

Chapter 3

Preliminary Data Analysis

This chapter, we describe the preliminary data analysis for drowning deaths in Thailand between 2000 and 2009. There were 40,604 drowning deaths occurred during study period. Section 3.1 shows number of drowning deaths and death rates separated by year, public health area (PHA), gender and age group. Section 3.2 displays the patterns of drowning death by graph.

3.1 Distributions of determinants

The frequency distributions of drowning mortality in Thailand from 2000 to 2009 are shown in Table 3.1. During the study period, the total number of reported drowning deaths was 40,604. The majority of drowning deaths were males (75.4%). Age group 5-14 years had the highest number of drowning deaths (21.3%) whereas aged 0-4 years had the highest drowning death rate (10.9 per 100,000 population). The highest drowning death rate was found in PHA2, followed by PHA3 and PHA8, respectively. Drowning death rate had a peak in year 2006.

Table 3.2: Frequency distribution of drowning deaths separated by determinants

Factors	Category	Cases (n=40,604)	% of deaths	Rate/100,000 population
Age group	0-4	5,181	12.8	10.9
	5-14	8,655	21.3	8.6
	15-29	6,159	15.2	3.8
	30-44	8,586	21.1	5.3
	45-59	6,517	16.1	6.0
	60+	5,506	13.6	8.2
Gender	Male	30,610	75.4	9.6
	Female	9,994	24.6	3.0
Public Health Area (PHA)	PHA1: Central	2,394	5.9	6.1
	PHA2: Central	2,724	6.7	8.8
	PHA3: Central	3,345	8.2	8.2
	PHA4: Central	2,792	6.9	6.7
	PHA5: Northeast	5,768	14.2	7.3
	PHA6: Northeast	4,526	11.1	6.0
	PHA7: Northeast	4,419	10.9	6.6
	PHA8: North	2,657	6.5	8.1
	PHA9: North	2,997	7.4	7.7
	PHA10: North	2,944	7.3	6.2
	PHA11: South	2,023	5.0	4.9
	PHA12: South	1,827	4.5	3.9
	PHA13: Bangkok	2,188	5.4	3.3

Table 3.2: (Cont.)

Determinants	Category	Cases (n=40,604)	% of deaths	Rate/100,00 population
Year	2000	3,749	9.2	6.0
	2001	3,806	9.4	6.1
	2002	3,975	9.8	6.3
	2003	3,888	9.6	6.1
	2004	3,881	9.6	6.0
	2005	4,416	10.9	6.8
	2006	4,635	11.4	7.1
	2007	4,097	10.1	6.2
	2008	4,064	10.0	6.1
	2009	4,093	10.1	6.1

3.2 Drowning deaths rate of each determinant

The trends of drowning death rate per 100,000 population by gender, age group and PHA are shown in Figure 3.1 to 3.4.

Figure 3.1 shows drowning death rates by year and gender. Males had slightly increasing trends of drowning death rate whereas a decreasing trend appeared in females. Drowning death rate per 100,000 population was highest in year 2006 with 10.97 and 3.29 for males and females respectively. Males had approximately 3 times higher death trend than females.

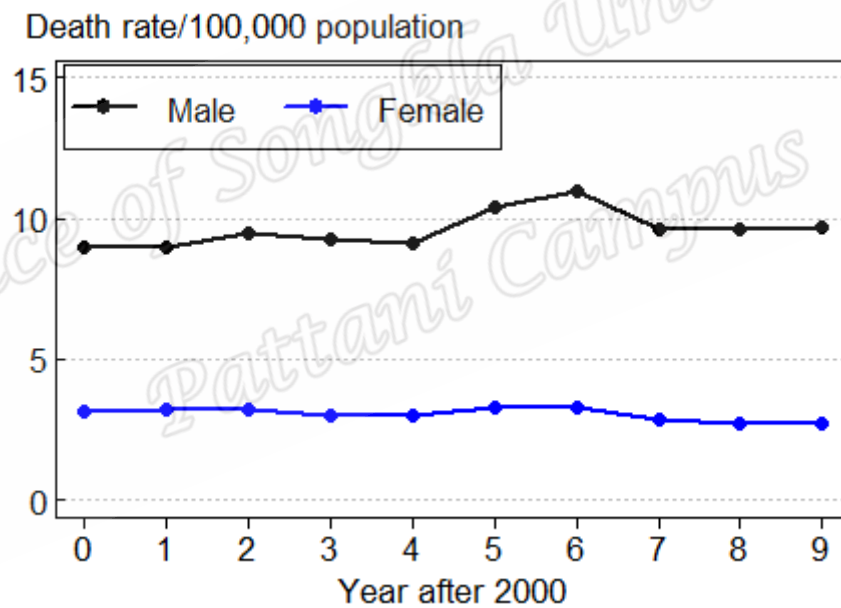


Figure 3.1: Annual drowning death rates by gender

Figure 3.2 shows the trend of drowning death rates by age group. Drowning death rates in males were consistently higher than those in females across all age groups. Drowning death rates had a peak in age group 0-4 years. A decreasing trend from age group 0-4 to 15-29 years was found in both genders and a slightly increasing trend for both genders occurred after age group 15-29 years until age group 60 years and over.

