

Chapter III

Research Methodology

The aim of this study is to develop the production process and the use of traditional herbal medicine with good management and adaptable standards for self-reliance in the community, and to promote traditional drug use in primary health care.

3.1 Research design

The study used multidisciplinary techniques in medical social science, aimed at description and operating the study in herbal medicine of "Lanna" healers. The survey and in depth interview with "Lanna" healers studied the social and cultural dimension to provide insight into indigenous conceptual systems. Data were collected in the framework of social and cultural knowledge which have main questions about the health care practice, the explanation or meaning, management, knowledge transfer and adaptation.

The Participatory Action Research (PAR) technique was used to select the herbal medicine of "Lanna" healers as the samples for experiment to improve or develop into appropriate dosage forms which don't conflict with the belief and indigenous concepts.

The development of raw medicinal plant material was done by using the standardization of the Good Manufacturing Production (GMP). The experiment concerning appropriate dosage forms was emphasized to control the effectiveness of physical and safety by controlling both raw materials and preparations.

The promotion of the use of herbal medicine in primary health care were done to stimulate the perception of people to accept herbal medicine for health and economy and need to manage it by themselves.

3.2 Research Tools

There were 4 types of tools used in the study: recording equipment; questionnaire; interviews and data records' as follows:

1. Recording equipment were the camera and tape recorder.
2. Questionnaire:

The questionnaire was developed by researcher under supervision of my advisor, and was pre-tested at Mae Chan district, which is outside the area of the target population(see Appendix A).

3. Interviews

For interviews with "Lanna" healers, it was constructed to describe the indigenous conceptual system of the use of traditional herbal medicine. The topics were the following:

- a. Health care practice in "Lanna" culture in the past: How did they take care of or treat their health whether they had illness or not?, What did they do when they had illness? Who decided to manage the illness, who did they trust for their treatment? Are these still available or not or is it changing?, What are the factors of changing, and how do they transfer the knowledge?
- b. The type of herbal medicine production of "Lanna" healers.
- c. The process or step of "Lanna" herbal medicine production : what was the process of the production? What are the important constituents?
- d. Belief or ritual in the process of "Lanna" herbal medicine: What or how did they use the belief or ritual in the process of "Lanna" herbal medicine? And if they did not do that what would happen or would be the effect on the medicine?
- e. Expenditure: The expenditure of healers for producing herbal medicine such as raw material, article or expenditure in the ritual process, and the expenditure of patients or persons who get the medicine: What did they have to pay? or how did they pay?
- f. Problems in the "Lanna" herbal medicine production: What the problems they had in the process of production in the past until today?;

- Finding raw material
 - Difficulty in the process of production
 - Storage; stability, timing
 - Ease of use
 - Expenditure
- g. Advantage or disadvantage of "Lanna" herbal medicine: stability and effectiveness, preparation, ease of use, cost and benefit
- h. The use of "Lanna" herbal medicine:
- What kind of medicine was popular and still used today ?
 - What kind of medicine people can use it by themselves?
 - What kind of medicine can only healers use?
- i. Development of "Lanna" herbal medicine:
- What kind of medicine can be developed?
 - How did they develop it within indigenous concepts?
 - What was the awareness of the development?
- 4..Data records of the experiment process
- a. Data record of the experimental process
 - b. Data record of the physical examination

3.3 Populations

There were 2 groups in this study as follows:

1. People in Phaya Mengrai district for data of the use of herbal medicine in Phaya Mengrai district. The sample size was 2% of the families in 5 Tambons of Phaya Mengrai district, obtained by simple random sampling to select the target group.

2. "Lanna" healers who are members of the Assembly of Mor Muang Chiang Rai – Pha-Yao for data of knowledge of the use of herbal medicine in the indigenous conceptual system. The target group were the herbalists and those who still use herbal medicine.

3. People and the leaders of community in Tambon Mae Pao, Phaya Mengrai district, for promoting the use of herbal medicine in primary health care in the community.

