The pattern of psychiatric admissions in a referral hospital, Bhutan

Rinchen Pelzang

**Background:** Mental illnesses are becoming a public health issue in all countries. However, data in most of the developing countries including Bhutan are scarce. This study aimed to explore the trends of admissions in the psychiatric ward of a referral hospital in Thimphu city of Bhutan.

**Method:** The study employed a retrospective analysis method. The data were obtained from the patient admission register of the psychiatric ward to capture distribution by age, gender, occupation, nationality, clinical diagnosis, and length of stay in the ward. International Classification of Diseases (ICD) 10th Revision was used for classification of the diseases. Descriptive statistics were used to describe the pattern of patient admissions. Demographic characteristics of the sample were cross-tabulated with clinical diagnosis and chi-square test was used to test statistical significance.

**Results:** In the psychiatric ward 1336 patients were admitted over a seven-year period. In 2004-05, 127 patients were admitted, which increased to 376 in 2010-11. Higher numbers of males (64.1%, 856) were admitted than females (35.9%, 480). Mental and behavioural disorders due to psychoactive substance use were the most common (45.5%) reason for admission. Among the admitted patients, 18.8% had no job or were dependents. A large number of patients were from Thimphu District (10.8%) and 42% of the patients stayed for one to two weeks in the hospital.

**Conclusions:** Psychiatric admissions were found to be increasing every year. Alcohol and drug use disorders were the most frequent diagnosis leading to hospitalization. Attention must be paid to increasing the in-patient services for psychiatric patients.

**Key words:** Bhutan, mental disorders, psychiatric admissions, morbidity.

**Introduction**

Mental illnesses are becoming a public health issue in all countries around the world. The number of people with mental illness requiring care in general settings is increasing every year. Besides, there has been a tendency to neglect the care of mentally ill in general settings due to lack of knowledge on mental illness and its management among health professionals. Issues are further compounded by the lack of adequate epidemiological information on mental illnesses around the globe including

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Bhutan. Reliable and valid epidemiological information on various mental disorders are necessary in order to improve mental health care services for the mentally ill.

Bhutan is a small Kingdom with an area of 38 394 square kilometres and a population of 672 425. With the realization of emerging mental health problems, the Government of Bhutan launched the Mental Health Programme in July 1997 coinciding with the 8th Five Year Plan. The main objective of the Mental Health Programme is to integrate mental health care services with general health care services to provide community-based mental health care services to people. Mental health care in Bhutan is delivered through 63 community-based psychiatric inpatient units. Psychiatric patients admitted to these community-based psychiatric units had mood disorders (32%), mental and behaviour disorders due to psychoactive substance use including alcohol (27%), and schizophrenia (19%).

In order to treat the severely ill referred cases from the districts, an eight-bed psychiatric ward was opened in Jigme Dorji Wangchuk National Referral Hospital (JDWNRH) at Thimphu on 29 March 2004. The bed capacity of the ward was increased to 18 in 2010. While several patients with mental illness were admitted in the psychiatric ward, the pattern of mental illnesses admitted has not been systematically studied. Therefore, a study was conducted to describe the type of psychiatric diagnosis among the admitted patients in the psychiatric ward of JDWNRH and to determine the relationship of psychiatric disorders with socio-demographic characteristics of the patients.

Methods
This retrospective study was carried out in the 18-bed psychiatric ward of JDWNRH in Thimphu, the capital of Bhutan. It is the only psychiatric ward with psychiatrists in the entire country which serves as a treatment centre for all kinds of mental disorders (including substance use disorders). Data were obtained from the indoor register of the psychiatric ward from 29 March 2004 to 28 March 2011. Data captured includes age, gender, occupation, nationality, clinical diagnosis, duration of stay in the ward and admissions per year. Patients were diagnosed by national psychiatrists according to the International Classification of Diseases (ICD) 10th Revision diagnostic criteria. All patients admitted in the ward were included. There were no patient age restrictions for admissions. Re-admissions were also included in the data set. Therefore, the data analyses presented here are based on the total number of admission episodes rather than the number of individuals admitted.

Statistical analysis
Data was managed and analysed using the Statistical Package for Social Sciences (SPSS) version 16.0. Descriptive statistics were used to describe the pattern of patient admission. Mean and standard deviation of patient age were examined. Cross-tabulation was performed for comparison of the demographic characteristics of the sample and clinical diagnosis. Chi-square tests were used for statistical tests. The data were presented as frequency and percentage.

Results
Socio-demographic characteristics of patients
There were 1336 admissions in the psychiatry ward of JDWNRH over a seven-year period. The highest number of patients admitted in any year was 376 in the seventh year (Table 1). The age range of the patients was 10 to 82 years, with a mean of 32.7 and standard deviation of 11.8 years. Overall, a higher
number of males were admitted (64.1%, 856) than females (35.9%, 480). Patients with no job or dependents accounted for 18.8% (251), followed by 17.9% (239) who were employed in Government services. Monks or nuns accounted for 5.1% (68) of the patients. Most (98.5%) of the patients admitted were nationals (Table 2). The highest number of patients admitted were from Thimphu (144, 10.8%), followed by Paro (138, 10.3%) and Samtse district (137, 10.3%). There were very few patients (20, 1.5%) from other countries.

