The Prevalence of Common Mental Disorders among Outpatient 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 outpatient clinic, Department of Psychiatry and Neurology, Phramongkutklao Hospital in 2005.*

Material and Method: *The authors retrospectively reviewed and analyzed all outpatient medical records in 2005 of Thai army personnel who received treatment at the outpatient clinic, Department of Psychiatry and Neurology, Phramongkutklao Hospital from January 2005 to December 2005.*

Results: *Altogether 1,729 Thai army personnel were enrolled in the present study. They were 1,546 males and 183 females. The most common age range was 41-50 years (27.8%) and most of them were married. The prevalence of the first ten rank of mental disorders among Thai army personnel were schizophrenia (30.5%), alcohol dependence (18.21%), major depressive disorder (10.75%), generalized anxiety disorder (6.88%), panic disorder (6.13%), acute stress reaction (4.22%), adjustment disorder (4.1%), dysthymia (3.12%), insomnia (3%) and bipolar disorder (2.48%), respectively.*

Conclusion: *The three most common prevalence of mental disorders among Thai army personnel who attended in the year 2005 were schizophrenia, alcohol dependence, and major depressive disorder.*

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

The most 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 fit. Various studies on mental disorders in soldiers have been done. For example, a study on the relationship between mental disorders and treatment in U.S. 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 U.S. Army conducted a study on mental disorders found from personnel treated as inpatients and outpatients, and has revealed that frequent mental disorders found in inpatients 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 outpatients were, from high to low, alcohol-related disorders, adjustment disorders, major depression, depression not otherwise specified and drug-related disorders respectively[2,3]. Regarding mental disorders and military attrition, it was 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 been reported only in civilian populations. For example, a 2003 National Survey on the prevalence of mental disorders was conducted on

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11,700 population at ages between 15 to 59 years. The prevalence of mental disorders were 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 in working ages was conducted on 3,552 population from 50 factories. The prevalence of mental disorders were: 23.9% major stress, 32.8% depression, 1.9% self-destructive and 26.9% alcohol misuse[6]. A study on epidemiology of mental disorders of the Thai people in 2001, in which 7,157 samples were randomly selected from the Thai population aged between 15 to 60 years and it was conducted using multistage random sampling technique.The recent study revealed that prevalence of mental disorders were: 1.3% mental retardation, 1.0% panic disorder, 0.5% hypochondriasis, 0.8% agoraphobia, 0.7% generalized anxiety disorder, 0.3% social phobia, 0.3% simple phobia, 0.3% obsessive compulsive disorder, 0.2% somatization, 1.8% mood disorder, 0.17% schizophrenia, 6.0% alcohol abuse, 4.2% alcohol dependence, 0.3% amphetamine abuse, 0.18% amphetamine dependence, 0.22% cannabis abuse, 0.19% cannabis dependence, 0.07% opioid abuse, 0.04% opioid dependence, 0.1% volatile abuse, 0.03% volatile dependence, 3.4% tobacco dependence and 1.0% attempted suicide[7].

At present, Thai army personnel have been continuously treated as outpatients at the Department of Psychiatry and Neurology at Phramongkutklao Hospital, and statistical data were collected, in accordance with patient's classification as outpatients and inpatients. A study or statistical data collection on common mental disorders in Thai army personnel treated as outpatient 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 outpatients at the Department of the Psychiatry and Neurology, Phramongkutklao Hospital. Results of the present 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 the OPD card of the Royal Thai Army personnel who received treatment as outpatients at the Department of Psychiatry and Neurology of the Phramongkutklao Hospital from January 1, 2005 to December 31, 2005. The inclusion criteria was the Royal Thai Army personnel who were treated as outpatients who had a completed psychiatric diagnosis by the fourth edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)[8] and the 10th revision of International Statistical Classification of Diseases and Related Health Problem (ICD-10)[9]. Data collection included psychiatric diagnosis and general information including gender, age, marital status and ranking were recorded. The patients who had incomplete data were excluded.

Statistical analysis

Analyze the prevalence of mental disorders and study the distribution of common mental disorders in the divisions of gender, rank, age and marital status of Thai Army Personnel by mean and percentage.

Results

From January 1, 2005 to December 31, 2005, a total of 1,772 Thai Army personnel were treated as outpatients at the Department of Psychiatry and Neurology, Phramongkutklao Hospital. Forty-three Army personnel were excluded from the present study due to incomplete data. Thus, only 1,729 Thai Army personnel were analyzed. They were 1,546 males and 183 females. 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 were married. Demographics data is shown in Table 1.

