CHAPTER III

METHODOLOGY

Population and Sample

The population of this study was the backyard poultry farmers who lived in Suantaeng Sub-District, Muang District, Suphan Buri Province. There are 460 backyard poultry farmers in nine villages.

Sample Size

The sample size was calculated using the following formula.

$$n = \frac{Nz^2pq}{d^2(N-1)+z^2pq}$$

(Daniel, 2005)

n = Sample Size

N = Population Size

z = Reliability Coefficient at 95% Confident Interval = 1.96

p = Proportion of this Study (The previous research found that 79.5% of clients in Pathumthani Hospital had appropriate practices in prevention of Avian Influenza transmission (Sukvichai P. 2006).

q = 1-p

d = Absolute Precision of Difference = 0.05 or 5% (Acceptable Error)

$$n = \frac{460(1.96)^2(0.8)(0.2)}{(0.05)^2(460-1)+(1.96)^2(0.8)(0.2)}$$

n = 160

Sampling Technique

According the sample calculation, it was added 10% that the sample size was became 176. This research mainly used the simple random sampling technique. Total population of backyard poultry farmers was equal to 460 from nine villages in Suantaeng Sub-District.. Thus, the calculated sample size mentioned was 176. In addition, the proportion from each represented village was calculated and picked up the sample size by lottery to reach 176 samples. The sampling technique shows the diagram below.

Village	Number of Backyard Poultry Farmers	Sample Size
Village One	50	$n=\frac{50\times176}{460}$ $n=19$
Village Two	39	$n=\frac{39\times176}{460}$ $n=15$
Village Three	56	$n=\frac{56\times176}{460}$ $n=21$
Village Four	115	$n=\frac{115\times176}{460}$ $n=44$
Village Five	52	$n=\frac{52\times176}{460}$ $n=20$
Village Six	30	$n=\frac{30\times176}{460}$ $n=11$
Village Seven	46	$n=\frac{46\times176}{460}$ $n=18$

Village	Number of Backyard Poultry Farmers	Sample Size
Village Eight	28	$n = \frac{28 \times 176}{460}$ $n = 11$
Village Nine	44	$n = \frac{44 \times 176}{460}$ $n = 17$
Total	460	176

