

HOLISTIC HEALTH SOCIETY DEVELOPMENT FOR CHRONIC LIVER FAILURE TREATMENT BY APPLIED THAI TRADITIONAL MEDICINE

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Abstract - *The research of Holistic Health Society Development for Liver Failure Treatment by Applied Thai Traditional Medicine. An applied research with the purposes to 1) study wisdom in local medicine recipe medication, 2) study Chronic Liver Failure treatment by Holistic Applied Thai Traditional Medicine, and 3) study quality herb production of the communities in order to develop society in health - care aspect. Research procedure comprised data collection from folk medicine men and field data collection. Moreover, observation, interview, and focus group discussion were used as research tools.*

The result of the research found that there were 11 kinds of active constituents in local medicine recipe. These constituents could reduce liver inflammation, helped promoting liver restoration and Jaundice treatment. Besides, the result of using Holistic Applied Thai Traditional Medicine found that patients who were cured by local medicine recipe would be recovered and back to good health in 3 – 12 months. However, the combination of wellness systems which comprised physical, mental, and social system were needed in the treatment as well. In addition, the research also found that there were 3 groups of folk medicine men and farmers in the quality herb production; 1) the pesticide - residue – free - herb producers, 2) herb transformers in the act of farmer group, and 3) herbal - medicine users who did packaging and distribution. The herb production system helped to increase community's income and at the same time, the system also helped local herbs to be preserved. These would help to sustain health society development in the long term.

Keywords: *Chronic Liver Failure, Holistic Treatment, Health Society Development*

INTRODUCTION

It can be observed from the social development and human security from the past until now that Thai traditional medicine is very important because it is one of the four basic necessities of human life. Thai traditional medicine is a medical system used to solve and relieve health problems of people in the past in which the healers are the folk healers who use holistic treatment methods resulting from their accumulated experiences that become inherited knowledge (Nikom Musikakama. 2002 : 185 – 190). Folk medicine is a health culture in which the folk healers act as the practitioners and work in accordance with ecosystem, socioeconomics and cultural-specific local knowledge. Health care methods used in Thai traditional medicine are linked to the specific local contexts (Saowanee Kulsomboon. 2012 : 2). In understanding the health care guidelines, it is necessary to consider conditions and both internal and external factors based on concept of holistic social security development (Saowanee Kulsomboon. 2012 : 8-14). According to the Public Health Statistics 2012 – 2014, the mortality rate for liver diseases in 2012 was 14,469 deaths per 100,000 population (22.51%), 15,472 deaths (23.94%) in 2013 and 15,306 deaths (23.56%) in 2014 which accounting for 12.5% or in the 21st rank of 103 diseases that are commonly found in the age range

of 40-60 years. In addition, men have a higher rate of cirrhosis compared to women (Health Information Resource Group, Strategy and Planning Division. 2014). When the patient has a long-term liver pathogenesis, the liver cells are permanently destroyed and a solid membrane that is characteristic of cirrhosis is formed which can develop into fatal liver cancer (Malinee Srikkhamuan. 2005 : 40-52).

