The Prevalence of Common Mental Disorders among Inpatient Thai Army Personnel

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Background: *The purpose of the present study was to determine the prevalence of common mental disorders among Thai Army personnel who attended the inpatient psychiatric ward, Department of Psychiatry and Neurology, Phramongkutklao hospital in 2007.*

Material and Method: *The author retrospectively reviewed and analyzed all inpatient medical records in 2007 of Thai Army Personnel who received treatment at the inpatient psychiatric ward, Department of Psychiatry and Neurology, Phramongkutklao hospital from January 2007 to December 2007.*

Results: *There were 213 Thai Army Personnel medical records recruited in the present study. From the records, 207 were from male patients and 6 were from females. The most common age range was 41-50 years (38.5%). The prevalence of the first ten rank of mental disorders among Thai Army personnel were alcohol dependence (39.9%), schizophrenia (28.6%), bipolar disorder (9.4%), amphetamine dependence (5.2%), adjustment disorder (4.7%), major depressive disorder (3.3%), personality disorder (2.3%), dementia (1.9%), dysthymia (0.9%) schizoaffective disorder (0.9%), delusional disorder (0.9%), anxiety disorder (0.5%) and polysubstance dependence (0.5%).*

Conclusion: *The three common prevalence of mental disorders among inpatient psychiatric Thai Army personnel in the year 2007 were alcohol dependence, schizophrenia and bipolar disorder.*

Keywords: *Mental disorders, Prevalence, Thai army personnel*

The important mission of the Royal Thai Army is to defend the nation; however, the changing world has allowed the Army to serve the country in other roles, such as solving society problems, humanitarian assistance and disaster relief. In order to efficiently perform all given missions, soldiers must be physically and mentally fitted. Various studies on mental disorders in soldiers have been done. For example, a study on the relationship between mental disorders and treatment in US veteran's hospital during 1993-1995, revealed that at least one mental disorder was found in the population studies, of which depression, post traumatic stress disorder, and alcohol-related disorders were found at the rates of 31%, 20% and 20%, respectively[1]. During 1990-2000 the US Army conducted a study on mental disorders found from personnel treated as inpatient and outpatient and has revealed that frequent mental disorders found in

inpatient were, from high to low, alcohol-related disorders, adjustment disorders, personality disorders, major depression and depression not otherwise specified respectively, while frequent mental disorders found in outpatient were, from high to low, alcohol-related disorders, adjustment disorders, major depression, depression not otherwise specified and drug-related disorders respectively[2,3]. About military attrition, it found that 46% of the population met the mental illness diagnoses and posted risk of military attrition at the rate of 19%[4]. In Thailand, the prevalence of common mental disorders had reported only in civilian's population. For example, A 2003 National Survey on the prevalence of mental disorders was conducted on 11,700 population at ages between 15 to 59 years old has revealed prevalence of mental disorders as follows: 28.52% alcohol-related disorder, 3.2% major depressive disorder, 1.85% generalized anxiety disorder, 1.76% psychoses, 1.18% dysthymia, 0.98% agoraphobia and 0.65% mood disorder[5]. A 2004 cross-section study on Thailand national psychiatric problems was conducted on 3,552 Thai workers population revealed that mental disorders found were:

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23.9% major stress, 32.8% depression, 1.9% self-destructive and 26.9 % alcohol misuse[6]. At present, Thai Army Personnel have been continuously treated as outpatient at Department of Psychiatry and Neurology at Phramongkutklao Hospital, and the hospital has been collecting statistical data, in accordance with patient's classification as outpatient and inpatient. A study or statistical data collection on common mental disorders in Thai Army personnel treated as inpatient has never been done; therefore, this is the first study on the prevalence of common mental disorders in Thai Army personnel who received treatment as inpatient at psychiatric ward, Department of the Psychiatry and Neurology, Phramongkutklao hospital. Results of the study may be used as basis data in planning for prevention and treatment for Thai Army personnel.

