Demographics and Psychosocial Impact on Disabled Soldiers and Family Members from Southernmost Thailand's Insurgency: A Mixed Method Study

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Objective: *To find the incidence, demographics, socioeconomics and their association with mental health of disabled soldiers from antiterrorists operations in the southernmost part of Thailand between 2004 and 2008.*
Material and Method: *Investigators gathered the lists of disabled soldiers from four different database then performed physical examination and semistructured interviews. Mental health of the disabled Royal Thai Army (RTA) officers and close family members was assessed by General Health Questionnaire-12 (GHQ-12).*
Results: *Of the 1,078 traumatic cases, 940 were nonfatal with 33 disabled. Fifteen point sixty-three percent required assistance for activities of daily living (ADL). A positive score of 37.50% in the GHQ-12 was associated with difficulties in ADL and dept repayment (p = 0.004 and 0.029, respectively). In close family members, a score of 17.5% in the GHQ-12 was associated with low family income, ADL, and walking difficulty (p = 0.019, 0.001 and 0.008, respectively). The qualitative results supported the importance of physical and financial problems plus a significant role of the affiliations and family members.*
Conclusion: *Disabled RTA officers appeared 6.6 cases/year. The most important problems were physical and financial difficulties. The medical-environmental-financial model is proposed as an effective rehabilitation for the disabled RTA officers from the southernmost Thailand.*

Keywords: *Disabled veteran, Mental health, Psychosocial impact, Family, Terrorist, Thailand*

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The insurgency in the southernmost part of Thailand is a covert operation without concrete demands. However, it is believed to be a movement of an armed struggle aimed at the liberation of the southernmost region of the country[1]. The situation began on January 4, 2004 across five provinces, but terrorists' attacks have mostly occurred in the three southernmost provinces notably Yala, Pattani, and Narathiwat.

According to the Real-time System of Reporting Traumatic Soldiers from Southernmost Thailand, 9,446 terrorist attacks occurred between 2004 and 2010, which injured 6,509 civilians and military officers and caused permanent physical disabilities to a number of victims.

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Usually, people with disabilities encounter not only difficulties in daily activities but also socioeconomic troubles, which eventually lead to long-term mental problems[2-4]. Regarding the insurgency in southernmost Thailand, the existing databases provide only information of physical damages with little focus on socioeconomic aspects. Moreover, the situation of disabled soldiers, the most vulnerable population, has never been fully explored.

The true number of Thai soldiers with confirmed disabilities was uncertain since a discrepancy exists in determining "disabilities" between Military Service Acts and Thais under Disabilities Empowerment Acts. Based on the World Health Organization (WHO) definition, "disability" encompasses impairments, activity limitations, and participatory restrictions that may occur in the presence of health conditions. Thus, it reflects an interaction between features of a person's body and features of the society in which he or she lives[5,6].

Accordingly, Thais under Disability Empowerment Acts defines "disability" as the difficulty in conducting daily life or social activities[7]. This definition was used to specify disabled soldiers throughout the present study.

Mental disorders are the leading illness in the military[8,9]. Prevalence of mental health disorders was reportedly as high as 86% in hospitalized Thai disabled veterans with the leading problems of somatization, depression, anxiety, and psychosis[2,10,11]. The physical factors relating to mental health in post-deployment soldiers are well known, but the socioeconomic issue has been little investigated. In a study from Thailand, almost all of the 235 disabled veterans believed that life satisfaction relied on career and/or financial stability. Unfortunately, 45% earned less than 323 USD per month[12]. Although the War Veterans Organization of Thailand (WVO) provides monetary and vocational support via its 24 branches, barriers still exists among those who live in remote areas. Accordingly, a number of Thai disabled soldiers are still confronting poor quality of life. The deployed officers in southernmost Thailand comprise a distinct population. They are at high risk of strenuous attack, and thereby receive higher compensation than officers facing other situations. As a result, their lives after becoming disabled under such particular conditions were the issues of interest. The aims of the present study were to investigate the demographics, socioeconomics and the association with mental health among disabled RTA officers from the antiterrorist operation in southernmost Thailand between 2004 and 2008.