3.4 Research Procedure

There were 8 steps in the research procedure. They are the following:

1. Reviewed literature of traditional health practice in "Lanna" culture.
3. In depth interview with "Lanna" healers to know the indigenous conceptual system of the use of herbal medicine.
4. Use the Participatory Action Research (PAR) technique to select the herbal medicine of "Lanna" healer to the samples for modification.
5. Analyzed the data from steps 1-4 for data to select the traditional method or process of production to develop the appropriate method or process.
6. Development and experiment to determine the suitable preparations or dosage forms.
7. Preliminary tests of the appropriate method or process in Phaya Mengrai hospital and community.
8. To promote the use of herbal medicine in primary health care in the community.

Details of each steps were done as follows:

1. Reviewed literature of the indigenous health care practice in "Lanna" culture by studying in Library and internet by using key word of herbal medicine, traditional medicine, folk medicine, culture and health, primary health care, holistic care.
- 2 Survey data on the use of traditional herbal medicine in Phaya Mengrai district
Used the questionnaire to survey the use of traditional herbal medicine in Phaya Mengrai district with 996 persons (2% of population in total of 48,196 families in 5 Tambons of Phaya Mengrai district, namely Tambon Mae-Pao, Meng-Rai, Mae-Tum, Tad-Kwun and Tambon Mai-Ya.).

3. In depth interview with "Lanna" healers to know the indigenous conceptual system of the use of herbal medicine. It was done with "Lanna" healers, who live in Chiang Rai province. The data were collected in the framework of social and cultural aspects.

4. The Participatory Action Research (PAR) technique was used to select the herbal medicine of "Lanna" healers as sample for the experiment. This step was set as a workshop and used the Participatory Action Research (PAR) technique with 8 "Lanna" healers who have great experience in process of traditional herbal medicine production. In this workshop used the data from the in-depth interviews in step 3 was used to check and review the indigenous knowledge about belief, process of traditional herbal medicine production and ritual. Then the method or dosage form which can be developed was analyzed and selected. Brain-storming was done to create and develop that dosage form. These were data for the researcher to design the model of improvisation which does not conflict with the belief and indigenous concepts.

5. The data from step 1-4 was analyzed for data to select the traditional method or process of production to develop for a suitable method as follows:

a. Used the SPSS/PC⁺ method to analyze the data from questionnaire which answered that they used to use traditional herbal medicine. Concerning the use of herbal medicine of people in Phaya Mengrai district by using descriptive statistic to know the trend of using and kind of herbal medicine which continue to be used or popular today. And how they think of herbal medicine regarding effectiveness, cost, satisfaction, and how they want to develop the dosage form (see Appendix B).

b. The data of the use of herbal medicine by people and the data from in-depth interviews and PAR technique was combined kind and dosage form of herbal medicine were compared to select dosage form to experiment with the appropriate dosage form.

6. Development or experiment on the appropriate dosage form. This step was done at the Phaya Mengrai Herbal Material Development Center and at the Traditional Medicine Department of Phaya Mengrai Hospital. Process of this step included:

- Advantage and disadvantage of traditional dosage form were analyzed
 - New dosage forms were designed by developing technique or some easy technology such as food technology was added.
 - Data about method, material, cost and possibility to develop was surveyed.
 - The suitable dosage form was developed and experimented on and each step of process was recorded.
 - Physical quality was evaluated by using standardization of GMP and physical evaluation at the laboratory of Faculty of Pharmacy, Chiang Mai University.
 - The appropriate dosage form was tested and corrected.
 - Use with volunteers was tried.
7. Tried to use the appropriate dosage form in primary health care in Phaya Mengrai Hospital at Diabetic Clinic and Traditional Medicine Clinic of Phaya Mengrai Hospital with patients who preferred to use it. Otherwise tried to use in community by selling in the shop of the Healthy Center Shop of the Phaya Mengrai Herbal Material Development Center.
8. The use of herbal medicine in primary health care was promoted in community. This step was done together with the step of development and experiment. It emphasized the sustainable use by stimulating the sense of people to manage herbal medicine by themselves. There were 2 main kinds of activity to promote and stimulate:
- a. To promote the use of herbal medicine in the community.
 - b. To stimulate the community leaders to use herbal medicine for decreasing the expense for primary health care, and use for support of the community economy.



Figure 3.1 Interviews with "Lanna" healers in Chiang Rai Province.
(a),(b) group interviews (c) Using PAR technique