Chronic liver failure usually occurs after cirrhosis from various causes. The early symptoms of liver failure are nausea, vomiting, fatigue, loss of appetite, stomachache especially the upper right abdomen and yellow skin and eyes (jaundice). The symptom of sever liver failure is ascites caused by high blood pressure in the portal system. The toxins that accumulate in the body directly destroy the brain cells in which the symptoms usually start from insomnia, forgetfulness, confusing, drowsiness during the daytime but awake at night. Patients may develop acute renal failure from renal ischemia without previous kidney diseases which results in swelling, oliguria, confusion, drowsiness, seizures, coma and eventually died (Malinee Srikkhamuan. 2005 : 58-62). The best treatment approach for liver failure is liver transplantation. However, it is a very costly method and the number of liver donors is low. In addition, patients need to take immunosuppressants throughout their lives after the surgery with 5-year survival rate of about 80%. Medicines and medical supplies for liver transplantation are all imported from abroad. In 2010, the values of imported medicines and medical supplies were 76,664.58 million Baht, 83,150.28 million Baht in 2011 and 96,508.20 million Baht in 2012 (The Customs Department. 2013) which is considered a tremendous value. If these problems are not resolved, they will contribute to the national economic and social problems (Rungravi Temsiririrkkul, 2012 : 2-5). Later, Thai herbal medicine was applied to Thai traditional medicine as an alternative for patients and public health personnel. Thai herbal medicine involves decoctum (pot medicine) which is difficult to maintain and outdated resulting in difficulties in taking medicine. In addition, each folk healer does not monitor the tangible results of the treatment. Therefore, it is necessary to study herbal medicine recipes, active substances and herbs that can be grown or found in the country in order to reduce imports. This study was performed at Prapokkklao Hospital, Chanthaburi because this hospital has been used modern medicine in combination with applied Thai traditional medicine to treat chronic liver failure since 2005. Chronic liver failure is a disease that creates a lot of suffering for patients and families and is one of diseases that can be effectively treated with this approach. Therefore, the development of holistic health society for chronic liver failure treatment by applied Thai traditional medicine is an alternative treatment for patients with chronic liver failure by using local wisdom in combination with society or known as holistic treatment for good wellness. This also provides community the opportunities to participate in producing high-quality herbs for medicine production and generates income for people in the community which will contribute to the conservation of natural resources and the environment, resulting in sustainable health society.

RESEARCH OBJECTIVES

1. To study local wisdom on herbal medicines for the treatment of chronic liver failure in Chanthaburi.
2. To study chronic liver failure treatment using holistic applied Thai traditional medicine.
3. To study the production of high-quality herbs in the community for the development of health society.

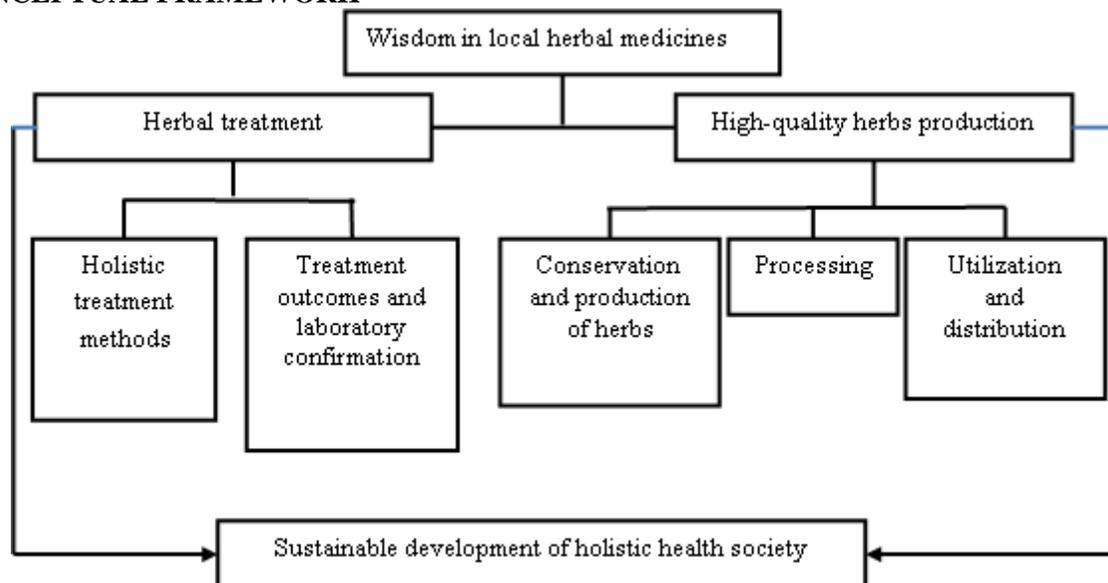
RESEARCH QUESTIONS

1. What herbal recipes from local wisdom on herbal medicines are used in chronic liver failure treatment? What are the therapeutic properties of each recipe?
2. What are the details and procedures for treating chronic liver failure by using holistic applied Thai traditional medicine?
3. How to produce high-quality herbs in the community for the development of health society? How does the community cooperate in the development of health society?

RESEARCH METHODOLOGY

This study aimed to develop the holistic health society for chronic liver failure treatment by using applied Thai traditional medicine. Applied research was used and the data collection was performed by using observation, interview, and focus group discussion from folk healers, community leaders and people in the community. The data were classified into categories according to the research objectives and were verified using data triangulation. The data analysis was performed by using descriptive analysis.