Material and Method

This study's ethics were approved by the Institutional Review Board, Royal Thai Army Medical Department. Participants comprised disabled Royal Thai Army (RTA) officers and their close family members. RTA officers were recruited for the study only if they became permanently disabled due to the antiterrorist operation from three provinces in southernmost Thailand during the 60-month period between January 4, 2004 and December 31, 2008. The study was conducted between 2008 and 2010. The causes of disabilities included warfare, terrorist attack, or in service accidents. Onset of injury must have been at least six months prior to date of survey. "Disabled" was defined, in respect to the Thais under Disabilities Empowerment Act 2007, as an individual who has a limitation in social or daily activities so that total or partial assistance is required. Having at least one-limb dysfunction was another criterion. Only RTA officers were recruited. Police, border patrol officers, marines, air force personnel and civilians with disabilities were excluded from the present study.

Besides disabled RTA officers, close family members were also enrolled in the present study. The author selected family members who were living with and/or contributing most in taking care of the disabled.

Data collection

The authors gathered the lists, details of injury and contact information of each traumatic RTA officer from four databases including: 1) Real-time System of Reporting Traumatic Soldiers from Southernmost Thailand between 2008 and 2010, an online, data collection system of all victims; 2) Front Office of the 4th Sector Internal Security Operations Command, the operating office at the area of insurgency; 3) Phramongkutklao In-patient Department of War Injury, where all major traumatic RTA officers were hospitalized; 4) Sai Jai Thai Foundation under Royal Patronage, a non-government organization providing financial support for individuals injured from internal security operations. All RTA officers with a medical record showing moderate to severe injury were interviewed by telephone. Investigators raised the query whether RTA officers lost any organs or found any difficulty in working or performing daily activities. The apparently non-disabled were excluded. RTA officers with positive answers via telephone were included in the lists of home visits. Investigators (Kumnerddee W and Tochaiwat T) traveled across the country to meet all cases on the lists at their residence. State of disability was verified by direct medical examination. Investigators performed semi-structured interviews and questionnaire testing for all verified disabled RTA officers and their close family members.

Participants' evaluation

Semi-structured interviews were conducted in respect to the framework of the International Classification of Functioning, Disability and Health (ICF). ICF[13] was introduced by the WHO as a standard framework for the description of health and health-related states. It consists of four domains including body function, body structure, activities/participation, and environmental factors. Details of structural and functional loss were verified by direct physical examination. Issues of financial status, marriage life, and further assistance needed were also

supplemented in the interview. Any psychosocial problems detected were confirmed by interviewing close family members.

Mental health status in disabled RTA officers and close family members was assessed using Thai General Health Questionnaire-12 (Thai GHQ-12)[14]. The questionnaire comprises 12 items, each in the scale of 1 to 4 to determine the presence of mental health problems without discerning a specific disorder. Thai GHQ-12 is considered a reliable instrument with a Cronbach's alpha coefficient of 0.86[15].

Statistical analysis

Demographic data were expressed as mean ± SD or median (minimum-maximum) for continuous variables or as a percentage of the group of origin for categorical variables. Relationships between categorical variables were tested using Chi-square test, Fisher's exact test, Wilcoxon signed rank test, Unpaired t-test and Mann-Whitney U test where appropriate. All p-values were two-tailed, and a p-value <0.05 was considered to indicate statistical significance. All statistical analyses in the present study were performed using SPSS software (version 13.0, SPSS Inc., Chicago).

Results

One thousand seventy eight RTA officers were traumatized during the 60-month-period of antiterrorist operations. However, only 33 were verified as physically disabled. Among these, 32 cases were found and evaluated. Average onset of injury was 28.97 (8-58) months. Numbers of wounded, killed, and disabled cases each year are shown in Table 1. The Case Fatality Rate (CFR) was as high as 20.75% in the first year of the situation but decreased to 10.53 to 13.64% between 2005 and 2008, respectively. CFR throughout five years was 12.80%. The disability rate tended to decrease from 7.55% in 2004 to 2.60% in 2008 (Table 1). All disabled RTA officers were male, aged 21-53 (33.48±10.53). In all, nine, 22, and one case were private, non-commissioned (NCO), and commissioned officers, respectively. Details of disabilities and the related problems in each domain are shown in Table 2 in the following section.