Table 1. Demographic data in 1,729 subjects

General data		n	%
Gender	Male	1546	89.0
	Female	183	11.0
Age	$\leq$ 20 yrs	36	2.1
	21-30 yrs	290	16.7
	31-40 yrs	217	12.6
	41-50 yrs	496	28.7
	51-60 yrs	289	16.7
	> 60 yrs	401	23.2
Rank	Major General - General	51	2.9
	Major - Colonel	404	23.6
	Second Lieutenant - Captain	292	16.9
	Sergeant Major 3rd Class - Sergeant Major 1st Class	442	25.6
	Private 1st Class-Sergeant	276	15.9
	Private	242	13.9
	Cadet Student	22	1.2
Marital status	Single	631	36.5
	Married	1038	60.0
	Divorce	60	3.5

Prevalence

The present study revealed that the prevalence of mental disorders in Thai Army Personnel who were treated as outpatients at Department of Psychiatry and Neurology of the Phramongkutklao Hospital in 2005 could be ranking in prevalence order, from high to low as follows: schizophrenia (30.5%), alcohol dependence (18.21%), major depressive disorder (10.75%), generalized anxiety disorder (6.88%), panic disorder (6.13%), acute stress reaction (4.22%), adjustment disorder (4.1%), dysthymia (3.12%), insomnia (3%) and bipolar disorder (2.48%) as shown in Fig. 1

Gender

The results show that most of population in the present study were male. Regarding the common three prevalent mental disorders in males were schizophrenia, alcohol dependence and major depressive disorder, in females were major depressive disorder, schizophrenia and dysthymia. Other gender's division is shown in Table 2.

Rank

The present study has found that most of the outpatients were at the rank from Sergeant Major 3rd

Class to Sergeant Major 1st Class. Regarding the common three prevalent mental disorders were schizophrenia, alcohol dependence and major depressive disorder. Schizophrenia was mostly found in privates. Alcohol dependence was mostly found at the rank of Sergeant Major 3rd Class to Sergeant Major 1st Class, and major depressive disorder was mostly found at the rank Major to Colonel. Other rank divisions are shown in Table 3.

Age

It was found that the most common age range in this outpatient group was 41-50 years. Regarding the common prevalent mental disorders were schizophrenia, alcohol dependence and major depressive disorder. Schizophrenia was mostly found in those aged between 21-30 years. Alcohol dependence was mostly found in those aged between 41-50 years and major depressive disorder was mostly found at the age between 41-50 years. Other age divisions are shown in Table 4.

Marital status

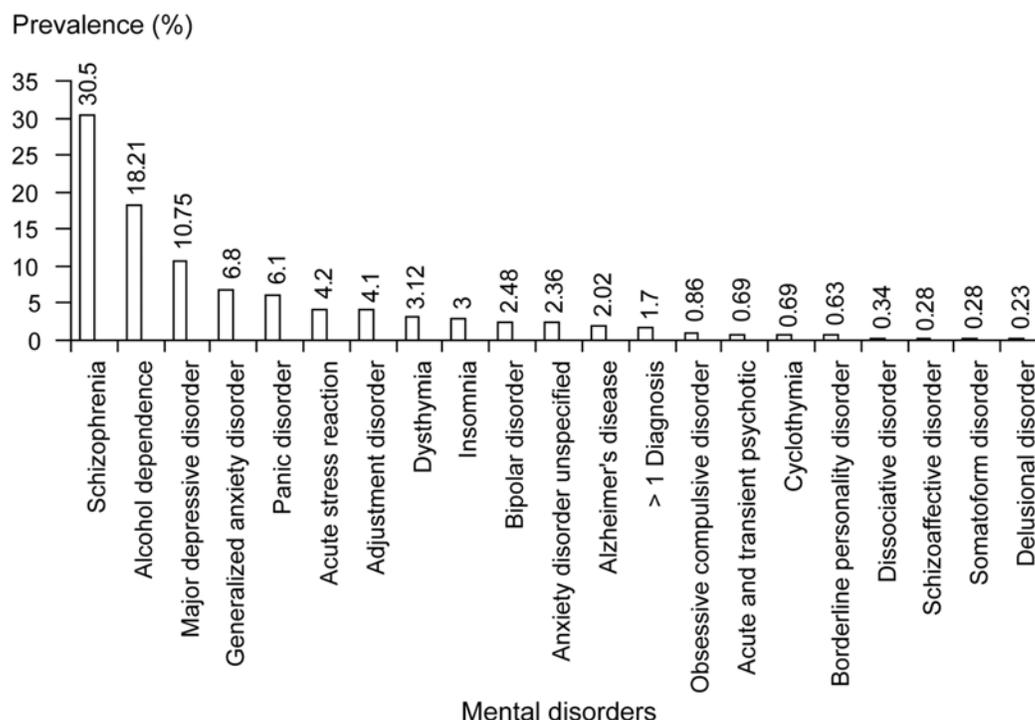The study found that most of the outpatients were married. Regarding the common three prevalent

