

## CHAPTER III

### RESEARCH METHODOLOGY

#### 3.1 Study design

This study utilized survey research using face-to-face interviews by a structured questionnaire.

#### 3.2 Study samples

This was a pilot study, whereby 50 study participants of each group of symptoms were observed. The studied symptoms were grouped anatomically into (1) urinary tract, (2) fever/headache, (3) throat/nose, (4) skin, (5) joint/musculoskeletal/back pain, and (6) gastrointestinal tract. Inclusion and exclusion criteria were as follows.

*Inclusion criteria:*

- 1) Those buying medication for themselves or for family members, aged 18 or older, and responsible for household expenses (if the person was not the breadwinner, the researcher would ask the breadwinner of their households).
- 2) Those seeking pharmacist's advice, care, or prescription filling.
- 3) Those visiting with one of the six studied symptoms.
- 4) Those living in poor households based on the set criteria.
- 5) Those willing to participate, agree to share information with the researchers, and signing the informed consents.

*Exclusion Criteria:*

- 1) Persons who were economically inactive e.g. those who were students and do not hold a job or were not able to make a living.

In this research, if persons from the same household visited a community pharmacy with different groups of symptoms, the researcher included it in data collection. However, if they had the same group of symptoms, the researcher did not include it.

### 3.3 Study site

The study site was a community pharmacy located in an urban area of Mahasarakham Province. The selection of the site was based on the purposive sampling method because of the cooperation in sharing information between pharmacists and the researcher.

### 3.4 Instruments

The primary instrument used in this study was a questionnaire for interviewing to collect socioeconomic and health profile data. Questionnaire development was done with the following steps.

3.4.1 Item were generated from reviews of two national surveys, namely Socio-Economic Survey (SES) 2007 and Health and Welfare Survey (HWS) 2006, which were developed by the National Statistical Office of Thailand. The questionnaire was divided into four parts as follows (Appendix 1).

3.4.1.1 Part one: This part was divided two sub-parts.

(1) Probing question: An open-ended question seeking the number of members in a household, relationships, and age. This question was used in addition to a dichotomous question about occupation and capacity for additional occupation.

(2) Dichotomous question: To determine poverty status, using household information. Limwattananon et al 2005 suggested the items, which were used to guide the inclusion of the poor into this study. The eight poverty indicators (score = 1 each) included (1) insufficient income for family; (2) too few family members with income; (3) increasing debt; (4) inability to borrow money from other people; (5) no assets; (6) living from “hand to mouth”; (7) lack of working knowledge and skills, and (8) bearing burden of family dependents. Households were considered poor if they had three out of eight poverty indicators, determined by interviewing in a yes/no question format.

3.4.1.2 Part two: Socioeconomic details consisting of:

(1) Demographic details: Age, telephone number, address, sex, marital status, knowledge of insurance, health insurance status, residential characteristics, living conditions, education, occupation, place of work.

(2) Income details: Wages and salaries, income characteristics, income from relatives, income of household, the amount of special income, and amount of income from relatives.

(3) Expense details: An extensive series including food, education, clothes, household product, social worker, entertainment, passage, etc., as well as spaces for additional amounts, in Baht.

(4) Debt details: Debt status, loans in the period of 12 months prior to interview, burden of debt, purpose of loans, source of finances, interest rates and borrowing outside the system, amount of debt, amount of interest and timing of repayment

(5) Savings details: Household savings, savings methods, savings characteristics, and amount of savings.

(6) Financial status

#### 3.4.1.3 Part three: Details of visitations to a community

pharmacy. Information obtained included symptoms, types of service, relationship of people in the household, timing and treatment before symptoms developed, diagnosis, drugs received (type, amount, and price), referral necessity, standard treatment based on the guidelines (this study follows the guidelines developed by Chaiyasong et al, 2005), impact of payment for services obtained, impact of payment if receiving standard treatment for the diagnosis, and willingness to pay for standard treatment.

3.4.1.4 Part four: Health profiles and health services. This contained information about visiting a community pharmacy within one month prior to the visit in question, hospital admission within one year prior to the visit, illness within one month prior to the visit, treatment and expense within one month prior to the visit, chronic disease, duration of chronic disease, and the location of treatment for chronic illness.

3.4.2 Content validity: Five experts experienced with socioeconomics evaluated the study: Three were lectures in the Faculty of Pharmaceutical Science, Khon Kaen University, and two were lectures in the Faculty of Pharmaceutical Science, Mahasarakham University. They evaluated an adequacy of the systematic questionnaire for clarity, meaningfulness, and appropriateness of wording for

socioeconomic and health details. The experts also provided comments on items that should be added.

3.4.3 After the questionnaire was evaluated by five experts, a thinking-aloud technique was used on 5 customers who had received services at a community pharmacy, to examine customer understanding regarding the questionnaire. The customers also provided comments on items they felt should be modified and edited.

3.4.4 The questionnaire was pre-tested twice in 15 sampling groups that had received services at a community pharmacy.

### **3.5 Study procedure**

The Khon Kaen University Ethics Committee for Human Research approved this study on April 22, 2009 (Appendix 3). The study was conducted for the three month period from May to July 2009. Data were collected during 8.00 am – 7.00 pm each day.

The pharmacists at the study site were informed of the objectives, data collection, details of the study, and standard treatment for each group of symptoms before the study was started. The researchers observed how the pharmacists dispensed medication to qualified households, and recorded the following data: major symptoms suffered, primary diagnosis, and the details of treatment – drug names, dosage regimen and amount dispensed.

#### **3.5.1 Screening of poor households and data collection:**

3.5.1.1 Data was only collected when pharmacists were on duty.

3.5.1.2 This study determined those who were financially poor, using the eight poverty indicators, by interviewing in a yes/no question format. If those that met inclusion criteria were willing to be study participants, their data was collected.

3.5.1.3 Data on socioeconomic and health profiles and effects of out-of-pocket spending on medication on their daily lives: Data was collected using the structured questionnaire. The researcher interviewed the study participants, and then information was recorded on the questionnaire.

### **3.6 Data evaluation and analysis**

Data obtained from the interviews and observation were recorded using Microsoft Access and analyzed using STATA as follows:

3.6.1 Socioeconomic information, health profiles, and illness experience were presented by descriptive statistics in terms of mean, standard deviation, median and inter-quartile range, or percentage, as appropriate.

3.6.2 The average expense a poor household could afford for each of the six groups of symptoms was analyzed by calculating the average price of dispensed medications. The prices of medications were determined by the studied community pharmacy (Appendix 4). They were reported in terms of mean, standard deviation, median and inter-quartile range.

3.6.3 The effects of out-of-pocket payment on the daily lives of poor households, for each group of symptoms, were presented as a percentage of those revealing the impacts.