

CHAPTER 4 RESEARCH METHODOLOGY

The investigator uses the Delphi technique to design criteria to select samples of the study. The main objectives are to identify the strategic issues affecting the achievement of DHCCs mission according to the experts' perception and to summarize the internal factors which make DHCCs strong or weak. This study also intends to give appropriate recommendation in order for the DHCCs to achieve the expected mission.

Population and Sampling

Target population

The target population comprises public health administrators at both district and provincial levels and technical officers who involve in DHCC supervising in Khonkaen Province. There are 50 people all together.

Samples

The samples are selected by purposive sampling. Those selected experts must meet the following criteria and agree to participate in this study.

Criteria to recruit the samples :

1. Must be the experts from the Provincial Health Office who authorize and coordinate with DHCCs.
2. The directors of Community Hospitals in Khonkaen.
3. The chiefs of District Health Offices in Khonkaen.

THOMUS T.MACMILLAN suggested that a survey using Delphi technique needs a group of experts which composes of more than 17 persons. Previous researches indicated that a large number of experts can reduce the error ratio.

Procedure of choosing experts

1. Those who meet above criteria were on the list. (There are 60 persons who meet criteria)

2. The name list was distributed to Provincial Chief Medical Officer, Expert of Public Health and Expert of Preventive Medicine. Each one selected 50 names of 60 names on the list.

3. The investigator made appointment with those who were selected in order to explain the study and ask for participation.

4. Invitation letters were sent to all experts from Medical Faculty, Chulalongkorn University (annex B)

The group of samples in this study comprise 50 experts (annex A)

4.1 10 experts were from the Provincial Health Office in Khonkaen.

4.2 40 experts were the members of DHCCs in Khonkaen.

Observation and Measurement

The questionnaires in this study were constructed by the Delphi technique.

1. The investigator developed an initial questionnaire. The initial questionnaire was distributed to the group of experts. The experts independently generated their ideas to answer the first round-questionnaire and returned it back.

2. The investigator summarized the responses of the first round-questionnaire and then enclosed the result, as a feedback report, with the second round-questions to the experts group. Based on this feedback information the experts evaluated their earlier responses.

3. Based on the result from the second round-questionnaire, the investigator calculated Median and Interquartile Range. Then the results were again sent to the experts group.

The third round-questionnaire was considered a census of the experts' opinion and therefore, the results of this study.

Instrument

The instrument in this study was a questionnaire.

Delphi technique was used in this study. The questionnaires were constructed as follow :

1. The first round-questionnaire: Data from papers, texts and previous researches related to DHCC was used to shape the scope of questionnaire. The contents in this questionnaire were issues

concerning mission, structure, role and responsibilities, authority and performance of DHCCs. They were grouped into :-

- 1.1 Mission of DHCC.
- 1.2 Operational strategy of DHCC.
- 1.3 Co-ordination.
- 1.4 Following up, Supervising, Monitoring and Evaluating.
- 1.5 Authority of DHCC.

The questionnaire was designed to be an open-ended type. It was used to survey opinion of the experts in the fields mentioned above. Some experts were interviewed by the investigator while others will received the questionnaire from the mail. (annex C)

2. The second round-questionnaire: Contents from related papers, texts were analyzed together with the answers from the first round-questionnaire. Then the second round-questionnaire was constructed. This time a rating scale type (Likert scale) was used. The questionnaire was divided into 5 areas - 36 statements. (annex D)

3. The third round-questionnaire: Median and Interquartile Range of each statement in the second round-questionnaire were calculated. The third round-questionnaire included only the statements which Median is equal or great than 3.25. Each statement shows Median, Interquartile Range and previous answer of each expert in the second round-questionnaire.(annex E)

This time, each expert knew whether his/her opinion was the same or different from the group. The expert took this given information into consideration before answering the third round-questionnaire. He could either change or confirm his/her answer.

In case the answer which the expert confirmed was out of Interquartile Range, he/she was requested to give reasons.

Data Collection

Data collection is done by interviewing or self-administration.

Data Analysis

1. The content analysis of the first round-questionnaire was done by the investigator.

2. The second round-questionnaire was constructed based on content analysis of the first round-questionnaire and literature

reviewing. Likert scale on 5-point scale was used. Below are the meaning of each scale:

5 = The expert strongly agrees with that statement

4 = The expert agrees with that statement

3 = The expert is undecided with that statement

2 = The expert disagrees with that statement

1 = The expert strongly disagrees with that statement

3. Each answer of second round-questionnaire was summarized to show Median and Interquartile Range. Items in the third round-questionnaire were exactly the same as the second, except the previous answer of each expert, Median and Interquartile Range of the experts group were added.

4. The answers to the third round-questionnaire were presented in Median, Interquartile Range and Mode.

4.1 Interpretation of Median

4.51-5.00 = The experts strongly agree.

3.51-4.50 = The experts agree.

2.51-3.50 = The experts are undecided.

1.51-2.50 = The experts disagree.

1.00-1.50 = The experts strongly disagree.

4.2 Interpretation of Interquartile Range : (The difference between Q1 and Q3).

0.05-1.00 = The experts' opinion is strongly in accordance.

1.00-1.50 = The experts' opinion is less in accordance.

Over 1.50 = The experts' opinion is not in accordance

4.3 Interpretation of Mode

If the difference between Mode and Median was less than 1.5, it meant that the experts' opinion was in accordance.

4.4 Consideration of the experts' opinion in accordance

Both Interquartile Range equal to and less than 1.5 and Mode equal to and less than 1, it meant that the experts' opinion was in accordance