Quantitative results

Causes of disabilities included: accident, gunshot, explosive device, and explosive device with gunshot. The most frequent cause of disability was peripheral nerve injury, which occurred twice as much in the lower than upper extremities (Table 2). The second was joint contracture followed by spinal cord injury, which manifested as complete thoracic lesion in all cases. Besides terrorist attacks, a spinal cord injury and a blindness occurred due to accidents during engineering service. Pain was the most frequent problem in the functional domain (Table 2). Of all 21 cases, 14 had pain due to neural tissue damage. For those with peripheral nerve injury, neuropathic pain developed more in the lower than upper extremities (9 of 10 cases vs. one of five cases, respectively) while four of five spinal cord injured cases developed neuropathic pain. Only six cases (18.75%) including paraplegic and traumatic brain injury cases were wheelchair users. Five cases (15.63%) walked with prosthesis or orthosis. Four cases (12.50%) walked without a special device but had some limitation due to significant muscle weakness, pain and/or leg length discrepancy.

The majority of the disabled RTA officers (84.38%) did not require a caregiver for basic activities of daily living (ADL). Only two cases (6.25%) were totally dependent on caregivers and three cases (9.38%) required some assistance. The authors found seven cases (21.88%) that hardly participated in the social activities. The majority of the disabled RTA officers were NCOs who graduated from an NCO academy or secondary school, and thereby did not have other vocational skills (Table 3). Approximately two-thirds of the cases were living alone or with another family member. Before injury, 23 cases (71.88%) earned the main income for their families. At the time of survey, the numbers decreased to 15 (46.88%). However,

Table 1. Number of wounded, killed and disabled cases from 2004 to 2008

Year	2004	2005	2006	2007	2008
Wounded and killed (n)	53	114	150	453	308
Killed, n (%)*	11 (20.75)	12 (10.53)	19 (12.67)	54 (11.92)	42 (13.64)
Disabled, n (%)**	4 (7.55)	5 (4.39)	8 (5.33)	8 (1.77)	8 (2.60)

* Percentage of killed to all wounded and killed (case fatality rate)

** Percentage of disabled to all wounded and killed

Table 2. Demographic data of disabilities for 2004-2008 (n = 32)

	n (%)
Causes of disabilities	
Gunshot	14 (43.73)
Explosive device	12 (37.50)
Explosive device and gunshot	4 (12.50)
On-duty accident	2 (6.25)
Structural domain	
Peripheral nerve injury	15 (46.88)
Joint contracture	7 (21.88)
Thoracic spinal cord injury	5 (15.63)
Lower limb amputation	4 (12.50)
Traumatic brain injury	2 (6.25)
Bilateral eyes damage	2 (6.25)
Bilateral ears damage	1 (3.13)
Functional domain	
Pain	21 (65.63)
Unable to walk	6 (18.75)
Complete visual loss	2 (6.25)
Auditory function loss	1 (3.13)
Speech function loss	1 (3.13)
Comprehension loss	1 (3.13)
Activity and participation	
Career loss	26 (81.25)
Socially deprived	7 (21.88)
Divorced or separated	2 (6.25)
Require caregiver for ADL	5 (15.63)
Bathing	3 (9.38)
Dressing	3 (9.38)
Eating	3 (9.38)
Supports (rated "good" to "very good")	
Family	29 (90.63)
Friends	15 (46.88)
Commanders	18 (56.25)
Medical personnel	27 (84.38)