CONCEPTUAL FRAMEWORK



RESULTS

1. LOCAL WISDOM ON HERBAL MEDICINES FOR CHRONIC LIVER FAILURE TREATMENT

According to the study of herbal medicine recipes for cirrhosis and chronic liver failure treatment, the conclusions are as follows: When the patients visit doctor, the important thing that needs to be considered is that the herbal medicine recipes selected for chronic liver failure treatment must be appropriate for the disease. The herbal medicine recipes used consists of Pattha Pitta, the herbal decoctum with liver cleanse effect to help remove toxins. In addition, the herbal medicine recipe for Yoknang Pikarn (liverish) which is the bolus with liver nourishing effect is also used. The treatment approach involves the removal of accumulated toxins while simultaneously nourishing the liver. Liver disease treatment begins with the removal of accumulated toxins followed by administration of elemental tonic, haematonic, lymphatic tonic and muscle relaxants. These treatment methods help improve and return liver functions to normal.

2. CHRONIC LIVER FAILURE TREATMENT WITH APPLIED THAI TRADITIONAL MEDICINE

2.1. Knowledge and principles of diagnosis and treatment with applied Thai traditional medicine methods using herbal medicine recipes

2.1.1 Mechanisms of liver diseases and chronic liver failure according to the concept of applied Thai traditional medicine: According to the concept of applied Thai traditional medicine, there are many causes of chronic liver failure including drinking alcohol or alcoholic beverages, liver infection, liver inflammation, liver injury caused by accident, long-term chemical exposure and do not know the exact cause in some cases. For the explanation of the occurrence of chronic liver failure according to the elemental abnormalities in the body, chronic liver failure is caused by the increase or abnormalities of fire element. When combine with increased wind element, the heat inside the body increase which results in

the increase or abnormalities of water element. When water and body fluids begin to run out, it adversely affects the earth element (organs) and resulting in liverish.

2.1.2 Herbal medicine recipes for chronic liver failure treatment

Pattha Pitta decoctum: Herbal decoctum with liver cleanse effect to help remove toxins.



Figure 1. Herbal decoctum for cirrhosis and chronic liver failure treatment

Medicinal properties: Cure hepatitis, hepatomegaly, cirrhosis, jaundice and remove accumulated toxins.

Recommended dose: Take 100 cc three times a day before breakfast, lunch and dinner for a month and follow-up.

Herbal medicine recipe for Yoknang Pikarn (liverish): Herbal Bolus with liver nourishing effect is also used. The treatment approach involves the removal of accumulated toxins while simultaneously nourishing the liver.

Medicinal properties: Cure capillary sclerosis (Lohittang Pikarn), enuresis (Muttang Pikarn) and liverish (Yoknang Pikarn).

Recommended dose: Take 3 pills three times a day before breakfast, lunch and dinner.

2.1.3 Injurious food for liver diseases: Avoid sweets, strong favor foods, all kinds of fermented foods including bamboo shoots, steamed starchy food, deep-fried foods or greasy foods, sweet fruits, refrain from alcohols, avoid unnecessary medication and avoid hard works that involve physical exertion.

2.1.4 Chronic liver failure treatment using applied Thai traditional medicine in combination with modern medicine, Prapokklao Hospital, Chanthaburi: More than 500 cirrhosis patients in this hospital were in the end-stage of cirrhosis who was indicated by modern medicine that they would die within 3 months. However, after they were treated with applied Thai traditional medicine methods using herbal

medicine recipes for about 3-5 months, the clinical examination in modern medicine showed that ascites decreased, swollen legs began to relieve with better liver function test results. After 4 months, the physical conditions of the patients were almost normal and their liver functions and swollen abdomens were back to normal.

2.1.5 Examination and treatment procedures using applied Thai traditional medicine in combination with modern medicine

1. Patient-centered care: Most patients were in end-stage of liver failure patients (decompensated) and came to the hospital with ascites. Patient must be treated with applied Thai traditional medicine in combination with modern medicine by taking 1/2 - 1 tablet of Propranolol (10 mg) three times a day before meals in order to reduce portal venous pressure depending on the patient's condition. The dosage used must not lower the patient's pulse below 60 times per minute in the morning. Furosemind and Spinololactone may be used to remove excess fluid in the body. This is the integration of traditional and modern medicines.

