100.00

Occupational background of the psychiatric patients is shown in table IV. Cultivator group contributed 24.57%. Housewives were the second largest group (22.23%). Service holder, retired from service, minial worker and self employed group collectively comprised 34.91%. Unemployed group contributed only 6.79%. Business and student group also contribution small in number with 6.68% & 5.82% respectively.

The urban and rural distribution of cases of both the sex were 57.43% and 42.57% respectively which is shown in table V.

Maximum psychiatric cases (51.40%) both in male and female group were found in lower income group which is shown in Table VI. Only 5.17% were found in higher income group.

Table —IV

Distribution of psychiatric patients according to their occupation.

Occupation	M	ale	Fema	ale	Total	
bruigh mass avoid it	Number	%	Number	%	Number	%
Cultivator	228	38.06	0	0.00	228	24.57
Housewife	0	0.00	197	59.88	197	22.23
Student	28	4.67	26	7.90	54	5.82
Business	62	10.35	0	0.00	62	6.68
Service	90	14.03	51	15.50	141	15.19
Retired	34	5.68	2	0.61	36	3.88
Minial worker	69	11.52	10	3.04	79	8.51
Self-employed	45	7.51	23	6.99	68	7.33
Unemployed	43	7.18	20	6.08	63	6.79
Total	599	100.00	329	100.00	928	100.00

Table—V

Distribution of psychiatric patients according to their social background.

Social	M	ale	Fema	ale	Total	
background	Number	%	Number	%	Number	%
Rural	274	45.74	121	36.78	395	42.57
Urban	325	54.26	208	63.22	533	57.43
Total	599	100.00	329	100.00	928	100.00

Table—VI

Distribution of psychiatric patients accrding to their economic backgraound

Income Group	M	Male		le	Total				
THE RESERVE OF THE PARTY OF THE	Number	%	Number	%	Number	%			
Higher	31	5.17	17	5.17	48	5.17			
Middle	260	43.41	143	43.46	403	43.43			
Lower	308	51.42	169	51.37	477	51.40			
Tatal	599	100.00	329	100.00	928	100.00			

Source of referral of the psychiatric patients is shown in table VII. It reveals that most of the cases (27.26%) were referred by the treated psychiatric patients and or their relatives. Referral from other department of hospitals was the second largest group (20.58%). About 21.66% patients were brought to the outpatients department by hospital staff and medical students. Self referral was only 9.05%

Table-VIII shows sex-wise diagnostic distribution of the psychiatric patients. Schizophrenia and affective disorder formed two largest group with 304 (32.76%) and 250 (30.17%) cases respectively of

918 total cases. Third largest group in the present series was neurotic disorder with 138 (14.87%) cases.

Sexual disorder was found with 33 (3.56%) cases. Drug alcohol dependence and other organic psychiatric illness formed 54(5.82%) and 13(1.40%) cases respectively. Childhood and adolescence disorder contributed 80 (8.62%) of the total number of patients. Paranoid state & other psychosis, personality disorder and mental retardation were much less in number in the sample with a total of only 19 (2.05%) cases.

Table—VII

Distribution of psychiatric patients according to their source of referral

Source of	Mal	е	Fema	le	Total	
referral	Number	%	Number	%	Number	%
G.P Specialist's private	75	12.52	37	11.25	112	12.07
chamber Treated Psychiatric patients and or their	59	9.85	28	8.51	87	9.37
relatives Other department of	147	24.54	106	32.22	253	27.26
hospitals	135	22.54	56	17.02	191	20.58
Medical students	41	6.85	24	7.29	65	7.00
Other hospital staff	84	14.02	52	15.81	136	14.66
Self	58	9.68	26	7.90	84	9.05
Total	599	100.00	329	100.00	928	100.00

Of the 280 cases of affective disorders, manic depressive psychosis (MDP) and depressive illness were found 99 (35.36%) and 181 (64.64%) cases respectively which is shown in table IX. It reveals that male to female ratio of MDP was found 3:1 (73 males & 26 females) and that was found 1:2 in depression (68 males & 113 females).

Neurotic disorder was further grouped according to the specific diagnosis which is shown in table X

Anxiety state formed the largest group of neurotic disorder with 34 (43.04%) males and 22 (37.29%) females. Hysteria was the next common group with 45 (32.60%) cases with slightly higher preponderance in female. Obsessive Compulsive disorder was found with 17 (12.32%) cases. Phobic state and hypochondriasis were least in number with 8 cases (5.8%) for each group.

Table—VIII

Distribution of psychiatric patients according to diagnostic categories.