ADL = activities of daily living

Table 3. Socioeconomic domain (n = 32)

	n (%)
Rank	
Commissioned	1 (3.13)
Non-commissioned	22 (68.75)
Private	9 (28.13)
Marital status	
Single	12 (37.50)
Married	19 (59.40)
Divorced	1 (3.13)
Education	
Cadet Academy	1 (3.13)
NCO Academy	5 (15.63)
Diploma School	3 (9.38)
Secondary school	16 (50.00)
Primary school or below	7 (21.88)
Family size (persons)	
1	11 (34.38)
2	11 (34.38)
3	3 (9.38)
4	5 (15.63)
5	2 (6.25)
Income per month (Baht*)	Median (min-max)
Personal	
Before disability	8,865 (4,000-30,000)
After disability	9,000 (1,500-30,000)
Family	
Before disability	14,000 (4,000-60,000)
After disability	13,500 (1,500-65,000)
Offspring (persons)	
None	16 (50.00)
1	5 (15.63)
2	6 (18.75)
3	3 (9.38)
4	2 (6.25)

* Thirty one Baht is approximate to one US dollar
NCO = non-commissioned officer

median personal and family income did not change significantly after injury (p = 0.648 and 0.554, respectively).

Positive GHQ-12 was found in 12 (37.50%) disabled RTA officers. The authors found a significant association of mental health problems with difficulty in ADL and difficulty in debt repayment (p = 0.004 and 0.029, respectively). Close family members selected to enroll in the study included parents and/or spouses. Among 40 persons, positive GHQ-12 was found in seven cases (17.50%). Mental health problems among close family members was significantly associated with economic and physical problems including low family income, ADL difficulty and walking difficulty (p = 0.019, 0.001 and 0.008, respectively). Specific details are shown in Table 4.

Qualitative results

Results from semi-structured interview explained and supplemented that of quantitative data. The difficulty in social participation resulted from both physical and mental barriers including walking disability, blindness, speech function loss, and affective instability. One traumatic brain injury case with an affective problem refused to go outside his residence because he frequently quarreled with others. In addition, the environment, such as a building without an elevator or a canal located between the road and

Table 4. Relationship between disability-related problems and mental health problems

	p-value
Disabled RTA officers (n = 32)	
Duration of being disabled	0.304
Difficulty in ADL	0.004*
Difficulty in walking	0.668
Marital problem	1.000
Require further medical support	0.250
Require further financial support	0.713
Indebtedness	0.422
Debt repayment difficulty	0.029*
Low personal income	0.131
Closed relatives (n = 40)	
Disabled RTA officers were still hospitalized	0.074
Disabled RTA officers' difficulty in ADL	0.001*
Disabled RTA officers' difficulty in walking	0.008*
Disabled RTA officers' marital problem	1.000
Disabled RTA officers required further medical support	0.175
Low family income	0.019*

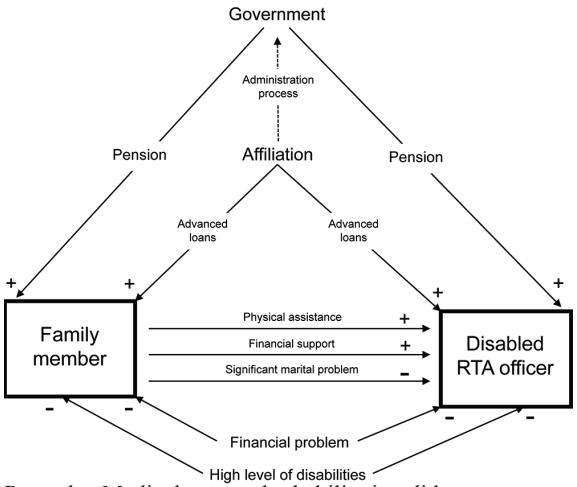
* Significantly correlated at $p<0.05$
RTA = Royal Thai Army

the residence were significant barriers for wheelchair users.

Results from the interview showed that mental health problems in disabled RTA officers were associated with financial problems, difficulties in ADL, marital problems and unpleasant physical changes. Financial problem was the most common concern by disabled RTA officers with mental health problems. Their salary was discontinued immediately after discharge from military service and disabled RTA officers would not obtain a pension until the administration process was completed. Meanwhile, financial status was stabilized by family members' incomes or by loans from some affiliations. This could explain the stability of incomes in the quantitative results. However, loans and financial assistance from family members were not accounted as stable income. Furthermore, financial problems still existed in those who lacked support from family members or affiliations (Fig. 1).