Most of the admitted patients stayed in the ward for one to two weeks (561, 42%) followed by less than one week (337, 25.2%). Only 13 (1%) stayed for more than two months.

### Clinical Classification

Figure 1 shows the number of admissions categorized by clinical diagnosis. The most common psychiatric diagnosis was alcohol use disorders (33.5%), followed by bipolar [affective] disorders (BPAD) (15.3%). Depression and psychosis accounted for 8.6% and 11.8% respectively. Figure 2 shows the number of admissions based on ICD-10 classifications. The majority of the admissions were mental and behavioral disorders due to psychoactive substance use (608, 45.5%) followed by BPAD (321, 24.0%).

### Association of socio-demographic characteristics with clinical diagnosis

Cross-tabulation of clinical diagnosis with demographic characteristics revealed that the distribution of clinical conditions varied by the age ($p < 0.001$), gender ($p < 0.001$), and occupation ($p < 0.001$) of the patients.
Psychiatric admissions in a hospital of Bhutan

Figure 2: Distribution of patients by ICD-10 classification (n=1336)

Table 2: Distribution of patients by socio-demographic characteristics (n=1336)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age group (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-19</td>
<td>148</td>
<td>11.1</td>
</tr>
<tr>
<td>20-29</td>
<td>461</td>
<td>34.5</td>
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<tr>
<td>30-39</td>
<td>382</td>
<td>28.6</td>
</tr>
<tr>
<td>40-49</td>
<td>238</td>
<td>17.7</td>
</tr>
<tr>
<td>50-59</td>
<td>72</td>
<td>5.4</td>
</tr>
<tr>
<td>60-69</td>
<td>19</td>
<td>1.4</td>
</tr>
<tr>
<td>70 +</td>
<td>18</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>856</td>
<td>64.1</td>
</tr>
<tr>
<td>Female</td>
<td>480</td>
<td>35.9</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government employee</td>
<td>239</td>
<td>17.9</td>
</tr>
<tr>
<td>Private employee</td>
<td>198</td>
<td>14.8</td>
</tr>
<tr>
<td>Dependent/no job</td>
<td>251</td>
<td>18.8</td>
</tr>
<tr>
<td>Student</td>
<td>175</td>
<td>13.1</td>
</tr>
<tr>
<td>House wife</td>
<td>189</td>
<td>14.1</td>
</tr>
<tr>
<td>Farmer</td>
<td>216</td>
<td>16.2</td>
</tr>
<tr>
<td>Monk/Nun</td>
<td>68</td>
<td>5.1</td>
</tr>
<tr>
<td><strong>Nationality</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bhutan national</td>
<td>1316</td>
<td>98.5</td>
</tr>
<tr>
<td>Foreigners</td>
<td>20</td>
<td>1.5</td>
</tr>
</tbody>
</table>
In the age group of 30-39 years, people were admitted for alcohol use (175, 45.8%), depression (35, 9.2%) and somatoform disorder (13, 3.4%); in the age group of 20-29 years drug use (103, 22.3%), BPAD (74, 16.1%), psychosis (68, 14.8%), and anxiety disorder (21, 4.6%) were more common; in the age group of 10-19 years dissociative [conversion] disorders were more frequent.

Males were admitted for alcohol problem (375, 43.8%), drug use (129, 15.1%) and psychosis (10.0%) whereas females were found to be admitted for BPAD (123, 25.6%), depression (61, 12.7%), anxiety (35, 7.3%), dissociative [conversion] disorder (45, 4%) and somatoform disorder (19, 4%).

More government employees (129, 54.0%) had alcohol problem. Students (48, 27.4%) and people without a job or dependents had more drug use problems (48, 19.1%) than people with other occupations. Most of the BPAD, anxiety and somatoform patients were housewives (43, 22.8%); psychosis (39, 15.5%) and epilepsy (16, 6.1%) were more common in people with no job or among dependents; depression among farmers (29, 13.4%) and dissociative [conversion] disorders in students (34, 19.4%) were more frequent.

Discussion
This study explored the pattern of admissions in the psychiatric ward at JDWRH, Bhutan. There are several interesting findings from this study. There is an increase in admissions from 127 in the first year to 376 in the seventh year (Table 1). The patient admissions have almost tripled in the seventh year. Although changes in admission policies were not investigated, it seems the main reason for the increase in the number of inpatient was public awareness activities, and the mental health policy of educating primary health care staff on mental illness and its management. This also indicates that more mental health awareness campaigns need to be carried out through the media and other means to educate the public on mental illnesses to reduce stigma towards mental illnesses and encourage people to seek treatment.