2. Evere hepatic impairment: If the liver produces less albumin, patient will have swollen legs and ascites. Albumin can be used to relieve leg swelling and ascites and provide patients the diuretics to remove excess fluid which will make them feel more comfortable and less abdominal distension. There are 2 types of diuretics which are Aldactone a potassium-sparing diuretic that remove sodium and Lasix may be used in combined with Aldactone to remove potassium. 25-100 mg of Aldactone may be required per day. For patients who have severe swelling, 1-2 pills of Lasix (40 mg) may be needed 2 times a day at breakfast and lunch. However, this medicine is not given at dinner because it will result in excessive urination at night and disturbed sleep. In addition, vitamin B, folate and iron as nourishment to body. The diagnosis and follow-up of treatment are performed by blood tests, ultrasound examination and kidney complications and liver function tests.

Blood test result	normal range	Duration after treatment (month)					
		0	1	3	5	8	11
SGPT	(N 10-40)	18	15	26	20	34	38
SGOT	(N 10-42)	50	40	46	29	32	35
T-BILI	(N .2-1.1)	2.5	1.9	1.4	1.2	0.7	1
Albumin	(N 3.5-5)	2.4	2.5	3	3.5	3.6	4.1

Table - 1 : Laboratory blood test results

Note: 0 represents before treatment

3. Treatment with herbal medicine recipes: Applied Thai traditional medicine treatment is used after modern medicine treatment. The applied Thai traditional medicine doctor will give patients the Pattha Pitta decoctum. The treatment approaches are depending on the patient's conditions and in accordance with the principles of applied Thai traditional medicine by using the combination of decoctum and bolus. The doctor will teach patient the decoction in detail and take the patient's pulse every morning in order to make various adjustments and records. After that, patients are allowed to urinate and then weight to check whether the patient' urination is normal or not. The doctor will teach the relatives to measure patient's stomach to see if the weight is reduced and the stomach will less swollen or not.



Figure 2. Patient care at home by relatives, patient abdominal size measurement and recording in cm daily.

4. THE COMBINATION OF APPLIED THAI TRADITIONAL MEDICINE AND MODERN MEDICINE TREATMENT METHODS

The similarity between applied Thai traditional medicine and modern medicine treatment is preventing patients from constipation. In patients with cirrhosis, the liver removes less ammonia, therefore the blood ammonia levels are high. Ammonia will permeate through the meninx and results in brain toxicity and dysfunction. Herbal medicine recipes used in treating patients with cirrhosis also contain laxatives to allow the patient to defecate 3-4 times a day in order to avoid residual stools. For modern medicine, 30 cc of Lactulose is given to patient before bedtime and recommends the patients to defecate 3-4 times a day.



Figure 3. Examination and treatment using applied Thai traditional medicine

2.1.6 Analysis of human well-being by focusing on the relationships of physical, mental and social well-being shows that

1. Physical well-being Human life depends on nature and is part of nature. It can be observed that food and herbal plants are unique to each ethnic group. These foods and herbs are suitable for people in that particular locality. Living with nature helps keep the body healthy and prevent and treat diseases. If we look back and use these natural ways of the past, these diseases may not appear or less.

2. Mental well-being It is easier said than done, but it is really strange that the mind has a significant effect on the physical condition. The mental state is determined by the five senses including taste, sight, touch, smell, and sound. Listening to good things repeatedly will embed a positive mind in your subconscious mind. This positive mind makes you let go of anger and resentment and results in detachment and love of humanity which are important sources of mental well-being.

3. Social well-being Humans are by nature social animals that live together in group and interact with each other from the smallest unit which is family to relatives, colleagues and ethnic group and race. Living together as a society results in interactions and interdependence which leading to well-being. Therefore, humans need families, friends and relatives to look after each other. A stable mind is necessary for treatment by various methods, especially by integrative medicine. The guidelines for promoting health of patients with chronic liver failure consist of physical, mental and social well-being as shown in the following chart.