Difficulty in performing ADL was most apparent in those with spinal cord injury and visual impairment. The problem could be so severe that it triggered a suicidal idea in two visually impaired cases. A visually impaired subject reported, "My life was very difficult. I had to ask my wife for help even with a very simple daily activity… Yes; I had a suicidal idea… now it is better. I can use the toilet by myself if things are put in the right place…". Less frequent but notable events associated with mental health were marital problems. A complete spinal cord injury case decided to perform colostomy to reduce his burden in bowel care. The colostomy bag became a new problem since it was very disturbing for his wife during sexual activity. Mostly, the wife left him alone in the room with a depressive mood: "My wife doesn't feel well with the bag so she denied sleeping with me… I find myself worthless…". Unexpectedly, unpleasant physical appearance caused poor mental health in a subject with hypertrophic scars on the face and extremities: "I find it's so ugly having scars on my face and arms… Do you know where to get cosmetic surgery?".

The soldiers' illnesses and financial difficulties were the main factors associated with mental health problems in some close family members. "It has been very difficult because I have to stop working… My wife and I live on the small salary of my son… We live month by month…" reported a father who was taking care of a severe brain injured private soldier. Interestingly, emotional instability, a consequence of traumatic brain injury also led to mental health problems in the spouse. "…He has changed from the person I've known… He is difficult to live with because he becomes quick-tempered I feel stressed…"



Remarks: Medical care and rehabilitation did not appear as a factor since all disabled RTA officers from the southernmost of Thailand received the same standard of medical treatments.

Fig. 1 Factors associated with mental health of the disabled RTA officers and their close family members.

Discussion

Based on CFR, the gravity of the situation in southernmost Thailand was nearly comparable with the situations in Northern Ireland and Sri Lanka[16]. RTA officers with disabilities appeared at a rate of 6.6 cases per year occupying 3.06% of all wounded cases. Disability occurred approximately four times less than mortality, probably because individuals would become disabled only if they survived a strenuous terrorist attack. Overall level of disabilities was relatively low. Only one-sixth of the cases required a caregiver for basic ADL. Half of the cases had some walking difficulties with one fifth unable to walk. Since the state of disability was verified by direct interview and physical examination, two remarkable causes of disabilities, such as peripheral nerve injury and joint contracture could be identified. The authors recruited only those with profound weakness or massive joint destruction so that it apparently limited upper or lower limb function and caused difficulties in ADL or social participation. Prevalence of amputation was rather low. It may be attributed to the advance of vascular surgery or types of explosive device. Terrorists in southernmost of Thailand commonly used improvised explosive devices or vehicle bombs rather than landmines.

Pain, in particular neuropathic pain, was the major problem of the functional domain. It could be a consequence of neural damage after gunshot as well as blast injuries. The authors noted that spinal cord and peripheral nerve in the lower limb seemed to be more susceptible to neuropathic pain than the upper limbs. These findings were relevant to the previous reports showing a high prevalence of neural damage and causalgia after gunshot wounds particularly in the surgical settings[17-20]. Although the peripheral nerve lesion can recover over time, results from a large retrospective study showed that nearly 40% of the surgical cases did not improve[20]. In our study, the authors recruited only subjects whose peripheral nerve damage was so severe that it caused significant ADL or walking difficulties without sign of recovery after at least six months. Hence, they were relevant to the WHO definition of disability. The high prevalence of spinal cord pain observed in our study was expected since it commonly occurred after spinal cord damage regardless of the injury causes[21,22].

According to previous reports, mental problems were found from 20 to 86% among military officers[4,11,23,24]. The disparity in prevalence may be attributed to many factors such as combat exposure[25], multiple organs involved[3], substance or alcohol use[24,26], brain injury[27,28], time of screening[29], and socioeconomic issues[11,30]. For the unique situation such as in southernmost Thailand where cultural issues underlie the conflict, having an understanding of Muslim culture was significantly related to morale status of the deployed officers[1,30]. In the present study, the authors found approximately 38% of the disabled RTA officers reported mental health problems.