Fig. 1 Prevalence of mental disorders

Table 2. The division of gender of mental disorders

Male			Female		
Diagnosis	n	(%)	Diagnosis	n	(%)
Schizophrenia	502	(32.5)	Major depressive disorder	50	(27.3)
Alcohol dependence	313	(20.2)	Schizophrenia	27	(14.7)
Major depressive disorder	136	(8.8)	Dysthymia	19	(10.4)
Generalized anxiety disorder	103	(6.7)	Panic disorder	18	(9.8)
Panic disorder	88	(5.7)	Generalized anxiety disorder	16	(8.7)
Acute stress reaction	66	(4.3)	Anxiety disorder unspecified	12	(6.5)
Adjustment disorder	59	(3.8)	Adjustment disorder	12	(6.5)
Insomnia	44	(2.8)	Insomnia	8	(4.4)
Bipolar disorder	42	(2.7)	Acute stress reaction	7	(3.8)
Dysthymia	35	(2.3)	Dementia in Alzheimer's disease	5	(2.7)
Anxiety disorder unspecified	33	(2.1)	> 1 diagnosis	2	(1.1)
Dementia in Alzheimer's disease	30	(1.9)	Alcohol dependence	2	(1.1)
> 1 diagnosis	29	(1.9)	Bipolar disorder	1	(0.6)
Obsessive compulsive disorder	14	(0.9)	Obsessive compulsive disorder	1	(0.6)
Acute and transient psychotic disorder	11	(0.7)	Acute and transient psychotic disorder	1	(0.6)
Cyclothymia	11	(0.7)	Cyclothymia	1	(0.6)
Borderline personality disorder	11	(0.7)	Schizoaffective disorder	1	(0.6)
Dissociative disorder	6	(0.4)			
Somatoform disorder	5	(0.3)			
Delusional disorder	4	(0.3)			
Schizoaffective disorder	4	(0.3)			
Total	1,546	(100)	Total	183	(100)

Table 3. The divisions of rank of mental disorders

Diagnosis	Rank						
	Maj. Gen-Gen.	Maj.-Col.	2Lt.-Capt.	SM.3-SM.1	Pfc.-Sgt.	Pvt.	Cadet student
Dementia in Alzheimer's disease	2	12	15	1	5	-	-
Alcohol dependence	-	76	31	136	72	-	-
Schizophrenia	-	66	68	97	115	180	3
Delusional disorder	-	-	-	4	-	-	-
Acute and transient psychotic disorder	1	-	2	-	1	-	8
Schizoaffective disorder	-	-	1	4	-	-	-
Bipolar disorder	-	7	2	27	7	-	-
Major depressive disorder	17	74	39	36	20	-	-
Cyclothymia	-	1	6	2	3	-	-
Dysthymia	-	25	11	17	1	-	-
Panic disorder	5	40	27	25	9	-	-
Generalized anxiety disorder	14	47	24	28	6	-	-
Anxiety disorder unspecified	4	16	7	12	6	-	-
Acute stress reaction	-	14	15	9	4	22	9
Adjustment disorder	-	2	13	6	11	29	10
Obsessive compulsive disorder	-	2	1	11	1	-	-
Dissociative disorder	-	1	-	5	-	-	-
Somatoform disorder	-	2	1	1	1	-	-
Insomnia	8	12	19	9	4	-	-
Borderline personality disorder	-	-	-	3	8	-	-
> 1 diagnosis	-	7	9	10	2	3	-
Total	51	404	292	442	276	242	22