Diagnosis	M	ale	Fema	ale	Total	
	Number	%	Number	%	Number	%
Schizophrenia	216	36.06	88	26.75	304	32.76
Affective disorder	141	23.54	139	42.25	280	30.17
Neurotic disorder	79	13.19	59	17.93	138	14.87
Drug & alcohol depende	nce 52	8.68	2	0.61	54	5.82
Organic psychosis	11	1.84	2	0.61	13	1.40
Paranoid state & other						
psychosis	3	0.50	2	0.61	5	0.54
Sexual deviations &						
disorder	30	5.00	3	0.91	33	3.56
Personality disorder	5	0.83	atriplian all si	0.30	6	0.65
Mental Retardation	6	1.00	2	0.61	8	0.86
Childhood & adolesence						
disorder	58	9.68	22	6.69	80	8.62
Miscellanceous	5	0.83	2	0.61	7	0.75
Total	599	100.00	329	100.00	928	100.00

Table—IX

Distribution of psychiatric patients according to the type of affective disorder.

Туре	M	Male		ale	Total	
	Number	%	Number	%	Number	%
MDP	73	51.77	26	18.70	99	35.36
Depression	68	48.23	113	81.30	181	64.64
Total	141	100.00	139	100.00	280	100.00

Table—X

Distribution of psychiatric patients according to the type of neurotic disorder

Туре	M	ale	Fema	le	Total	1,5 % 1 %
Constitution and price	Number	%	Number	%	Number	%
Anxiety state	34	43.04	22	37.29	56	40.58
Hysteria	21	26.58	24	40.68	45	32.60
Phobic state	5	6.33	3	5.08	8	5.80
OCD	11	13.92	6	10.17	17	12.32
Hypochondriasis	3	3.80	1	1.70	4	2.90
Others	5	6.33	3	5.08	8	5.80
Total	79	100.00	59	100.00	138	100.00

Sexual disorders group comprises 33 caes. Of these group, 30 cases were males and only 3 cases were females. All but one cases (96.97%) were diagnosed as sexual dysfunction and only 1 male case (3.03%) was found to have sexual deviation with voyeurism type. All the male cases presented themselves with a common symptom of passage of whitish discharge in urine described as Dhatu.

All the sexual dysfunctions were either erectile impotence or premature ejaculation or both in male, Infemale, 2 cases of frigidity and 1 case of dyspareunia were found.

Drug and alcohol dependence group (Table XII) comprised 54 cases of whom 52 were males and only 2 were females. Addiction of Heroin and other opium alkaloides formed the largest group with 31 (59.61%) in male and 2 (100%) in female. Other types

o addiction were entirely found in males. Only 2 (3.85%) male cases were diagnosed as alcohol depedence.

The diagnosis of childhood & adolescence disorder is shown in table XIII according to sex. Childhood emotional disorder formed the largest group with 16(27.12%) males and 10(47.62%) females. It is observed that majority of patients with emotional disorders had either anxiety or hysteria. Conduct disorder was the second largest group with 14 (23.73%) males and only 1 (4.76%) female. Mental retardation were found 11 (18.64%) cases in male and 2(9.52%) cases in female. Infantile autism was found 4(6.78%) in male and 2(9.52%) in female. Hyperkinetic syndrome was found only in male child with 3 (3.75%) cases. Only one case of rare tie disorder, Gilles de la Tourette's syndrom was found in a male child.

Table—XI

Distribution of psychiatric patients according to the type of sexual disorder

Туре	Male		Fema	ale	Total	
	Number	%	Number	%	Number	%
Sexual dysfunction	29	96.67	3	100.00	32	96.97
Sexual deviation	1	3.33	0	0.00	1	3.03
Total	30	100.00	3	100.00	33	100.00

Table—XII

Distribution of psychiatric patients according to the types of drug and alcohol dependence.

Туре	M	lale	Fema	ale	Total	Total	
to bit of the postalital	Number	%	Number	%	Number	%	
Heroin & other Opiu	ım		THE REAL PROPERTY.	NAME OF BRIDE	total training	on the special	
alkaloids	31	59.61	2	100.00	33	61.11	
Canabis	9	17.31	0	0.00	9	16.67	
Barbiturates	0	0.00	0	0.00	0	0.00	
Alcohol	2	3.85	0	0.00	2	3.70	
Hallucinogens	0	0.00	0	0.00	0	0.00	
Multiple drugs	10	19.23	0	0.00	10	18.52	
Total	52	100.00	2	100.00	54	100.00	

Table—XIII

Distribution of types of childhood and adolescence disorders according to sex.