Results from our study supported the significance of physical difficulties and economic problems associated with mental health of the disabled soldiers. Hence, these two aspects should be emphasized during rehabilitation among Thai disabled veterans. Interestingly, the authors also found sexually-related problems as another cause of emotional distress in a paraplegic subject. Although not statistically significant due to a very small number of subject, the authors recommend that issues of sexual rehabilitation should be a concern in paraplegic veteran recovery programs. In addition, physicians should discuss carefully with the spouse if colostomy is considered as an alternative since it might result in a significant marital problem thereafter.

Regarding economic issues, a majority of the disabled RTA officers had no skills for other careers. While pension had not started, the financial status was stabilized initially by loans from affiliations and/or income from family members. Therefore, family members not only help in daily activities but also substituted the income loss. Some family members had to stop working to look after the disabled. As a result, it was observed that severely disabled RTA officers from a small family seemed to be at risk of mental health problems. The results showed difficulties in debt repayment instead of indebtedness and personal income that was associated with mental health among disabled RTA officers. Thus, the authors believe that proper financial counseling and management are more important than merely monetary compensation. Not only Thai but also officers in Western countries such as the British Armed Forces considered home life and financial matters as their most important problems[31].

In the present study, the authors found that family members were the most important persons for the disabled RTA officers during recovery. They provided not only physical assistance but also financial support. Almost all of the subjects in our survey perceived good to very good support from family members. Close family members also received an impact from disabilities, so that approximately 18%

had mental health problems. The authors found from the interviews that close family members addressed the soldiers' illnesses as the cause of their distress. The factors significantly related to mental health of close family members were family income as well as difficulties in ADL and ambulation. The results supported the concept that difficulties of daily life and financial issues were significantly related factors to mental health among disabled soldiers and family members. The financial factor was related not only to mental health but also the relationship within families of Thai Army Officers[32]. According to the previous study, prevalence of mental health in spouses of the officers deployed to southernmost Thailand was as high as 47%[33]. This may indicate that anxiousness regarding the soldiers' safety might cause more distress than having the burden of disabilities. Mental health problems among family members or close acquaintances also exist in western countries with reported prevalence from 13 to 34%[24,34]. All the main factors associated with mental health in the present study are summarized in Fig. 1.

Limitations of the present study firstly included the cross-sectional study design in which the onset of injury varied among individuals. Recently injured cases may have had more difficulties due to a shorter time for daily life adaptation. In contrast, the older cases who had received adequate financial compensation may have had less difficulty in daily life. However, no significant correlation was found between onset of injury and mental health in the present study. A longitudinal study would have reduced this confounder. Secondly, only 32 cases were enrolled in the study because of the low prevalence of disability in this population. The small sample size may have reduced the power of the statistical analysis. Thirdly, the authors used only semi-structured interviews to collect the qualitative data. Triangulation method would increase reliability qualitatively aspect.

The authors suggest that the best rehabilitation process for the disabled soldiers should comprise three aspects: firstly, physical rehabilitation and mental support by medical department; secondly, environment adaptation possibly by the Engineer Corps and lastly, financial support and counseling possibly by the Finance Corps. According to our results, the authors believe that besides a standard psychological treatment protocol, mental health problems among the disabled veterans could be improved by proper management of physical and financial matters. Longitudinal studies from different cultures might contribute other interesting points. More health-related economic studies in veterans should be conducted in the future.

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Potential conflicts of interest

None.

