

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

This study investigates the functional disability of the elderly in Tambon Krabi-noi, Muang district, Krabi province and it aims to assess the elderly disability and explore effects of socio-economic factors towards health of the elderly. Two types of the assessment will be conducted; 1) Physical ability of the elderly in implementing basic daily routines and 2) Physical ability of the elderly in implementing extended daily routines. Methodologies used in this study are elaborated in details as follows;

#### **1. Research design**

This study is a cross-sectional research which data are collected at one point of time. Data in this study are cross sectional and retrospective and are collected through interviews in January-March 2005 with the elderly living in Tambon Krabi-noi, Muang district, Krabi province.

#### **2. Methodology**

##### **2.1 Population and study population**

2.1.1 The populations are 907 elderly people living in Tambon Krabi-noi, Muang district, Krabi province in 2003.

2.1.2 The study population refers to the elderly residents in Tambon Krabi-noi, Muang district, Krabi province. The number of the elderly is calculated using Yamane's calculation formula as referred in Samphan Phanphrek (1998). The following is the formula;

$$n = \frac{N}{1 + N(e)^2}$$

N = the number of total population

n = the number of sample population

e = error by random sampling (in this study, specified error = 0.05)

The formula was then replaced by actual numbers and the result of the study population was 278 people. Simple random sampling method was applied by gathering the name and address of the 278 elderly people and randomly selecting some of them for this study.

## 2.2 Observation and measurement

### 2.2.1 Research variables

Independent variables are sex, age, marital status, religion, education, reading ability, writing ability, sufficiency of income, family type, living condition, level of required care and health problems.

Dependent variable is the functional disability of the elderly.

2.2.2 Research instrument to measure variables is an interview form consisting of 6 parts as follows:

The first part is related to general data of the elderly; namely, sex, age, marital status, religion, education, reading ability, writing ability, sufficiency of income, family type, living condition, level of required care and health problems.

The second part covers a list of questions to assess the level of current performing activities. The questions are related to the elderly performance of 10 basic daily activities which are selected to assess whether they can perform such activities or not. Those activities are routine tasks which they perform within 24-48 hours. If they need assistance or a caregiver has to closely watch them perform any activity, the score will be deducted and if the elderly become unconscious, the score will be zero.

### **Severity levels**

- 0-4 = very low initial score (total score)
- 5-8 = low initial score (severe dependence)
- 9-11 = intermediate initial score (moderately severe dependence)
- 12+ = initial high (mildly severe dependence: consideration of discharging home)

The third part includes 5 questions about their performance in operating extended daily routines. The questions will assess what activity the elderly are able to actually perform on their own within 1 month. If they need assistance or someone to closely watch them perform the activity, the score will be deducted and if they pass out, the score will be zero.

The fourth part is comprised of 5 questions on their health status and illnesses which they have had for more than 6 months. If the elderly answer "2" in the first and/or in the second question and in the fifth question, it means they have long-term disabilities.

The fifth part is related to new incurring illnesses in the past 1 month. It consists of 3 questions and if the number of days that the elderly answer is more than 1 day in questions 1-3, it means they have short-term disabilities.

The sixth part comprises of open-ended questions for the elderly to express their opinions on their needs and what they would like to request from their caregivers.

### **3. Assumptions**

1. The elderly and/or caregivers provide accurate information and data acquired from interviews are genuine and reliable.
2. This study can be determined by numbers and results can be analyzed by using statistical methods.
3. In this study, if the elderly cannot provide any information, their caregivers can be of any assistance in giving information on their behalf.
4. Each part of the assessment instruments is equally important.

### **4. Keywords**

1)Disability, and 2) the elderly

### **5. Operational definitions**

1. The elderly refer to populations, both male and female, aged 60 years or more.
2. The long-term disability refers to any limited condition which obstructs a person to perform an activity that s/he normally does. It could be due to illnesses, disabilities or physical handicaps which have lasted for 6 months or longer.

3. The short-term disability refers to any limited condition which obstructs a person to perform an activity that s/he normally does. It could be due to incurring illnesses, disabilities or physical handicap within 1 month or earlier.
4. The total disability refers to overall disabilities at the time of the study which is equal to a total number of the elderly suffering from the long-term disabilities and those from the short-term.

## **6. Data collection**

1. The researcher collects the data on her own.
2. Before proceeding with the data collection for the next household, the researcher has to ensure the data are accurate and complete.
3. Data must be recorded and are prepared for analysis.

## 7. Data analysis

**Table 1 : Type of statistics**

Type of statistics	Topic for analysis	Type of variables	Methods
Descriptive statistics	General data; i.e. age, income	Ratio scale	Means Standard deviations Percentage
	General data; i.e. sex, marital status, religion, education, reading ability, writing ability, sufficiency of incomes, family type, living condition, level of care received and health status	Norminal scale	Frequency Percentage
Inferential Statistics	Testing the relation between independent and dependent variables	Ordinal scale	Chi-square test

## **8. Ethical consideration**

This study is a descriptive research and does not conduct any intervention or experiment with the respondents, so there was no ethical issue to be concerned.

## **9. Limitation of the research**

Respondents were the elderly living in the rural area. So, the results of the study may not represent the perspective of the elderly in the urban area.

## **10. Obstacles and problems**

Respondents of the questionnaire were the elderly and some of them might have suffered from memory loss or had difficulties in hearing and reading.

Solution: caregivers may answer questions in the questionnaire on their behalf if the elderly couldn't possibly do so.