Profile of the Psychiatric In-patient Population in Bahrain, 1983 - 1987

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ABSTRACT

A retrospective analysis of admissions to the Psychiatric Hospital in Bahrain during the period 1983-1987, was carried out by examining the case notes. The data analysed included socio-demographic variables, source of referral, diagnostic categories, and the relationship between the above mentioned variables. Males constituted 70.5% of patients; singles, 64.3%; and those under the age of 34 years, 70.4%. The most common diagnostic category according to ICD-9 was schizophrenic illness (31.8%), followed by affective disorders (20.1%), with drug dependence (19.5%) ranking third. The smallest frequencies were neurotic disorders (0.9%) and organic psychiatric disorders (0.6%). We compared our findings with those in developing and industrialised countries. Our results are similar to those in developing countries and different from those in industrialised ones. We have discussed the possible sociocultural factors contributing to those differences.

It has become increasingly clear that psychiatric illnesses are not problems of Western societies alone, but are universal in their distribution.[1] To compare the frequency and pattern of psychiatric illnesses in the industrialised societies with those in developing ones through population surveys,[2] requires considerable financial expenditure and trained manpower; therefore, many workers had to depend on hospital data although these suffer from inherent weakness arising from the "selection factor" involved in hospitalisation; yet they can still provide baseline statistics that is certainly of interest to the local psychiatric service, and also help in the design of prospective population surveys.[3,4,5] The present study attempts to describe the socio-demographic characteristics and diagnostic categories, and the relationship between them in a cohort of in-patients treated at the Psychiatric Hospital in Bahrain over the five-year period.

METHODS

Information about all admissions to the Psychiatric Hospital in Bahrain were collected from the case records of patients admitted from January 1983 till December 1987. Data collected included socio-demographic variables, source of referral, and diagnostic category which was made according to the International Classification of Psychiatric Disorders (ICD-9).[6] All data were analysed by an IBM PC/AT using dbase III plus and SPSS programmes. χ^2 statistics were used to test for significant associations between any socio-demographic variable and diagnosis.

RESULTS

A total of 4217 cases were admitted to the Psychiatric Hospital in Bahrain during the years 1983-1987 and analysed as follows:

Sex and age
This study revealed a predominance of male (N=2971) to female (N=1246) patients; ratio 2.4:1. Table 1 shows the age and sex frequencies of our sample. Young adults under the age of 44 years made up the majority of our sample (85.8%), while those over 65 constituted only 2.1%. The distribution of diseases was significantly different according to both age and sex (p-value <.001).

Marital status
More than half the patients admitted (57.1%) were single, while 42.9% were married. Sixty percent of females were married. There were significant differences in disease diagnoses by marital status (p-value <.001)(Table 1).

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Table 1
Socio-demographic data

Item	Frequency	Percentage
Age		
< 15	40	0.9
15 - 24	1387	32.9
25 - 34	1542	36.6
35 - 44	651	15.4
45 - 54	361	8.6
55 - 64	146	3.5
≥ 65	90	2.1
Sex		
Male	2971	70.5
Female	1246	29.5
Marital status		
Single	2407	57.1
Married	1810	42.9
Nationality		
Bahraini	3361	79.7
Other Arabs	285	6.8
South East Asians	508	12.0
Europeans	63	1.5
Residence*		
Urban	3588	86.9
Rural	629	13.1
Occupation		
Professional & clerical	316	7.5
Sales & services	478	11.3
Agriculture, product & transportation	672	15.9
Students	234	5.6
Housewives	652	15.5
Unemployed	1865	44.2

*Residence -
Urban - Manama, Muharraq, Hidd, Riffa, Isa Town
Rural - Elsewhere

Occupation

The largest category comprising 1865 patients (44.2%) were unemployed, followed by production/transportation workers representing 15.9%, and housewives, 15.5%. The lowest frequencies of admissions were among professionals, and students constituting 7.5% and 5.5% of the total sample, respectively. Occupation was also significantly associated with diagnosis (p-value <.001).

Nationality

Bahrainis formed the bulk of admissions representing 79.7% of the sample, South East Asians made up

12%, Arabs from other countries 6.8%, and European and other nationalities (1.5%). Significant differences were found among Bahrainis versus other nationalities (p-value <.001).