Туре	Male		Female		Total	
	Number	%	Number	%	Number	%
Emotional disorders	16	27.12	10	47.62	26	32.50
Infantile autism	4	6.78	2	9.52	6	7.50
Other psychosis	2	3.39	stem nicted	4.76	3	3.75
Conduct disorder	14	23.73	minuers 10	4.76	15	18.76
Hyperkinetic syndrome	3	5.08	0	0.00	3	3.75
Tie disorder	137	1.69	(IIX elds 1) qu	4.76	2	2.50
Specific delays in						
development	1	1.69	0	0.00	1	1.25
Mental retardation	17	18.64	2	9.52	13	16.25
Epilepsy	6	10.17	4	19.05	10	12.50
Drug dependence	1	1.69	0	0.00	1	1.25
Total	59	100.00	21	100.00	80	100.00

Discussion:

This study was for one year period in the outpatients department of Institute of Mental Health & Research, Dhaka. Patients attendence for the first time were included in the study.

In the present series 20-31 years of age group contributed more than a half of the total number of patients. Similar age distribution has also been reported in other studies in Bangladesh ^{3,4,5,7}. The distribution of religion of our patients is almost similar to the religious distribution of last report of population census.

Sex distribution of the psychiatric patients in this study, it was found that 64.55% were male and 35.45% were female. In a study among the patients admitted to the mental hospital, Pabna, sex distribution varied between 68.2% and 78.5% in case of males and 31.8% to 21.5% in case of females during the year 1967-727. Attendence of female inpatients in this study were less because of the provision of female bed was less and it is situated in the distant area. The male to female ratio in the

present study was 1.82:1. According to 1991 population census in which male to female ratio of the population was 106.18. Smaller number of women in the sample may be due to the fact that they are less frequently brought for treatment than their male counterpart because of the conservative nature of our society and because our women play subordinate role in the family as well as in the society, and as they are economically dependent. However, the trend of male to female attendence in outpatients department IMHAR is changing as reflected by the analysis of the outpatients in the following year 1991 & 1992 which was formed to be 51:49 (unpublished data).

About 33.95% of the psychiatric patients in this study were illiterate. Yet this figure is much lesser than the report of 1991 population census where 75.18% of population was illiterate⁸. Poor representation of this group was most likely to be due to ignorance, poor economic condition believe pattern about the causation & treatment of mental illness, social attitude of the relatives of patients and prevailing social prejudice and superstition in this country and less opportunity to avail the hospital facilities.

In the present series, male psychiatric patients were mostly cultivators and employee in deffrent forms. Female cases were mostly housewives. These samples reflect the overall soci-economic background of population. Moreover, women infrequently work in this country outside the family environment and being hiusewife is widely accepted as an occupation.

In our study, psychiatric patients from urban areas were higher than from the rural areas. This finding is somewhat unusual in comparison with urban /rural distribution of the population. Selective factors like widely applying definition of town, location of the hospital in the urban areas, economic factor, urban people's better health consciousness, and better information about the mental health service may explain the preponderence of the urban patients rather than any specific vulnerability between urban and rural people in our study. However, a significant proportion, 42.57% came from rural areas to this city center. In the present study, cases from lower income group were overrepresented. Similar finding was supported in an earlier community survey in our country2.

Most of the cases in our study were refered either by the treated psychiatric patients and or their relatives, or by the other department of hospital which was certainly due to increased awareness and motivation of the people through good responsiveness of the psychiatric treatment and due to increased awareness of the medical professional about the existence of psychiatric illness which was reflected through better referral service among hospitals.

In the present series, schizophrenia (32.76%) and affective disorder (30.17%) were found to be two commonest group of illness. The result is consistent with one study among the patients attended in a psychiatric clinic in our country where schizophrenia and affective disorder were found 30% and 25% respectively⁵. Even in a study among the medical outpatients population in a central hospital of Dhaka, affective disorders and schizophrenia were reported 14% and 0.2% respectively⁴. In another study it was found that 99.8% of the psychiatric patients were schizophrenia and affective disorders⁷.

Since it was a study among treated inpatients of mental hospital of severe nature, such diagnosis pattern was different from the present study which is basically a study among outpatients of a city centre. Depressive disorder was found much higher among women in our study. Increased insecurities, life style pattern of our women, the burden of having a large family with younger children and extreme dominating role of the male partner may played a significant role in the higher incidence of depression. However the higher incidence of depression is universally represented.