More men than women were admitted to the psychiatric ward for treatment. This finding supports the study carried out to find the pattern of psychiatric illness admitted in psychiatric units in England and in Bangladesh.

The study revealed that a majority of the admissions were for mental and behavioural disorders due to psychoactive substance use. Patients in the age group of 30-39 years were most frequently admitted for alcohol use. These findings are consistent with other studies. It also revealed that most patients who were admitted for alcohol problem were government employees. Those who were admitted for drug use were found to be students and people without a job or dependents. The possible reason for more admissions of substance abuse in the ward could be peoples’ awareness on the availability of treatment and management for substance use disorders in the hospital.

Most of the patients admitted stayed for one to two weeks in the ward. The length of stay in this study is more or less similar to 15 days found by another study. Perhaps this finding is related to the hospital policy of not keeping the patients for more than two weeks.

A majority of the patients admitted were from Thimphu and the nearby district Paro. It may be due to the location of the psychiatric ward in Thimpu. However, the situation is not straight forward as there are an equal number of patients admitted from Samtse district which is quite far from the location of the psychiatric ward. Further, it is not clear from this study whether such differences in patient admissions represent local variations in psychiatric illnesses. Further research is needed to investigate the actual number of psychiatric illnesses in different districts.
More females were admitted to the psychiatric ward for BPAD. Females admitted with BPAD were found to be housewives. These findings, however, are very unique and are not consistent with other studies. Although we could not find explanations for these findings, coding-related problem during diagnosis may be there. Therefore, further research with accurate diagnostic coding is necessary for confirmation of these findings. The study revealed that more housewives were admitted for anxiety and somatoform disorders. These findings are consistent with other studies.4,7,8,9

Most admissions for psychosis and epilepsy were found in people with no job or those who are dependent. This could be due to presence of psychiatric disorders. Poor mental health can lead to job loss due to poor work performance.10

Patients admitted for depression were only 12.8% (171) of total admissions. This finding differs from other studies2,5,11 which state that depression is the most common diagnostic category admitted in a psychiatric ward. Those admitted for depression were mostly females and farmers. Though this finding from hospital cannot be generalized to the population, one can hypothesize an association of farmers and female with depression which needs confirmation.

Finally, patients admitted for dissociative [conversion] disorders were found to be students, mostly female within the age group of 10-19 years. This finding is consistent with another study.12

The findings of this study must be interpreted in the light of a number of limitations. First, this was a retrospective study involving only one psychiatric ward in a referral hospital. It would be unwise to generalize the findings to the rest of the country or to reach conclusions about the epidemiological relationships. Second, the data analyses presented in this study were based on the total number of admission episodes rather than the number of individuals admitted. We were unable to look at the number of re-admissions of each patient which could have made a difference to the number of cases admitted in the ward. Third, the study used the indoor patient admission register as a data source which may not have complete records. Further, the accuracy of coding of clinical diagnosis has not been evaluated. Thus, interpretation of diagnostic patterns must be done with caution.

Previous studies in other countries indicate that quality of care in psychiatric wards has been compromised due to increase in admission and bed occupancy rates. Scarcity of available resources and inefficiencies in their use are considered to be obstacles to better mental health, especially in low-and middle-income countries.13

Bhutan has been operating with a community psychiatric care system for more than a decade with only one psychiatric unit (ward), two psychiatrists, and four trained psychiatric nurses (without any psychologist, social workers and occupational therapists) for the entire country. Findings of the study indicate that psychiatric admissions in psychiatric ward are increasing every year and the pattern of admission is no different from other countries. There is also evidence of an increasing proportion of ‘difficult’ patients especially young men with substance use in the ward. With these findings, it suggests that special attention must be paid on more subtle issues of health professionals’ education, in-patient resources and service planning.

To provide quality care to the patients, ward design has to be adjusted. Hospital ward needs to become one element of comprehensive services and alternatives such as crisis services, day hospitals or intensive
case management teams should be available where possible. Most importantly, staff needs to be increased, trained and supported in the management of people with severe mental illness and substance use disorders. Training the staff in psychosocial interventions and cognitive behavioural therapy for common mental disorders, screening and interventions of dual diagnosis and addictions are a vital component in assuring effective management of psychiatric patients.

To conclude, findings of the study indicate that psychiatric admissions in psychiatric ward are increasing year after year. Alcohol and drug use disorders were found to be the most common diagnosis leading to hospitalization in Bhutan. Drawing together the findings of this study it may be concluded that special attention must be paid to more subtle issues of health professional’s education, in-patient resources and service planning.

References


14. Trudel J, Lesage A. Care of patients with the most severe and persistent mental illness in an area without a psychiatric hospital. Psychiatr Serv. 2006; 57: 1765-70.