Residence

The largest number of admissions by far (78.7%) came from urban areas while only 21.3% came from rural areas, thus making the urban to rural ratio of 3.7:1. Residence was also significantly associated with diagnosis (p-value <.001)(Table 2).

Source of referral

More than half the patients were self-referred (53.1%), while 30.4% were referred from Psychiatric out-patient Clinic, 8.7% from accident and emergency departments, 6.6% from the Police, and 1.2% from health centres (Table 2).

Diagnostic categories

Table 3 gives the characteristics of different diagnostic categories for each of the socio-demographic variables. The socio-demographic variables were significantly associated with diagnosis. The most common diagnostic category was schizophrenic illness (31.8%), followed by affective disorders (20.1%), drug dependence (19.5%), alcohol dependence (12.3%), and neurotic disorders (0.9%). The lowest frequency was for organic illnesses (0.6%)

DISCUSSION

The highest morbidity of psychiatric illness in this Bahraini hospital population (36.6%) was found among young people, 25-34 years of age, with a preponderance of males (70.5%). Similar findings have been reported in Saudi Arabia[7] and Nigeria.[5] In contrast, studies from Western Europe showed that the highest morbidity (38.9%) was among those over the age 65, the majority of which are females (57%).[7] The higher representation of young people and the larger number of male patients in our sample corresponds to the population structure of Bahrain, where 95% of the population are below the age of 50 and those above 60 constitute only 2.2% of the population. The secondary sex ratio in the general population is 1: 1.4, showing a preponderance of males.[8]

The finding that most males (64.2%) were single and most females (60%) were married are similar to the report from Nigeria, in which single males constituted 72.6%, while married females, 53.5%.[5] In a Norwegian study, more single females (53.9%) were found to have psychiatric disorders compared to 49.6% in single males.[2] In general, European studies have shown that rate of disorders is highest in females and most of which occur in the separated and divorced ones, followed by single and

Table 2
Average values for source of referral and diagnosis

Item	Frequency	Percentage	Mean	SD*
Source of referral				
Out-patient department	1283	30.4	256.6	130.4
Accident & emergency	365	8.7	73.0	32.8
Health centres	329	7.8	10.0	2.3
Self-referral	2240	53.1	448.0	194.9
All others	279	6.6	55.8	33.3
Total	4217	100.0		
Diagnostic category				
Organic illness	27	0.6	5.4	2.5
Schizrenia/paranoia	1341	31.8	268.2	43.7
Affective psychoses	609	14.5	121.8	42.3
Neurotic disorders	274	6.5	54.8	5.3
Alcohol dependence	519	12.3	103.8	25.0
Drug dependence	812	19.5	164.2	82.9
Acute reaction to stress	230	5.6	4.6	6.3
Adjustment disorder	34	0.8	6.8	3.4
No psychiatric illness	52	1.2	10.4	2.3
Others	250	5.9	50.0	19.0
Total	4217	100.0	843	

*SD = Standard Deviation

married ones.[9-12] A possible explanation is in the difference in population structure between European and the developing countries. It has also been postulated that overrepresentation of singles indicates that abnormal personality traits is associated with single status and/or due to lower utilisation of psychiatric services by married persons. Single people, especially males, tend to utilise psychiatric services more than married ones because of their loneliness.[13] The higher utilisation rates for married females, on the other hand, have been explained by increased stress as well as difficult and overburdened role expectations.[14]

There was a trend towards higher psychiatric morbidity among the lower socioeconomic groups (unemployed, unskilled and those engaged in traditional occupations). This finding is in agreement with European studies, in which a significantly higher psychiatric morbidity rate was found among the lower socioeconomic groups.[15] It also agrees with the Nigerian study, in which 40.8% of the in-patient population were unskilled.[5]

The ratio of Bahrainis to non-Bahrainis in hospital admissions is 3.9:1 while it is only 1.96:1 in the general population.[1] There is an obvious overrepresentation of Bahrainis. This cannot be attributed to economic factors since the health services are free of charge for all residents on the Island. A possible explanation is that non-Bahrainis are mainly young male workers who are transitory migrants often staying for a year or two on the job. Those who fall ill probably go home at an early stage or lose their jobs and are repatriated.