Among the neurotic disorders, anxiety state formed the largest group in both males and females in our study which is consistent with other reports in this country^{3,4,5}. Hysteria though common to be believed the disease of non-western societies, was not very high in our psychiatric out patients which was 4.85% though it consisted 32.60% of the neurotic disorders.

Almost all cases of sexual disorder were males. This may be due to prejudice, cultural factors, lack of sex education, over valued belief regarding male potency, shame and passive role of female. Almost all the cases of these group were found sexual dysfunction and all the male cases presented themselves with the symptom of passage of whitish discharge in urine described as 'Dhatu" which indicates the existence of the large number of cases of culture bound "Dhat syndrome" in our country and it's close relationship with sexual dysfunction.

Most of the cases of drug dependence was found heroin type which indicates a burning problem in our society needs to be controlled. It may be pointed out that heroin has a higher potentiality of spreading dependency as 2 females in the present study sample were found to be suffering from heroin addiction. Otherwise no female cases of drug and alcohol dependence were found in this study.

In the pesent study, childhood and adolescence disorders were found 8.62% of the total psychiatric cases which indicates the growing awareness of the parents about the existence of psychiatric problems among child and adolescent in our country. Of these, emotional disorders comprised largest group with 32.50% of the 80 cases. One but all of the cases of conduct disorders were found in male child with 18.75%. In the well known isle of Wight study, the

prevalence rate of conduct disorders was found twice than that of the emotional disorders. Our study reveales reverse of the above report in average. This may be due to ignorance of the parents to recognise the couduct disorder as illness. About 16.25% of the cases of mental retardation was found in these group. This reveals that a considerable amount of mental retardation are existing in our country.

Conclusion:

The psychiatric morbidity in the present study was considerable. It is to be born in mind that majority of the psychiatric cases in our country still do not come to the hospital for treatment. If these untreated cases are taken into account, the total psychiatric morbidity in the present study would be worse. A countrywide survey is required to know the actual psychiatric morbidity in our country.

Though this Insttute is situated in Dhaka city, it serves the poor and middle income group of the country and out of which 42.57% from outside the Dhaka city.

either by the treated psychiatric patients and or their relatives (27.26%). This indicates increase awareness and good motivation of the people through effective psychiatric intervention and treatment. Referrals from professional people were 21.44% which also indicates increased awareness among the professional people about the psychiatric illness.

This study reveals the changing pattern of outpatients attendence in psychiatric centre. It is evident form the analysis of this study, nearly one third of the patients suffered form schizophrenia, another one third suffered from affective disorder and rest one third suffered from minor psychiatric disorders. It can be concluded that the acceptance of the psychiatric treatment among the general population is gradually improving comparing with earlier studies.

The attendence of woman in psychiatric outpatient department is gradually increasing from the report of 64.55% male and 35.45% female of this study which is further evident in the subsequent analysis of the outpatients statistics of IMHAR following 1991 and 1992 and the male female

percentage is now 51% and 49% respectively which is more representative of the population census and reflectis the changing social attitude regrading women.

Less severely ill and emotionally disturbed people are coming for help. Probably the prejudice against the psychiatric treatment are gradually improving at least in the cities.

Sexual dysfunction is found in considerable proportion of cases which need professional help.

As significant proprotion of attendence are childhood and adolescence disorder which was not perceived so long. This indicates the necessity of the development of childhood and adolesence psychiatric services of the country.

References:

- A proposed national mental health plan for Bangladesh (1985-1999). Institute of Mental Health and Research. Dhaka 1985.
- Chowdhury AKMN, Alam MN. & Keramat SM. Dasherkandi project studies: demography morbidity and mortality in a rural community of Bangladesh. BMRC bulletin 1981 3(1) 52-61.
- 3. Alam MN. Psychiatric morbidity in general practice. BMRC Bulletin 1978; 4(1):38-42.
- 4. Chowdhury AKMN, Selim M and Sakeb N. Some aspects of psychiatric morbidity in the outpatient population of a general hospital BMRC bulletin 1975; 1: 51-59.
- 5. Ahmed SU. Analysis of the epidemiological data of 600 psychiatric patients. BMRC Bulletin 1978; 4(1): 43-48.
- International classification of Diseases. Ninth Revision. Tabular list Mental disorder. World Health Organization Geneva 1992; 1:177-213.
- 7. Islam H A. Review of 5153 treated psychiatric patients-a five year retrospectives study BMRC Bulletin 1977; 3(1): 52-61.
- Preliminary report of population census 1991.
 Bangladesh Bureau of Statistics Dhaka-1992.
- Gelder M, Gath D and Mayou R. Oxford textbook of psychiatry. 2nd edn. Oxford University Press, Oxford 1989.