References

1. Srirai S. BRN-coordinate and violence in the three southern border province and four districts in Songkhla between 2004-2007 and the strategies to end violence. Bangkok: National Defence College; 2008.
2. Pokmontri A. A study of mental health of disabled veterans admitted at Veterans General Hospital Bangkok [Thesis]. Bangkok: Thammasat University; 1994.
3. Dougherty PJ. Transtibial amputees from the Vietnam War. Twenty-eight-year follow-up. J Bone Joint Surg Am 2001; 83-A: 383-9.
4. Ebrahimzadeh MH, Rajabi MT. Long-term outcomes of patients undergoing war-related amputations of the foot and ankle. J Foot Ankle Surg 2007; 46: 429-33.
5. Kirby RL. Impairment, disability, and handicap. In: DeLisa JA, Cans B, editors. Rehabilitation medicine: principles and practice. Philadelphia: Lippincot-Raven; 1998: 55-60.
6. World Health Organization. Disabilities [Internet]. 2012 [cited 2012 May 11]. Available from: http://www.who.int/topics/disabilities/en
7. Thais with Disabilities Empowerment Acts. Bangkok: The Royal Thai Government Gazzette; Volume 124 Part 61 A; 27 September 2007.
8. Gross R, Neria Y. Combat duty in Iraq and Afghanistan and mental health problems. N Engl J Med 2004; 351: 1798-800.
9. Simmons R, Maconochie N, Doyle P. Self-reported ill health in male UK Gulf War veterans: a retrospective cohort study. BMC Public Health 2004; 4: 27.
10. Limpabandhu P. Mental health status among veterans, Sukhothai province [thesis]. Chiang Mai: Chiang Mai University; 2008.
11. Rojanaporntip B. Mental health problems of the physically disabled war veterans admitted at veterans general hospital [thesis]. Bangkok:

Chulalongkorn University; 2005.
12. Bidaya S. The vocational rehabiltation program for the disabled war veterans: a case study of The War Veterans Organization of Thailand under the Royal Pratonage of His Majesty the King [thesis]. Bangkok: National Institute of Development Administration; 2000.
13. World Health Organization. International classification of functioning, disability and health. Geneva: WHO; 2001.
14. Goldberg DP, Gater R, Sartorius N, Ustun TB, Piccinelli M, Gureje O, et al. The validity of two versions of the GHQ in the WHO study of mental illness in general health care. Psychol Med 1997; 27: 191-7.
15. Nilchaikovit T, Sukying C, Silpakit C. Reliability and validity of the Thai version of the general health questionnaire. J Psychiatr Assoc Thai 1996; 41: 2-17.
16. Coupland RM, Meddings DR. Mortality associated with use of weapons in armed conflicts, wartime atrocities, and civilian mass shootings: literature review. BMJ 1999; 319: 407-10.
17. Dicpinigaitis PA, Koval KJ, Tejwani NC, Egol KA. Gunshot wounds to the extremities. Bull NYU Hosp Jt Dis 2006; 64: 139-55.
18. Deitch EA, Grimes WR. Experience with 112 shotgun wounds of the extremities. J Trauma 1984; 24: 600-3.
19. Patman RD, Thompson JE, Persson AV. Management of post-traumatic pain syndromes: report of 113 cases. Ann Surg 1973; 177: 780-7.
20. Daneyemez M, Solmaz I, Izci Y. Prognostic factors for the surgical management of peripheral nerve lesions. Tohoku J Exp Med 2005; 205: 269-75.
21. Rintala DH, Holmes SA, Fiess RN, Courtade D, Loubser PG. Prevalence and characteristics of chronic pain in veterans with spinal cord injury. J Rehabil Res Dev 2005; 42: 573-84.
22. de Miguel M, Kraychete DC. Pain in patients with spinal cord injury: a review. Rev Bras Anestesiol 2009; 59: 350-7.
23. Greenberg N, Jones E, Jones N, Fear NT, Wessely S. The injured mind in the UK Armed Forces. Philos Trans R Soc Lond B Biol Sci 2011; 366: 261-7.
24. Gorman LA, Blow AJ, Ames BD, Reed PL. National Guard families after combat: mental health, use of mental health services, and perceived treatment barriers. Psychiatr Serv 2011; 62: 28-34.
25. Hoge CW, Castro CA, Messer SC, McGurk D, Cotting DI, Koffman RL. Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. N Engl J Med 2004; 351: 13-22.
26. Elbogen EB, Fuller S, Johnson SC, Brooks S, Kinneer P, Calhoun PS, et al. Improving risk assessment of violence among military veterans: an evidence-based approach for clinical decision-making. Clin Psychol Rev 2010; 30: 595-607.
27. McAllister TW, Stein MB. Effects of psychological and biomechanical trauma on brain and behavior. Ann N Y Acad Sci 2010; 1208: 46-57.
28. McAllister TW. Neurobiological consequences of traumatic brain injury. Dialogues Clin Neurosci 2011; 13: 287-300.
29. Milliken CS, Auchterlonie JL, Hoge CW. Longitudinal assessment of mental health problems among active and reserve component soldiers returning from the Iraq war. JAMA 2007; 298: 2141-8.
30. Yoinual N. Job morale of the police officers in the three southern border provinces [thesis]. Pattani: Prince of Songkla University; 1998.
31. French C, Rona RJ, Jones M, Wessely S. Screening for physical and psychological illness in the British Armed Forces: II: Barriers to screening—learning from the opinions of Service personnel. J Med Screen 2004; 11: 153-7.
32. Wongcha-oum T. Relationship among members of the families of army soldiers working in a remote area outside the site for a long Time: a case study of army unit 6, regiment 1, Ubonratchathani province [thesis]. Bangkok: National Institute of Development Administration; 2006.
33. Sriwichai S. Mental health status among family members of soldiers working in 3 southern border provinces [thesis]. Chiang Mai: Chiang Mai University; 2008.
34. Zeber JE, Noel PH, Pugh MJ, Copeland LA, Parchman ML. Family perceptions of post-deployment healthcare needs of Iraq/Afghanistan military personnel. Ment Health Fam Med 2010; 7: 135-43.