The urban to rural ratio in this study is 3.9:1, whereas the national figure is 3.2:1.[1] Although residence is significantly associated with diagnosis (p-value <.001), this ratio is far less than those reported in other parts of the world. This may be due to the composition of the Bahraini society. There are islands of urban residence within the traditional rural areas in the form of luxury compounds for high income people, in addition to some government residential schemes for low and middle income Bahrainis often coming from the city. The opposite is also true; in certain areas of the cities, small communities with rural existence are found.

Patients admitted to the hospital were mainly self-referred (53.1%). This is a very high rate for patients short circuiting their route of admission to the Psychiatric Hospital without passing through any referral system. If those admitted from accident and emergency department (8.7%),

Table 3
Characteristics of different categories*

Items	Schizo-phrenia	Affective disorder	Alcohol	Drug	Others	Total	χ^2	p-value
Number	1341 (31.7%)	846 (20.1%)	519 (12.3%)	821 (19.4%)	690 (16.4%)	4217 (100%)		
Age							583.4	<.001
below 25	27.1	7.8	4.1	28.7	32.2	100		
25-44	36.3	13.8	15.4	17.8	16.7	100		
above 45	26.6	32.5	20.6	3.5	16.8	100		
Sex							773.7	<.001
Male	29.7	10.7	16.7	27.3	15.6	100		
Female	36.9	23.4	1.8	0.7	37.2	100		
Marital status							234.2	<.001
Married	31.8	8.9	11.4	25.7	22.2	100		
Single	31.8	21.8	13.5	11.2	21.7	100		
Nationality							133.9	<.001
Bahraini	29.5	13.5	13.5	22.3	21.1	100		
Non-Bahraini	40.9	18.0	7.5	8.2	25.5	100		
Occupation								
Professional & clerical	25.8	14.2	11.5	24.2	24.3	100		
Other workers	31.7	10.4	15.5	26.8	15.6	100		
Students, Housewives	34.9	27.7	1.6	3.0	32.8	100		
Unemployed	32.9	9.7	16.6	22.6	18.1	100		

* Percentages and row totals are used for all categories.

and others brought by police (6.6%) are added this shows a schism towards admission by crisis. This is further highlighted by 30.4% re-admission from the out-patient and only 1.2% from health centres. In 1978 the total number of psychiatric diagnosis made at health centres were 378 patients, out of which 156 patients were referred to the psychiatric hospital and of whom 38 patients needed admission. Shepherd showed that family doctors in London referred 25% of the psychotics known to them, but only 5% of other diagnoses.[16] Furthermore, he showed that severity as measured by general health questionnaire was greater among those referred than among a matched control group seen in a primary care set-up. These findings suggest that family physicians in Bahrain are not and/or referring psychiatric conditions to the Hospital. At the same time, the high percentage of patients with self-referral as well as of those referred by the Police and accident and emergency departments reflects a tendency to delay consultations and treatment till illness becomes severe and results in crisis admissions.

The most common diagnosis in our study was schizophrenia with an incidence of 31.8% compared to 22% in Saudi Arabia[3] and 46.6% in the UK.[7] In the schizophrenia category there was an overrepresentation of unemployed people, students, housewives, and manual workers compared to professional and clerical staff. This finding is consistent with other studies in which the unemployed, unskilled, and semiskilled workers had consistently higher representation compared to other groups among schizophrenics admitted to hospitals.[10]

Affective disorders constituted 20.1% of the total sample, compared to 30.8% in Saudi Arabia[3] and 18.2% in Nigeria.[5] Depression was more common in middle-aged, married females (28.9%) than in males (16.8%). This finding is similar to that of a British study.[17] Drug dependence was predominantly a diagnosis of males, being third in frequency (19.5%). This result is similar to that found in Saudi Arabia, where drug dependence has been reported to be exclusively a male problem.[3]

CONCLUSION

Bahrain shares with developing countries a similar profile of the diagnostic categories and socio-demographic variables of the hospital psychiatric population. The profile, however, is different from that of Western Europe, possibly reflecting differences in the population structure between developing and industrialised countries. Availability of psychiatric beds, stigma towards psychiatric illness, and other economic and cultural factors are all important variables contributing to the difference.

In reviewing the findings of this study, it is important to be aware of its limitations. Conclusions cannot be drawn from these data about the incidence and prevalence in the Bahraini population, since this is a hospital-based study with an inherent selection bias. Those who get admitted to the Psychiatric Hospital are usually severely ill and present basically severe psychotic conditions.

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