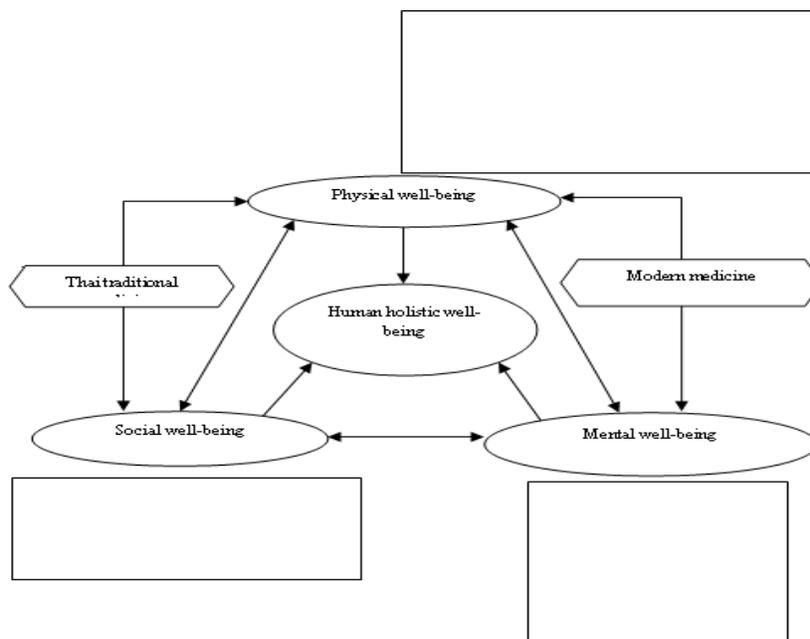


Figure 4. Guidelines for promoting health of patients with chronic liver failure

3. HIGH-QUALITY HERBS PRODUCTION FOR THE HEALTH SOCIETY DEVELOPMENT

Upstream: Conservation and production of high-quality herbs by farmers: In order to produce high-quality herbs, farmers have to learn the herb plantation and maintenance from natural and traditional wisdom such as weather, suitable climate for herbs, soil conditions, fertilizers and minerals, irrigation, toxic precautions and traditional herb species. In other words, it is a study of eco-system of herbs before being processed at the midstream. It therefore affects social and economic development. Farmers can operate commercial businesses such as production or propagation of herb seedlings, production of organic fertilizers for herbs, production of non-toxic pesticides for herbs, part-time plowing jobs or being worker in herb farm. The higher herbal medicines sales in at downstream are, the higher income for farmers at the upstream.

Midstream: High-quality herb processing: The details of production process of herbal medicine recipes for chronic liver failure treatment are as follows: Herbal medicine recipes used for chronic liver failure treatment are decoctums containing dried herbs available in the community. Villagers and farmers have gathered and established the community enterprise groups for herb processing. At present, there are more than 4 community enterprise groups for herb processing. The process of herbal processing involves harvesting and collecting fresh herbs available in the community, washing, sun-drying, drying, packing in sealed bags and storing in dry condition for further distribution.



Figure 5. Dried Smilax glabra (Khao Yen Tai), raw material of the community enterprise group



Figure 6. Dried Smilax corbularia (Khao Yen Nuae), raw material of the community enterprise group

Downstream: Applications of herbal medicines in the future: For the applications of herbal medicines in the future, more researches and efforts are needed including human subject researches, registration with the Food and Drug Administration, and intellectual property registration. After all these steps, the production and distribution of herbal medicines are possible. Treating a patient using herbal medicines takes 3-6 months and 300 – 1,000 pills depending on the severity of disease which costs 1,800 – 6,000 Baht per person. The greater the number of users worldwide, the more social stability and revenue generated.

IMPLICATIONS

1. LOCAL WISDOM ON HERBAL MEDICINES FOR CHRONIC LIVER FAILURE TREATMENT

Herbal medicine recipes for cirrhosis treatment consisted of herbal decoctum called Pattha Pitta. The treatment begins with the removal of accumulated toxins followed by administration of elemental tonic and haematonic. In addition, the liver tonic bolus with liver nourishing effect is also used. The medical properties of this herbal bolus are curing capillary sclerosis (Lohittang Pikarn) and enuresis (Muttang Pikarn).