Table 4. The divisions of age of mental disorders

Diagnosis	Age (years)					
	≤ 20	21-30	31-40	41-50	51-60	> 60
Dementia in Alzheimer's disease	-	-	-	-	5	30
Alcohol dependence	-	4	27	142	57	85
Schizophrenia	18	180	99	144	59	30
Delusional disorder	-	-	-	4	-	30
Acute and transient psychotic disorder	-	8	2	-	-	29
Schizoaffective disorder	-	-	-	5	-	-
Bipolar disorder	-	1	2	10	21	9
Major depressive disorder	-	-	19	56	41	70
Cyclothymia	-	1	1	6	-	4
Dysthymia	-	-	4	6	18	26
Panic disorder	-	5	13	26	29	33
Generalized anxiety disorder	-	3	7	42	19	48
Anxiety disorder unspecified	-	1	2	12	12	18
Acute stress reaction	6	35	6	16	5	5
Adjustment disorder	12	47	7	3	2	-
Obsessive compulsive disorder	-	1	8	3	2	1
Dissociative disorder	-	-	-	6	-	-
Somatoform disorder	-	-	-	3	-	2
Insomnia	-	1	8	3	8	32
Borderline personality disorder	-	-	10	1	-	-
> 1 diagnosis	-	3	2	8	11	7
Total	36	290	217	496	289	401

mental disorders were schizophrenia, alcohol dependence and major depressive disorder. Schizophrenia was mostly single. Alcohol dependence and major depressive disorder were mostly married. Other marital status divisions are shown in Table 5.

Discussion

The present study revealed that the prevalence of common mental disorders among Thai army personnel who attended the outpatient clinic at Phramongkutklao Hospital in 2005 compared to a national survey on the prevalence of mental disorders in Thailand, 2003[5,10]. It was concluded that the two studies have resulted in similar major prevalent diseases; that are alcohol dependence, major depressive disorder, generalized anxiety disorder and psychoses.

This present study has found that the most common prevalent 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 20 years old and in compliance that schizophrenia can be mostly found in men at the age of early 20 years[10-13]. Previous studies about psychoses in soldiers found no difference in schizophrenia between soldiers and civilians. Schizophrenia

Table 5. The divisions of marital status of mental disorders

Diagnosis	Marital status		
	Single	Married	Divorce
Dementia in Alzheimer's disease	1	30	4
Alcohol dependence	57	254	4
Schizophrenia	331	182	16
Delusional disorder	-	-	4
Acute and transient psychotic disorder	10	2	-
Schizoaffective disorder	-	-	5
Bipolar disorder	3	37	3
Major depressive disorder	35	142	9
Cyclothymia	2	9	1
Dysthymia	2	52	-
Panic disorder	20	83	3
Generalized anxiety disorder	23	94	2
Anxiety disorder unspecified	8	37	-
Acute stress reaction	47	25	1
Adjustment disorder	61	9	1
Obsessive compulsive disorder	9	6	-
Dissociative disorder	-	6	-
Somatoform disorder	-	5	-
Insomnia	4	44	4
Borderline personality disorder	10	1	-
> 1 diagnosis	8	20	3
Total	631	1038	60

incidents were also found in soldiers and civilians at the same age interval were similar and the patients who had psychopathologic symptoms prior to having these reactions, 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 reflects the flaw of the recruiting system, which patients cannot be identified at the beginning, therefore, the finding from the present study should be used and applied for more efficient recruiting process.

The second most prevalent mental disorders was alcohol dependence, at the rate of 18.21% compared to the rate of 28.52% of A national survey in Thailand, 2003[5]. Only small differences are found. In the present study alcohol dependence was mostly founded in men in respect to the previous study that 60% of alcohol consumers were male, and addiction rate was found in males more than females[17]. Possible causes for these differences occurred since this study focused on personnel in the Royal Thai Army, mostly are male, but the national study in 2003 focused at national level, which included more populations and more female proportion, and as a result, higher prevalence value from the national study existed. Regarding the divisions in ranks and ages, alcohol dependence was mostly found at the rank of Sergeant Major 3rd Class to Sergeant Major 1st Class, and at the ages between 41-50 years. This signified 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 third most prevalent mental disorders was major depressive disorder, which was mostly found at the age of 60 years old and older and at the rank of Major to Colonel. This finding has suggested surveillance and protection of personnel who are at the ages of 60 years old and older since a large number of major depressive disorder has been found.