Material and Method

The data was collected from all inpatient record of The Royal Thai Army Personnel who received treatment as inpatient at psychiatric ward, Department of Psychiatry and Neurology of the Phramongkutklao Hospital from January 1, 2007 to December 31, 2007. The inclusion criteria was the Royal Thai Army Personnel who treated as inpatient and had a completed psychiatric diagnosis made by psychiatrist based on The fourth edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)[7]and The10th revision of International Statistical Classification of Diseases and Related Health Problem (ICD-10)[8]. Data included psychiatric diagnosis and general information that were gender, age, marital status and ranking were recorded. The uncompleted records for psychiatric diagnosis were excluded.

Statistical analysis

The data are expressed as frequency and percentage. The prevalence of mental disorders among Thai Army Personnel was calculated overall and the distribution of common mental disorders was calculated by gender, rank, age and marital status.

Results

From January 1, 2007 to December 31, 2007, a total of 213 Thai Army Personnel were treated as inpatient at psychiatric ward, Department of Psychiatry and Neurology, Phramongkutklao Hospital. They were 207 males (97.2%) and 6 females (2.8%). No patient had been excluded from this study. The most common age range was 41-50 years, at the rank from Sergeant Major 3rd Class to Sergeant Major 1st Class and marital status are married. Demographics data was shown in Table 1.

Prevalence

The present study revealed that the prevalence of mental disorders in Thai Army Personnel could be ranking in prevalence order, from high to low as follows:

Table 1. Demographics data in 213 subjects

Characteristics of the study population		n	%
Gender	Male	207	97.2
	Female	6	2.8
Age	≤ 20 yrs	5	2.3
	21-30 yrs	64	30.0
	31-40 yrs	28	13.2
	41-50 yrs	82	38.5
	51-60 yrs	26	12.2
	> 60 yrs	8	3.8
Rank	Major-Colonel	17	7.9
	Second Lieutenant-Captain	20	9.4
	Sergeant Major3rd Class-Sergeant Major1st Class	69	32.4
	Private 1st Class-Sergeant	44	20.7
	Private	62	29.1
	Cadet Student	1	0.5
Marital Status	Single	89	41.7
	Married	102	47.9
	Divorce	22	10.4

alcohol dependence (39.9%), schizophrenia (28.6%), bipolar disorder (9.4%), amphetamine dependence (5.2%), adjustment disorder (4.7%), major depressive disorder (3.3%), personality disorder (2.3%), dementia (1.9%), dysthymia (0.9%) schizoaffective disorder (0.9%), delusional disorder (0.9%), anxiety disorder (0.5%) and substance dependence (0.5%) as shown in Fig. 1

Gender

The results show that the common three prevalent mental disorders in male were alcohol dependence, schizophrenia and bipolar disorder. For female the highest prevalence was anxiety disorder. Other mental disorders determined by gender were shown in Table 2.

Rank

Most of psychiatric inpatients were found at the rank from Sergeant Major 3rd Class to Sergeant Major 1st Class. Regarding the common three prevalent mental disorders, alcohol dependence was mostly found in the rank of Sergeant Major 3rd Class to Sergeant Major 1st Class, Schizophrenia was mostly found in privates and bipolar disorder was mostly found at the rank Major to Colonel. Other mental disorders determined by rank were shown in Table 3.

Age

Determination by age it was found that in relation to the most common mental disorders, alcohol dependence was mostly found in aged between 41-50 years. Schizophrenia was mostly found in aged between 21-30 years and bipolar disorder was mostly found at the aged between 41-50 years. Other mental disorders determined by age were shown in Table 4.