The patients in this study were patients with end-stage cirrhosis in which were informed by modern medicine that they would die within 3 months since they did not respond to all treatment approaches. However, after these patients were treated with applied Thai traditional medicine methods using herbal medicine recipes, the follow-up results according to modern medicine showed improved results and liver functions of some patients were back to normal.

According to the results, it can be seen that the wisdom on applied Thai traditional medicine is useful knowledge because it has been used in health care of people from the past to the present while modern medicine has just introduced to Thailand since Rattanakosin period. Unfortunately, Thai traditional medicine has been neglected, abandoned or partially destroyed and vanished. It is therefore necessary to study this knowledge in order to integrate with modern medicine to maximize the benefits for Thai people.

2. CHRONIC LIVER FAILURE TREATMENT BY HOLISTIC APPLIED THAI TRADITIONAL MEDICINE

2.1. Applied Thai traditional medicine treatment In Applied Thai tradition medicine, the factors affecting health condition including natural and behavioral factors and which are the causes of diseases are investigated. The guidelines of applied Thai traditional medicine are based on Thai traditional medicine, which are to take care of both the body, mind and society in accordance with the local nature and the lifestyle of Thai people. The treatment begins with taking the patient's pulse, feeling liver and abdominal lumps and estimating swelling degree. After that, checking for jaundice, loss of appetite, insomnia, swollen stomach and tongue coating. In addition, pulse detection is also required for diagnosis.

Herbal medicine recipes are used in combination with blood tests. It is a holistic treatment method for physical, mental and social well-being tangibly. This method has been used by applied Thai traditional medicine as a guideline which provides good results. Modern medicine should therefore consider this method as an alternative to treatment.

2.2 Risk factors of disease in applied Thai traditional medicine Health care system in applied Thai traditional medicine is holistic health care that take care of every aspects of health including physical, mental, social, environmental and spiritual aspects. Not only current diseases or a specific part of the body, applied Thai traditional medicine also considers the interactions between body, mine, spirit and environment which are inseparable and these interactions must be balanced.

2.3 Health promotion and disease prevention according to the guidelines of applied Thai traditional medicine Knowledge if Thai traditional knowledge has been inherited and developed into the holistic medicine which are to take care of both the body, mind and society in accordance with the local nature and the lifestyle of Thai people as follows:

1. Physical aspect: Focusing on eating according to element, season, age, duration and environment; avoiding risk behaviors and balancing physical structure using Thai hermit exercise.
2. Mental aspect: Using Buddhism approaches for mental elevation such as praying, meditation and walking meditation in order to achieve peace, strong mind, no anger and sorrow.
3. Social aspect: Thai traditional medicine focuses on family, family warmth, gratitude to parents, building maternal bond through breastfeeding and promoting family support such as massaging and also focuses on developing from family level to community level including forgiveness, living together in peace and mutual support.
4. Environmental aspect: Thai traditional medicine focuses on trying not to destroy the environment which disturbs the balance of nature and adversely affect human. In addition, Thai traditional medicine also focuses on growing herbs, conserving forest and water resources, adapting to environment and season and keeping environment clean by living a natural life, not using chemical fertilizers, not causing water and air pollution.