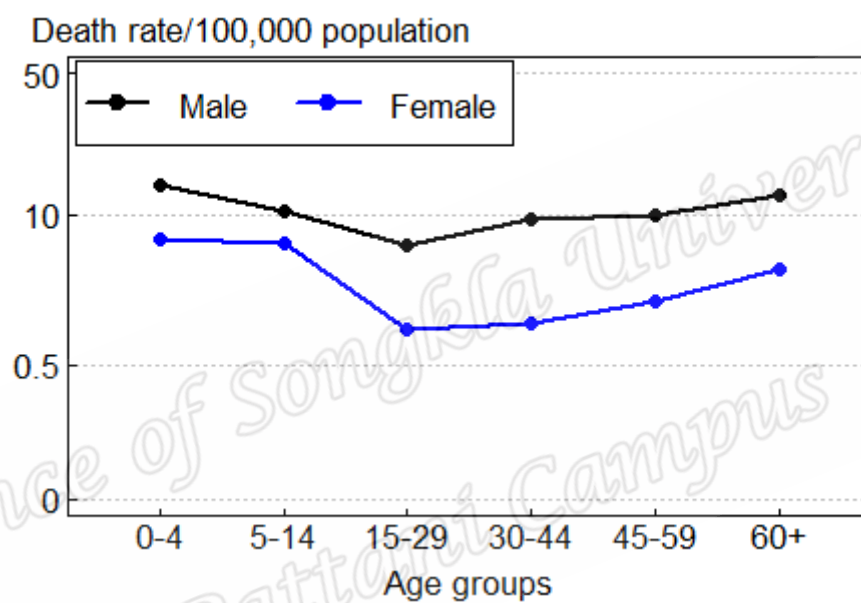


Figure 3.2: Trends of drowning death rates by age group and gender

Figure 3.3 shows trends of drowning death rates by year, gender, and age group.

Drowning death rates of males were higher than those in females all age groups. The highest drowning death rates occurred in aged 0-4 years in both genders. Males had an increasing drowning death trend in aged 5-14 and aged 30 years and over. In contrast, a decreasing trend was found in aged 0-4 and aged 15-29 years. For females, a decreasing drowning death trend was found in aged 0-4 and 45-59 years whereas an increasing trend from 2000 to 2005 was found in aged 5-14 years. A slightly decreasing trend in females was also found in aged 15-29 and 30-34 years.