Marital status

Most of inpatients are married. With reference to the common three prevalent mental disorders schizophrenia was mostly found in single, alcohol dependence and bipolar disorder were mostly found in married. Other mental disorders determined by marital status were shown in Table 5.
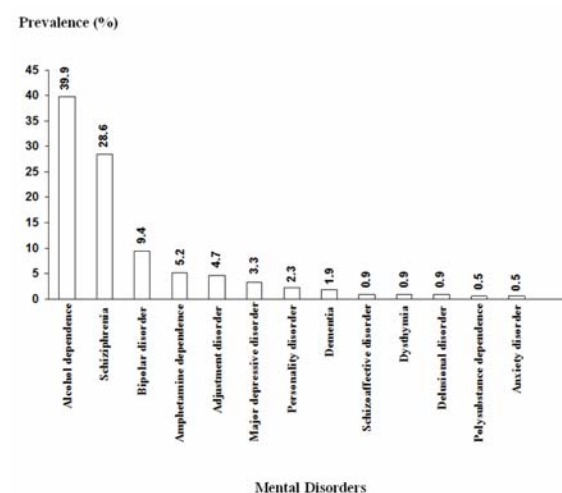

Fig. 1 Prevalence of mental disorders

Table 2. Gender and mental disorders

Male			Female		
Diagnosis	n	(%)	Diagnosis	n	(%)
Alcohol dependence	85	(41.0)	Anxiety disorder	2	(33.2)
Schizophrenia	61	(29.5)	Major depressive disorder	1	(16.7)
Bipolar disorder	19	(9.2)	Bipolar disorder	1	(16.7)
Amphetamine dependence	11	(5.3)	Schizoaffective disorder	1	(16.7)
Adjustment disorder	9	(4.6)	Adjustment disorder	1	(16.7)
Major depressive disorder	6	(2.9)			
Personality disorder	5	(2.4)			
Dementia in Alzheimer's disease	4	(1.9)			
Delusional disorder	2	(0.9)			
Dysthymia	2	(0.9)			
Polysubstance dependence	2	(0.9)			
Schizoaffective disorder	1	(0.5)			
Total	207	(100)	Total	6	(100)

Table 3. Rank and mental disorders

Diagnosis	Rank					
	Maj-Col n (%)	2Lt-Capt n (%)	SM3-SM1 n (%)	Pfc-Sgt n (%)	Private n (%)	Cadet Student n (%)
Dementia in Alzheimer's disease	-	4 (20.00)	-	-	-	-
Alcohol dependence	7 (43.75)	6 (30.00)	47 (68.12)	25 (55.56)	-	-
Schizophrenia	1 (6.25)	2 (10.00)	12 (17.39)	8 (17.77)	37 (59.68)	1 (100)
Delusional disorder	-	-	-	2 (4.45)	-	-
Schizoaffective disorder	-	1 (5.00)	1 (1.45)	-	-	-
Bipolar disorder	7 (43.75)	5 (25.00)	6 (8.69)	2 (4.45)	-	-
Major depressive disorder	1 (6.25)	1 (5.00)	2 (2.90)	2 (4.45)	1 (1.62)	-
Amphetamine dependence	-	-	-	1 (2.21)	10 (16.13)	-
Dysthymia	-	-	-	2 (4.45)	-	-
Anxiety disorder	-	-	-	2 (4.45)	-	-
Polysubstance dependence	-	-	-	-	2 (3.22)	
Personality disorder	-	-	-	-	5 (8.06)	-
Adjustment disorder	-	1 (5.00)	1 (1.45)	1 (2.21)	7 (11.29)	-
Total	16 (100)	20 (100)	69 (100)	45 (100)	62 (100)	1 (100)

Note: Maj-Col = Major-Colonel, 2Lt-Capt = Second Lieutenant-Captain, SM3-SM1 = Sergeant Major 3rd Class-Sergeant Major 1st Class, Pfc-Sgt = Private 1st Class-Sergeant