Sampling Technique

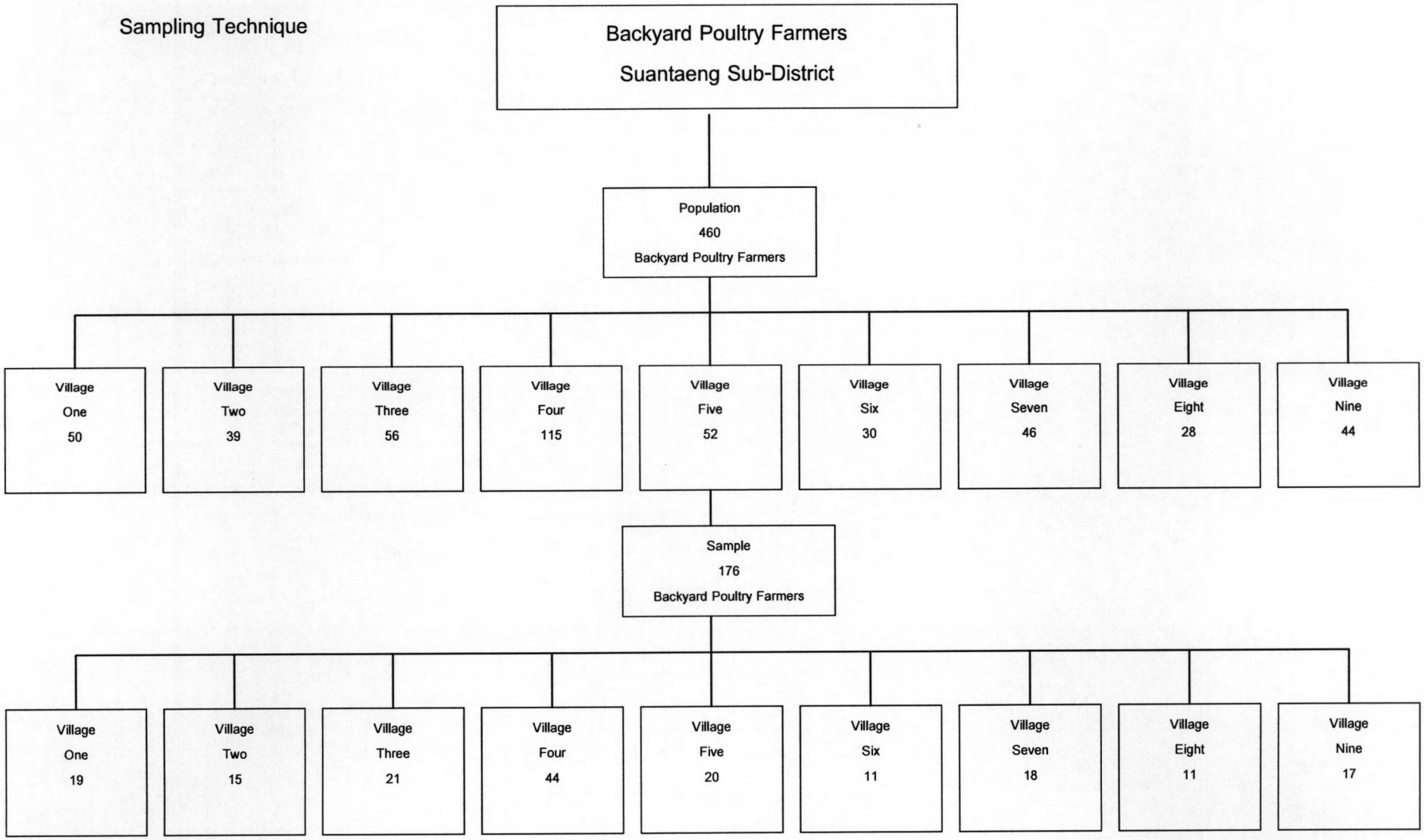

Figure 3: Sampling Technique

Research Instrument

The main instrument of this study was the modification of the questionnaire of Dr. Sukvichai P., The Director of Pathumthani Hospital (Sukvichai P., 2006), and some implication from review of relevant literatures.

The questionnaire consisted of four parts as follows:

Part I viewed general information; socio-demographic characteristics of the samples and native chicken information.

Part II showed the question of perceptions toward Avian Influenza. It covered perceived severity such as knowledge, symptom, transmission, severity and perceived susceptibility.

Part III was questioned to health information receiving toward Avian Influenza. It included source of information which the samples had received health information.

Part IV comprised of health behaviors toward Avian Influenza such as raising modes, cooking method and consumption of the chicken products.

Validity Test:

The modified questionnaire, as referred above, was submitted to three experts; a doctor, a veterinarian and a public health officer to check the accuracy and clarity of the questionnaire.

Reliability Test:

The pilot survey was conducted on 30 samples at Bangplama District. The results were tested to modify content and quantitative range of information of the questionnaire. In addition, internal consistency of rating scale was tested by Cronbach's alpha coefficient was equal 0.7.

Data Collection

1. The researcher submitted the formal letters to the Provincial Chief Medical Officers in Suphan Buri Province.
2. The researcher contacted the Staff of the Health Center, Community Leaders, and Village Health Volunteers in order to appoint the samples.
3. The researcher described the information and objectives of this study for the samples.
4. The samples were asked to participate in this study and signed inform consent.

Ethical Consideration

The research proposal was submitted to Health Sciences Ethical Approval Committee, Chulalongkorn University. The researcher explained the objective and the process of this study to all of samples. They could decide to participate or deny in this study. The researcher asked informed consent among voluntary subjects and they signed inform consent to join this research. The researcher kept the confidentiality on the participants' information. The results were reported in general.

Data Analysis

The data were analyzed by SPSS/FW.

1. The general information was presented by number and percentage.
2. Perceptions and health behaviors toward Avian Influenza were illustrated by number and percentage.
3. Health information receiving were shown as number and percentage.
4. The levels of perceptions and health behaviors toward Avian Influenza were categorized by mean score.

5. The relationship between perceptions and health behaviors were tested by Pearson's Product Moment Correlation Coefficient.

The scale of levels of perceptions ranged as follows;

Perception	Score of positive question	Score of negative question
Agree	3	1
Uncertain	2	2
Disagree	1	3

The scale of levels of behaviors ranged as follows;

Behavior	Score of positive question	Score of negative question
Always	2	0
Sometimes	1	1
Never	0	2

The cutting points of the levels of perceptions and health behaviors were categorized by (Suwanpong N. and Boonsuya C., 1999);

Low Perceptions/Poor Health Behaviors = $\overline{X}$ - S.D.
Medium Perceptions /Fair Health Behaviors = $\overline{X}$ ± S.D.
High Perceptions /Good Health Behaviors = $\overline{X}$ + S.D.

The total of score of perceptions toward Avian Influenza was ranged 15-45. The levels of perceptions toward Avian Influenza were interpreted as follows;

Levels of Perceptions	**Cut Point of Score**
Low	Less than 34.3
Moderate	Between 34.3 and 40.1
High	More than 40.1

The total score of health behaviors toward Avian Influenza was ranged 0-24. The levels of health behaviors toward Avian Influenza were identified as follows;

Levels of Behaviors	Cut Point of Score
Good	Less than 13.3
Fair	Between 13.3 and 18.7
Poor	More than 18.7