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Appendix

Characteristics of Suicide in Southern Thailand during 1996-2006

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Abstract

The purpose of this study was to examine the characteristics of suicide mortality in Southern of Thailand from 1996 to 2006. The data were obtained from records of the Bureau of Policy and Strategy, Ministry of Public Health. According to the National Cause of Death Register 4,904 persons committed suicide during the study period. The ratio of male to female was 3.4:1. The mortality rates were classified by age, gender and province. The male suicide rate was higher than the female rate in all age groups. There was a peak suicide rate for male aged 20-34 years and more than 65 years while female suicides showed less variation with age. Hanging was the most frequently used method for both genders, followed by poisoning. High suicide rates occurred in Chumphon, Phuket, Suratthani, and Ranong provinces.

Key words: Suicide, Mortality rate, Southern Thailand

บทคัดย่อ

การศึกษานี้มีวัตถุประสงค์เพื่อศึกษาลักษณะการเสียชีวิตจากการฆ่าตัวตายในภาคใต้ของประเทศไทยในช่วง พ.ศ. 2539-2549 โดยใช้ฐานข้อมูลการตายจากสำนักยุทธศาสตร์ กระทรวงสาธารณสุข มีผู้เสียชีวิตจากการฆ่าตัวตายจำนวน 4,904 คน ตามสาเหตุการตาย จำนวนอัตราการตายจำแนกตาม เพศ อายุและจังหวัด จากผลการศึกษา พบว่า เพศชายมีอัตราการเสียชีวิตจากการฆ่าตัวตายสูงกว่าเพศหญิง อัตราส่วนเพศชายต่อเพศหญิง 3.4:1 ในกลุ่มเพศชายพบการฆ่าตัวตายสูงสุดช่วงอายุ 20-34 ปีและอายุ 65 ปีขึ้นไป ขณะที่เพศหญิงมีลักษณะใกล้เคียงในทุกๆ ช่วงอายุ วิธีการฆ่าตัวตายที่ใช้บ่อยที่สุด คือ การแขวนคอ ตามด้วยการใช้สารพิษ การฆ่าตัวตายจะพบสูงในจังหวัดชุมพร ภูเก็ต สุราษฎร์ธานีและระนอง ตามลำดับ

คำสำคัญ: การฆ่าตัวตาย อัตราตาย ภาคใต้ประเทศไทย

Introduction

Suicide is an important public health problem throughout the world. Approximately one million people committed suicide in 2000, a global mortality rate of 16 per 100,000 populations (WHO, 2002a). In most regions of the world, suicide is more common for males than female in all age groups; with increasing rates in the younger and the oldest age groups (Bertolotte and Fleischmann, 2002).

In Thailand, the suicide rate was as high as 7.8 per 100,000 in 1955-2002 (WHO, 2002b). Male suicide rates were higher than females in all age groups (Lortrakul, 2006). The suicide rate in the younger aged was greater than the other age groups (Bureau of Policy and Strategy, 2006). Between 1998-2003 the most frequent methods of suicide were intentional self-harm by hanging, strangulation and suffocation (Lortrakul, 2003).

In Thailand, The suicide rates, correlates over different regions (Lortrakul, 2006). At the local level, only limited data are available however, and differences in suicide rates in subgroups within this population may prove significant in targeting specific intervention strategies. Therefore the purpose of the present study was to examine the characteristics of suicide mortality during the period 1996 -2006 in an area of Southern Thailand.

Methods

We conducted a cross-sectional study of death due to suicide during 1996 to 2006. Gender-age-specific mortality for provinces of southern Thailand in years 1996-2006 were obtained from the vital registration database. This database is provided by the Ministry of Interior of Thailand and contains cause-of-death data based on the tenth International Classification of Diseases (ICD10) according to the National Cause of Death Register 4,904 persons committed suicide during the study period.