ลักษณะประชากร และผลกระทบด้านจิตสังคมของทหารพิการและครอบครัวจากสถานการณ์ความไม่สงบในจังหวัดชายแดนภาคใต้: การศึกษาแบบผสมผสาน

วิภู กำเหนิดดี, ฐานะวัฒน์ โตชัยวัฒน์, ราม รังสินธ์

วัตถุประสงค์: *เพื่อศึกษาลักษณะประชากรและปัจจัยทางสังคมเศรษฐกิจ ที่สัมพันธ์กับปัญหาสุขภาพจิตในทหารพิการ จากปฏิบัติการต่อต้านผู้ก่อการร้ายในจังหวัดชายแดนภาคใต้ของประเทศไทย ตั้งแต่ปี พ.ศ. 2547-2552*

วัสดุและวิธีการ: *ผู้นิพนธ์รวบรวมรายชื่อทหารพิการจากฐานข้อมูล 4 ฐาน จากนั้นทำการตรวจร่างกายและสัมภาษณ์ ประเมินสุขภาพจิตของทหารพิการและญาติใกล้ชิดโดยใช้แบบทดสอบ General Health Questionnaire-12 (GHQ-12)*

ผลการศึกษา: *จากจำนวนทหารบาดเจ็บทั้งหมด 1,078 ราย รอดชีวิต 940 ราย พิการ 33 ราย ในจำนวนนี้ ร้อยละ 15.63 ต้องการความช่วยเหลือเรื่องกิจวัตรประจำวัน GHQ-12 ให้ผลบวกร้อยละ 37.50 ซึ่งพบว่ามีความสัมพันธ์กับความยากลำบากในเรื่องกิจวัตรประจำวันและการชำระหนี้ (p = 0.004 และ 0.029 ตามลำดับ) ในญาติใกล้ชิดพบว่า GHQ-12 ให้ผลบวก ร้อยละ 17.5 ซึ่งมีความสัมพันธ์กับรายได้ครอบครัวต่ำ, ความยากลำบากในเรื่องกิจวัตรประจำวันและการเดิน (p = 0.019, 0.001 และ 0.008 ตามลำดับ) ผลการศึกษาเชิงคุณภาพสนับสนุนความสำคัญของปัญหาทางกายภาพและทางเศรษฐกิจ อีกทั้งยังพบบทบาทที่สำคัญอย่างมากของครอบครัวและหน่วยต้นสังกัด*

สรุป: *อุบัติการณ์ของทหารบกพิการคือ 6.6 ราย/ปี ปัญหาสำคัญที่สุดคือเรื่องความยากลำบากทางกายภาพและการเงิน ผู้นิพนธ์เสนอรูปแบบการฟื้นฟูอย่างมีประสิทธิภาพโดยเน้น การแพทย์-สิ่งแวดล้อม-การเงิน ในทหารพิการจากจังหวัดชายแดนภาคใต้*