Table 4. Age and mental disorders

Diagnosis	Age (years)					
	≤ 20 n (%)	21-30 n (%)	31-40 n (%)	41-50 n (%)	51-60 n (%)	> 60 n (%)
Dementia in Alzheimer's disease	-	-	-	-	-	4 (50.00)
Alcohol dependence	-	-	22 (53.65)	45 (64.28)	15 (60.00)	3 (37.50)
Schizophrenia	2 (40.00)	36 (56.25)	7 (17.07)	9 (12.86)	6 (24.00)	1 (12.50)
Delusional disorder	-	-	-	2 (2.86)	-	-
Schizoaffective disorder	-	-	1 (2.44)	1 (1.42)	-	-
Bipolar disorder	-	4 (6.15)	4 (9.76)	9 (12.86)	3 (12.00)	-
Major depressive disorder	-	1 (1.57)	3 (7.32)	2 (2.86)	1 (4.00)	-
Dysthymia	-	-	-	2 (2.86)	-	-
Anxiety disorder	-	-	2 (4.88)	-	-	-
Amphetamine dependence	1 (20.00)	10 (15.63)	-	-	-	-
Polysubstance dependence	-	2 (3.12)	-	-	-	-
Adjustment disorder	2 (40.00)	6 (9.37)	2 (4.88)	-	-	-
Personality disorder	-	5 (7.82)	-	-	-	-
Total	5 (100)	64 (100)	41 (100)	70 (100)	25 (100)	8 (100)

Discussion

The present study revealed that the prevalence of common mental disorders among Thai Army Personnel who attended the inpatient psychiatric ward at Phramongkutklao Hospital in 2007 differed from the study on prevalence of mental disorders in Thailand: A National Survey in 2003-4[5,9]. The most common prevalent mental disorder found in this study was alcohol dependence, at the rate of 39.9% comparing to the rate of 28.5 % of a national survey in Thailand, 2003[5]. Regarding to the previous study that 60% of alcohol consumers were male and addiction rate was

Table 5. Marital status and mental disorders

Diagnosis	Marital status		
	Single n (%)	Married n (%)	Divorce n (%)
Dementia in Alzheimer's disease	-	3 (3.16)	1 (4.17)
Alcohol dependence	12 (12.12)	64 (67.36)	9 (37.50)
Schizophrenia	56 (56.57)	-	5 (20.83)
Delusional disorder	-	2 (2.10)	-
Schizoaffective disorder	-	2 (2.12)	5 (20.83)
Bipolar disorder	5 (5.05)	12 (12.63)	3 (12.50)
Major depressive disorder	1 (1.01)	6 (6.33)	-
Dysthymia	-	1 (1.06)	1 (4.17)
Anxiety disorder	-	2 (2.10)	-
Amphetamine dependence	10 (10.10)	1 (1.06)	-
Polysubstance dependence	2 (2.02)	-	-
Adjustment disorder	8 (8.08)	2 (2.10)	-
Personality disorder	5 (5.05)	-	-
Total	99 (100)	95 (100)	24 (100)

found in male more than female[10] and in this study alcohol dependence was mostly found in male. Thus possible cause for the difference in prevalence may occur from the inpatient was mostly male, so higher prevalence value was found. This signifies that alcohol consuming is a major problem of the Army Personnel. These findings may provide an opportunity for a development of prevention and abolition of alcohol consuming for the Army.

The second most prevalence mental disorder was schizophrenia, mostly seen in privates, aged between 21-30 years and single. This can be explained from the fact that most privates were around 18-20 years old and in compliance that schizophrenia can be mostly found in men at the age of early 20 years[11-13]. Previous study on psychoses in soldiers found no difference in schizophrenia between soldiers and civilians. Schizophrenia incidents found in soldiers and civilians at the same age interval were similar and factors stimulated the symptoms were traumatic incidents of battle environment, family problems, sexual conflict, dissatisfaction on given duties and problems of relationship among soldiers[14-16]. This finding may reflects the private's recruiting system, which patients cannot be early identified at the selection period, therefore, the finding from this study should be used and applied for more efficient recruiting process.

Bipolar disorder was found in the third prevalence order which mostly found at the age between 41-50 years old and at the rank of Major to Colonel. This finding has suggested for surveillance and protection of personnel who was at the age between 41-50 years old since a large number of bipolar disorder has been found.