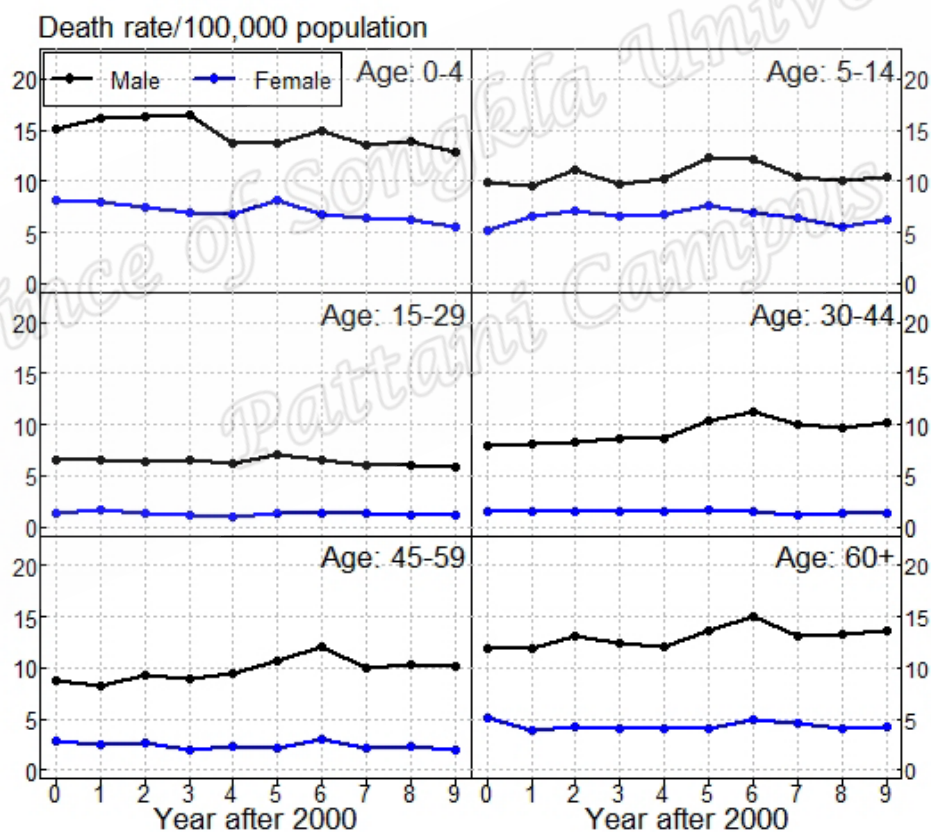


Figure 3.3: Trends of drowning death rates by year, gender, and age group

Figure 3.4 shows trend of annual drowning death rates by PHA. An increasing drowning death trend was found in PHA2, PHA4, PHA5, PHA8, PHA10 and PHA12. In contrast, there were only three PHAs had a decreasing trend including PHA1, PHA11 and PHA13. There were three PHAs including PHA3, PHA6 and PHA7 had quite stable trends over this period. However, in Thailand most of PHA still had an increasing trend of drowning death.

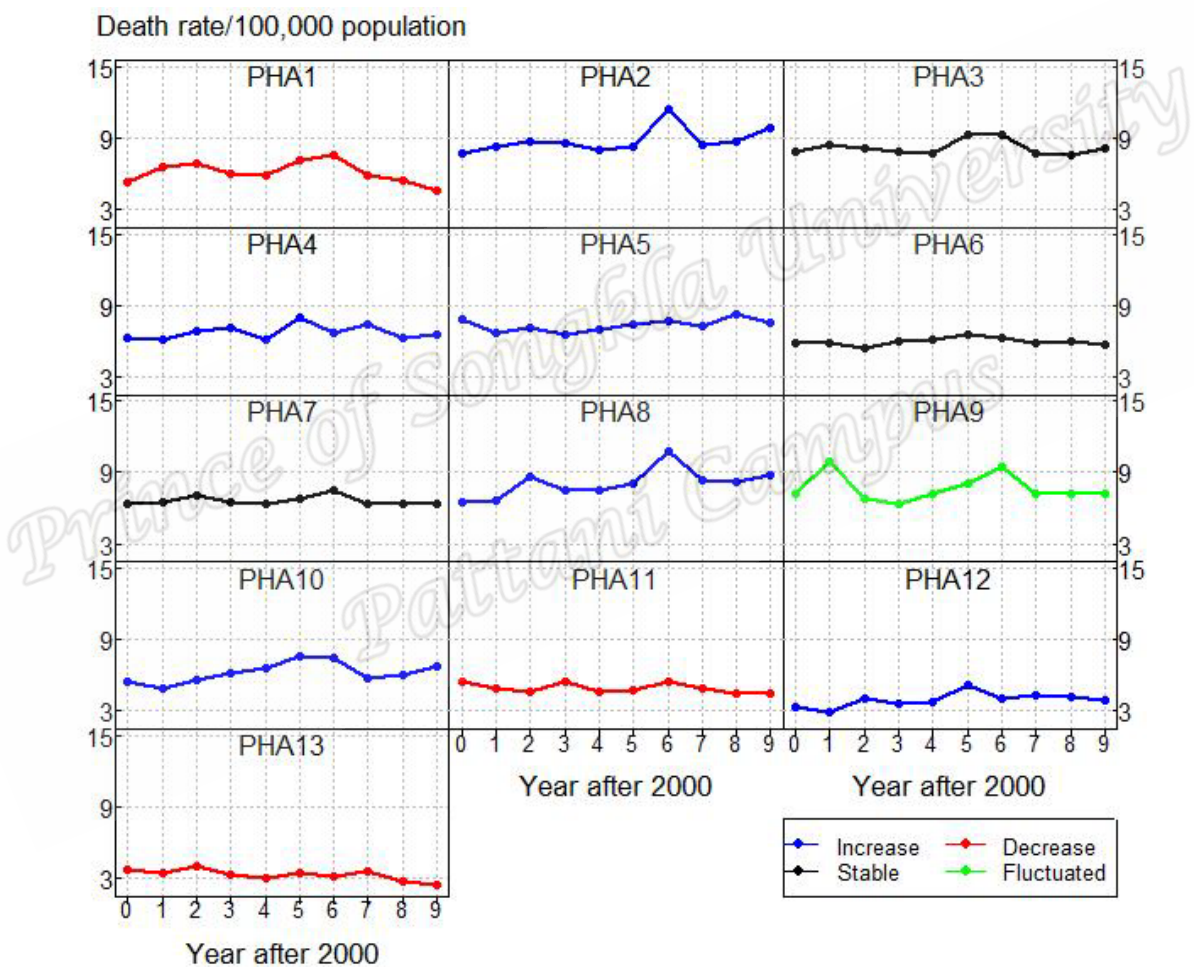


Figure 3.4: Trends of annual drowning death rates by PHA