Since the present study examined data already existing from records of psychiatrists and psychiatric residents, discrepancies of diagnoses might have occurred. The most valuable point in the present study was that it was the first report about the prevalence of common mental disorders in Thai army personnel who were treated as outpatients at Phramongkutklao Hospital which is the largest army hospital in Thailand. Further studies should be done to include other variables, such as an age at which a person first experiences, education level, and financial status, which could lead to better understandings of characteristics of mental disorders in Thai army personnel. Other than providing treatment to Thai army personnel, Department of Psychiatry and Neurology also provides the same to civilians. The present study focused only on Army personnel, therefore, further study may be done by collecting data from both Army personnel and civilians, and then comparing data collected so that differences in prevalence of mental disorders in Army personnel and civilians can be found.

Conclusion

From the present study, it was found that the three most prevalent mental disorders among outpatients Thai army personnel were schizophrenia (30.5%), alcohol dependence (18.21%) and major depressive disorder (10.75%).

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ความชุกของโรคทางจิตเวชที่พบบ่อยในผู้ป่วยนอกที่เป็นกำลังพลของกองทัพบกไทย

อิศรา รักษ์กุล, ธวัชชัย ลีพหานาจ, นวพร หิรัญวิวัฒน์กุล, อาจณรงค์ ผลบุณยรักษ์

ภูมิหลัง*: ยังไม่เคยมีการศึกษาโรคทางจิตเวชที่พบบ่อยในกำลังพลของกองทัพบกไทย การศึกษานี้ต้องการทราบถึง ความชุกของโรคทางจิตเวชที่พบบ่อย ในกำลังพลของกองทัพบกไทยที่มารับการรักษาแบบผู้ป่วยนอกที่กองจิตเวช และประสาทวิทยา โรงพยาบาลพระมงกุฎเกล้า ในปี พ.ศ. 2548*

วัสดุและวิธีการ*: ศึกษาโดยเก็บรวบรวมข้อมูลพื้นฐาน การวินิจฉัยโรคทางจิตเวช จากเวชระเบียนผู้ป่วยนอก ของกำลังพลของกองทัพบกไทยที่มารับการรักษาแบบผู้ป่วยนอกที่กองจิตเวชและประสาทวิทยา โรงพยาบาล พระมงกุฎเกล้า ระหว่างวันที่ 1 มกราคม - 31 ธันวาคม พ.ศ. 2548*

ผลการศึกษา*: กำลังพลกองทัพบกไทยมารับการตรวจรักษาที่แผนกผู้ป่วยนอก กองจิตเวชและประสาทวิทยา โรงพยาบาลพระมงกุฎเกล้า ในปี พ.ศ. 2548 จำนวนทั้งสิ้น 1,729 คน เป็นผู้ป่วยเพศชาย 1,546 คน และผู้ป่วยเพศหญิง 183 คน ช่วงอายุของผู้ป่วยที่พบบ่อยที่สุดระหว่าง 41-50 ปี (ร้อยละ 28.7) ชั้นยศที่พบมากที่สุดคือ จ่าสิบตรี-จ่าสิบเอก และผู้ป่วยส่วนใหญ่มีสถานภาพสมรส ความชุกของโรคทางจิตเวชในกำลังพลของกองทัพบกไทย ที่มารับการรักษา ที่แผนกผู้ป่วยนอก กองจิตเวชและประสาทวิทยา โรงพยาบาลพระมงกุฎเกล้าในปี พ.ศ. 2548 โดยเรียงลำดับ ความชุก จากมากไปน้อย 10 อันดับแรกคือ schizophrenia (ร้อยละ30.5) alcohol dependence (ร้อยละ18.21) major depressive disorder (ร้อยละ10.75) generalized anxiety disorder (ร้อยละ 6.88) panic disorder (ร้อยละ 6.13) acute stress reaction (ร้อยละ 4.22) adjustment disorder(ร้อยละ 4.1) dysthymia (ร้อยละ 3.12) insomnia (ร้อยละ 3) และ bipolar disorder (ร้อยละ 2.48)*

สรุป*: โรคที่พบความชุกมากที่สุด 3 อันดับแรก ในกำลังพลของกองทัพบกไทยที่มารับการรักษาแบบผู้ป่วยนอก ที่กองจิตเวชและประสาทวิทยา โรงพยาบาลพระมงกุฎเกล้า ในปี พ.ศ.2548 คือ schizophrenia, alcohol dependence และ major depressive disorder*