The most valuable point from this study was that it was the first report on the prevalence of common mental disorders in Thai Army Personnel who treated as inpatient at Psychiatric ward, Phramongkutklao Hospital which is the largest Army's hospital in Thailand.

However, the present study has some limitations. Firstly, the data already existed from records of psychiatrist and psychiatric residents, discrepancies of diagnose might have occurred. Secondly, the sample size was little because this study focused only on inpatient Army Personnel but this could lead to gain knowledge on the characteristics of mental disorders among Thai Army Personnel. Further studies should be carried out to include other variables from both Army Personnel and civilians and data collected can be compared, for better understanding of Thai Army Personnel's mental health.

Conclusion

From the present study, it was found that the three most prevalent mental disorders among inpatient Thai Army Personnel were alcohol dependence, schizophrenia and bipolar disorder.

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ความชุกของโรคทางจิตเวชที่พบบ่อยในผู้ป่วยในที่เป็นกำลังพลของกองทัพบกไทย

อิศรา รักษ์กุล

ภูมิหลัง*: การศึกษานี้ต้องการทราบถึงความชุกของโรคทางจิตเวชที่พบบ่อย ในกำลังพลของกองทัพบกไทยที่มารับการรักษาแบบผู้ป่วยในที่กองจิตเวชและประสาทวิทยา โรงพยาบาลพระมงกุฎเกล้า ใน ปี พ.ศ. 2550*

วัสดุและวิธีการ*: ศึกษาโดยเก็บรวบรวมข้อมูลพื้นฐาน การวินิจฉัยโรคทางจิตเวช จากเวชระเบียนผู้ป่วยในของกำลังพลของกองทัพบกไทยที่มารับการรักษาแบบผู้ป่วยในที่กองจิตเวชและประสาทวิทยา โรงพยาบาลพระมงกุฎเกล้า ระหว่างวันที่ 1 มกราคม-31 ธันวาคม พ.ศ. 2550*

ผลการศึกษา*: กำลังพลกองทัพบกไทยที่มานอนรักษาแบบผู้ป่วยในที่กองจิตเวชและประสาทวิทยา โรงพยาบาลพระมงกุฎเกล้า ในปี พ.ศ. 2550 จำนวนทั้งสิ้น 213 คน เป็นผู้ป่วยเพศชาย 207 คน และผู้ป่วยเพศหญิง 6 คน ช่วงอายุของผู้ป่วยที่พบบ่อยที่สุดระหว่าง 41-50 ปี (ร้อยละ 38.5) ความชุกของโรคทางจิตเวชในกำลังพลของกองทัพบกไทย ที่มารับการรักษาที่แผนกผู้ป่วยใน กองจิตเวชและประสาทวิทยา โรงพยาบาลพระมงกุฎเกล้า ในปี พ.ศ. 2550 โดยเรียงลำดับความชุกจากมากไปน้อย 10 อันดับแรก คือ alcohol dependence (ร้อยละ 39.9) schizo-phrenia (ร้อยละ 28.6) bipolar disorder (ร้อยละ 9.4) amphetamine dependence (ร้อยละ 5.2) adjustment disorder (ร้อยละ 4.7) major depressive disorder (ร้อยละ 3.3) personality disorder (ร้อยละ 2.3) dementia (ร้อยละ 1.9) schizoaffective disorder (ร้อยละ 0.9) delusional disorder (ร้อยละ 0.9) anxiety disorder (ร้อยละ 0.5) และ polysubstance dependence (ร้อยละ 0.5)*

สรุป*: โรคที่พบความชุกมากที่สุด 3 อันดับแรก ในกำลังพลของกองทัพบกไทยที่มารับการรักษาแบบผู้ป่วยในที่กองจิตเวชและประสาทวิทยา โรงพยาบาลพระมงกุฎเกล้า ในปี พ.ศ.2550 คือ alcohol dependence, schizo-phrenia และ bipolar disorder*