

## **Chapter 5**

### **Conclusions and Discussion**

#### **5.1 Conclusions**

This thesis investigates age distribution of population and constructs model life tables for 14 provinces in Southern Thailand, based on mortality statistics by gender, 5-year age group and province provided by the Ministry of Public Health's Bureau of Policy and Strategy.

From preliminary results, it was found that there are different patterns among Muslim and non-Muslim populations with higher proportion in Muslim populations for younger age groups, especially in Pattani, Yala and Narathiwat.

It was found that subgroups of six provinces can be fitted with common models for males and for females, and the remaining eight can also be grouped together with different model. The main difference between "lower south" and "upper south" models is that the "lower south" model is smoother than that of the "upper south" model. The "upper south" curves show peaks at age 25 years whereas the "lower south" curves increase monotonically. Songkla and Narathiwat have relatively high mortality, whereas Ranong and Krabi have lower than average mortality levels.

#### **5.2 Discussion**

The high mortality rates for both males and females around age 25 for the "upper south" provinces may be due to road accident fatalities, which expose to higher risk than other ages. Most population in the four southernmost provinces (Satun, Pattani,

Yala and Natathiwat) are Muslim and Muslims refrain from alcohol, there are possibly more non-Muslim alcohol drinking drivers in the “upper south” provinces than in the “lower south” provinces. Also, public transport centers in the region are located in three (Chumphon, Suratthani and Songkla) of the eight provinces in the “upper south” provinces.

It should be noted that our mortality analysis is done by province. It refers to the place where deaths occur, which is not necessarily the place of residence. This could explain the low mortality rates in small provinces such as Ranong and Krabi. Most hospital deaths occur in big cities. The three hospitals in Songkhla province are university Hospital (Songklanakarin Hospital), regional hospital (Hat Yai Hospital) and general hospital (Songkhla Hospital), which are the main hospitals in the south. This could explain the high mortality rate in Songkla. Compared to the whole of Thailand, the southern region estimates of males and females mortality rates for all ages are lower. The crude death rates for males and females were 5.5 and 3.7 respectively, whereas the corresponding rates for the whole country were 7.0 and 4.9 (Rukumnuaykit, 2006). This could be due to hospital deaths in other major cities around the country including the Bangkok metropolis.

Although this study is limited by the quality of the death registration data, the findings provide useful information on the pattern of mortality at the micro level. The expected benefits and applications derived from this study relate to the improved knowledge about model life table of the small region population. These mortality patterns and model life table will be used for construction of more complete life tables and population projection. Our study will provide useful information of survival and mortality patterns for policy and program formulation.

### **5.3 Limitations and Recommendation for Future Research**

The findings of this thesis are subject to at least two limitations. First, data on death in Thailand is not complete. It is undercounted by as much as 15%, especially for younger age groups (Prasatkul and Vapattanawong, 2006). Under-registration of infant deaths is widely believed to be high in Thailand. Second, deaths in the provinces are recorded by the provinces where the death occurred, which is not necessarily the province of residence of the death.

Our preliminary results suggest that the numbers of deaths are influenced by socio-economic factors, and that death rates differ in different areas and religion within a country, given the different living conditions and access to health care.

Further research is needed to answer the question of how socio-economic factors affecting death rate.