3. HIGH-QUALITY HERBS PRODUCTION IN THE COMMUNITY FOR THE DEVELOPMENT OF HOLISTIC HEALTH SOCIETY DEVELOPMENT

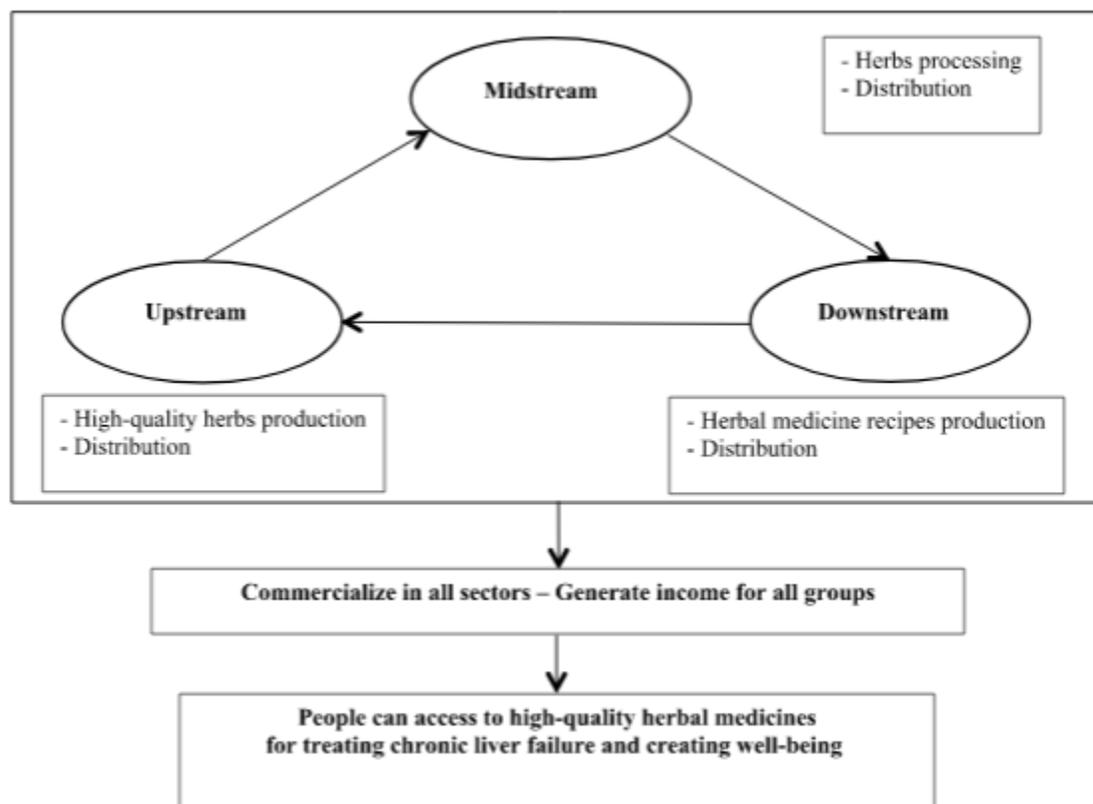
Upstream: Conservation and production of high-quality herbs by farmers In herbs production, eco-system of herbs must be investigated before being processed at the midstream. Therefore, it therefore has positive effects on social and economic development and has commercial benefits for farmers. The higher herbal medicines sales at the downstream are, the higher income for farmers at the upstream.

Midstream: High-quality herbs processing The midstream can produce dried, clean and ready to use herbal medicines and generates income for farmers.

Downstream: Applications of herbal medicines in the future

Treating a patient using herbal medicines takes 3-6 months and 300 – 1,000 pills depending on the severity of disease which costs 1,800 – 6,000 Baht per person. The greater the number of users worldwide, the more social stability and revenue generated.

According to the results mentioned above, herbs production cycle is as follows:



SUGGESTIONS

PRACTICAL APPLICATIONS OF RESEARCH FINDINGS

1. The results showed that the hospital, by the Ministry of Public Health should publicize this herbal medicine wisdom for chronic liver failure treatment so that the patients who are suffering from illnesses have access to the services. In addition, other serious diseases should be diagnosed and treated with herbal medicine recipes.
2. Knowledge of chronic liver failure treatment should be shared with other hospitals that provide Thai traditional medicine services in order to create a treatment and services network. In addition, Thai traditional medicine recipes should be translated into other languages.
3. The results showed that knowledge of Thai traditional medicine was often ignored by modern medicine doctors. Therefore, the Ministry of Public Health should prepare the alternative medicine courses for modern medicine.
4. The applications of this local wisdom on herbal medicine recipes can be achieved using holistic medicine. Therefore, the elementary and secondary school curriculums should be created to provide youth with a better understanding of life and holistic health care using local herbs which will lead to quality human resources of the country. In addition, cultivation and propagation of herbs should be studied with scientific procedures.

5. Thailand will have Herbal medicine recipes for chronic liver failure treatment in combination with modern medicine which can reduce costs related to modern medicine, generate income for farmers from herbs collecting and farming and also create occupation. Thai pharmaceutical industry will obtain techniques for preparing extracts and quality control of raw materials and extracts. This will enhance and empower Thai pharmaceutical industry which can generate revenue for the private sectors and the country. In addition, further researches should be performed focusing on reducing production cost of farmers.

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