The population denominators by gender, age group and provinces of Thailand during 1996-2006 were estimated by Ministry of Interior of Thailand. Since age was included as a demographic determinant, it was divided into 17 age groups: 0, 1-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74,

and 75 years and over. All suicide methods were classified into four groups using the ICD-10 X-codes: poisoning by drugs and other means, hanging, firearms, and other methods. The records for 14 provinces for the eleven years were stored in an SQL database. SQL programs were used to create suicide counts by age group, gender, year and province. Suicide mortality rates were computed as the number of cases per 1,000 residents in the province, given by

$$y = \frac{Kn}{P} \quad (1)$$

where n is the number of deaths, P is the population at risk, and K is a specified constant, here equal to 1,000.

Results

Sex- and age-specific suicide rates in 10-year age groups were calculated for each calendar year in each province. Sex-and age-specific rates for people aged 10 years or above were subsequently computed on the basis of the mid-year population was obtained from the Ministry of Interior during 1996 to 2006.

Of 4,904 crude suicide cases occurring between the years 1996 and 2006 in southern Thailand, 3,788 (77.2%) were males and 1,116 (22.8%) were females. In our study, the male suicide rate was higher than female in all age groups (figure1).

Figure 1 presented the mortality rates in Southern Thailand (upper panel), by year and gender, for suicide and all causes of death (lower panel). The male suicide rate was peak at aged 20-34 and aged over 65. The female suicide rate has remained relatively stable over the time period. The males of all causes of death showed similar pattern for both. It showed a rising trend as age increasing after 25 years.

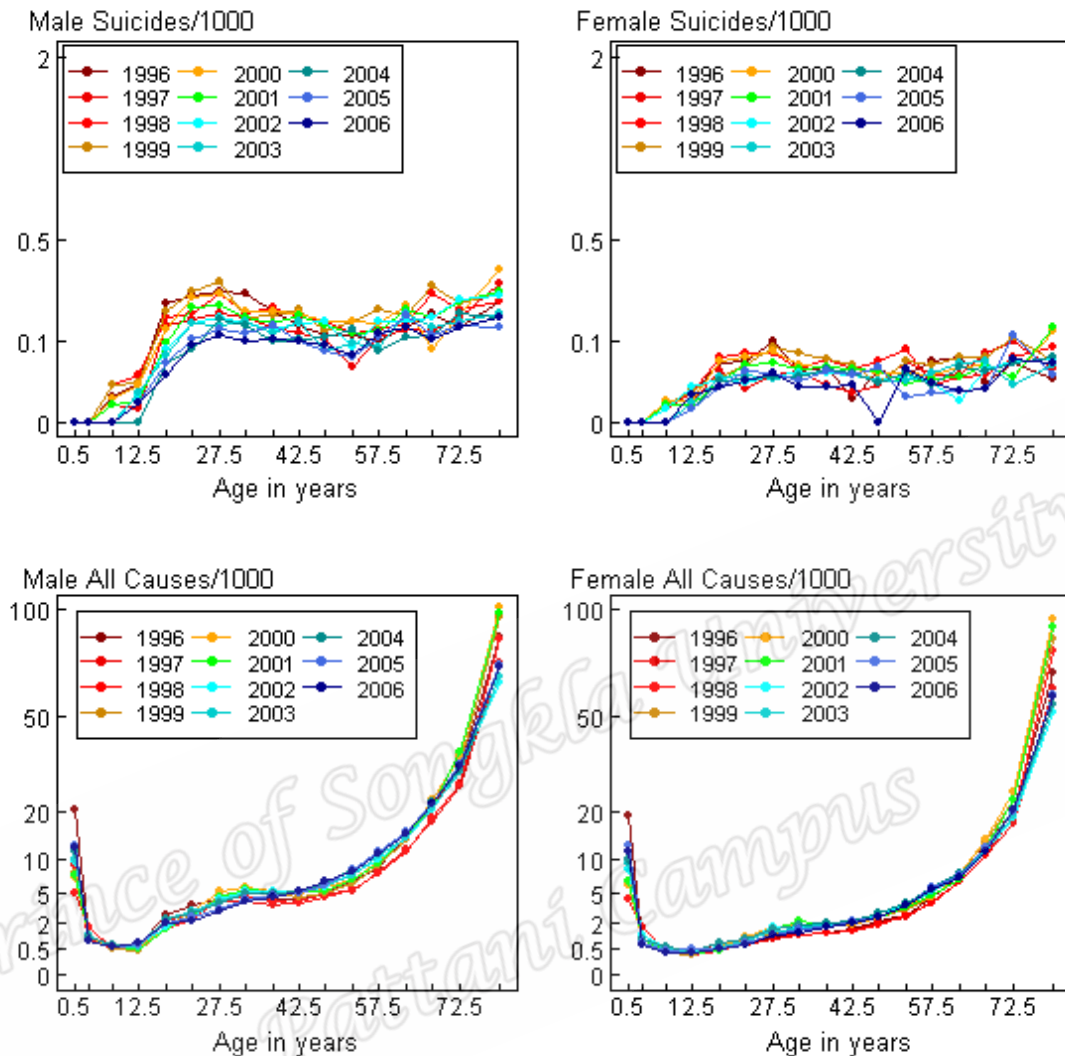


Figure.1. Age-specific suicide and all causes mortality rate per 1,000 populations in Southern Thailand, 1996-2006

Figure 2 gave the mosaic plot showing the proportions between females and males vary with method of suicide. Hanging was more often followed by poisoning and firearm in both of gender. Method of suicide was higher males than for females in very category.

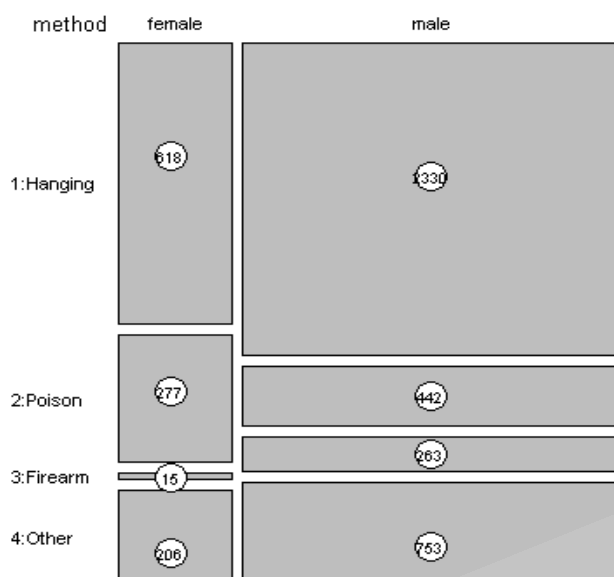


Figure 2: Mosaic plot of method of suicide by gender

Table 1 showed the geographic distribution of suicide rates in each province.

Provinces with high suicide rates were Chumphon, Phuket, Suratthani, and Ranong. Chumphon and Phuket have been the provinces with the highest rates of suicide for the last decade while the male suicide rate was higher than female suicide rate in each province.

Table 1. Suicide rates per 100,000 population in each province by gender in Southern Thailand, 1996-2006

Province	male		female		Total	
	number	mortality	number	mortality	number	mortality
Chumphon	343	13.42	129	5.1	472	9.28
Phuket	201	14.71	41	2.86	242	8.64
Suratthani	510	10.31	180	3.63	690	6.97
Ranong	90	9.77	33	3.85	123	6.92
Trang	326	10.13	110	3.36	436	6.71
NakhonSiThammarat	847	10.19	238	2.84	1085	6.50
Phatthalung	276	10.17	70	2.5	346	6.28
Songkhla	607	9.02	159	2.29	766	5.61
Krabi	169	8.28	41	2.05	210	5.19
Phang-nga	103	7.87	31	2.42	134	5.17
Satun	83	5.69	21	1.45	104	3.57
Yala	87	3.57	24	0.99	111	2.28
Narathiwat	80	2.16	18	0.48	98	1.32
Pattani	66	1.98	21	0.61	87	1.29

Summary

The male suicide rate was higher than the female rate in all age groups. The ratio of male to female was 3.4:1. There was a peak age group for male suicides (aged 20-34 years and more than 65 years) while female suicides showed less variation with age. Of all the methods of committing suicide, over the period 1996-2005 the most frequent was chosen by hanging, poisoning and firearm. High suicide rates occurred in Chumphon, Phuket, Suratthani, and Ranong provinces.

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