



CHAPTER III

RESEARCH METHODOLOGY

The research objectives to find the prevalence of smoking and factors influenced to smoking behaviors among secondary school and vocational school students in Phuket province. Information regarding the research is below explained.

3.1 Research Design

Cross sectional descriptive study.

3.2 Target populations and sample

1. Target populations were students who were studying in Mattayom 1-6 of all secondary schools and in vocational level 1-3 in all vocational schools registered under Phuket Educational Service Area Office both governmental and private institutes that were total 22,144 students.
2. Sample size in this research used formula to estimate size of sample group created by Daniel W.W., 1987 (cited in Silapasuwat et al., 1995).

$$n = \frac{Z^2 pq}{d^2}$$

n = Sample size

Z = Standard value, under normal curve which was valued compatibly with defined P-value = 1.96 if $\alpha/2 = 0.025$

p = Proportion of decision variable (dependent variable) used in the research were proportion (percentage) of youth smoking prevalence = 17.6% (0.18) (cited in Sroythong, 1999)

d = Errors values that were allowed to accept most = 0.03

Therefore, sample size in the research was

$$\frac{(1.96)^2 (0.18)(1-0.18)}{(0.03)^2} = \frac{0.56702016}{0.0009} = 630.0224$$

Numbers of sample size that should be selected was 630 cases

3. Sampling: This research used Stratified Random Sampling to select sample. Steps for this sampling were below: The research classified students by type of areas (rural and urban areas), type of education institute (government and private), type of education (secondary and vocational schools) and level of education as stated in figure 3.
4. Conducted simple random sampling in each stratified group and each educational level by drawing lots to select one secondary or one vocational school.
5. Simple random sampling was conducted in each secondary school or vocational school where was random as below:
 - 5.1 In secondary school level, only students in M.2 were selected and then simple random sampling was used to get 2 rooms of M. 2. If which selected school had only 1 room of M.2, there would be another simple random to get one more school and then used simple random sampling to get one room of M.2 of that school.

5.2 In higher level, only students in M.5 were selected and then simple random sampling was used to get 2 rooms of M. 5. If which selected school had only 1 room of M.5, there would be another simple random to get one more school and then used simple random sampling to get one.

5.3 In vocational level, only students in P.V.C 2 were selected and then simple random sampling was used to get 2 rooms of P. V. C 2. If which selected vocational school had only 1 room of P.V.C 2, there would be another simple random to get one more vocational school and then used simple random sampling to get one room of P.V.C 2 of that school. See figure 3.

Remark: P.V.C. = Por Wor Chor (Vocational level 2)

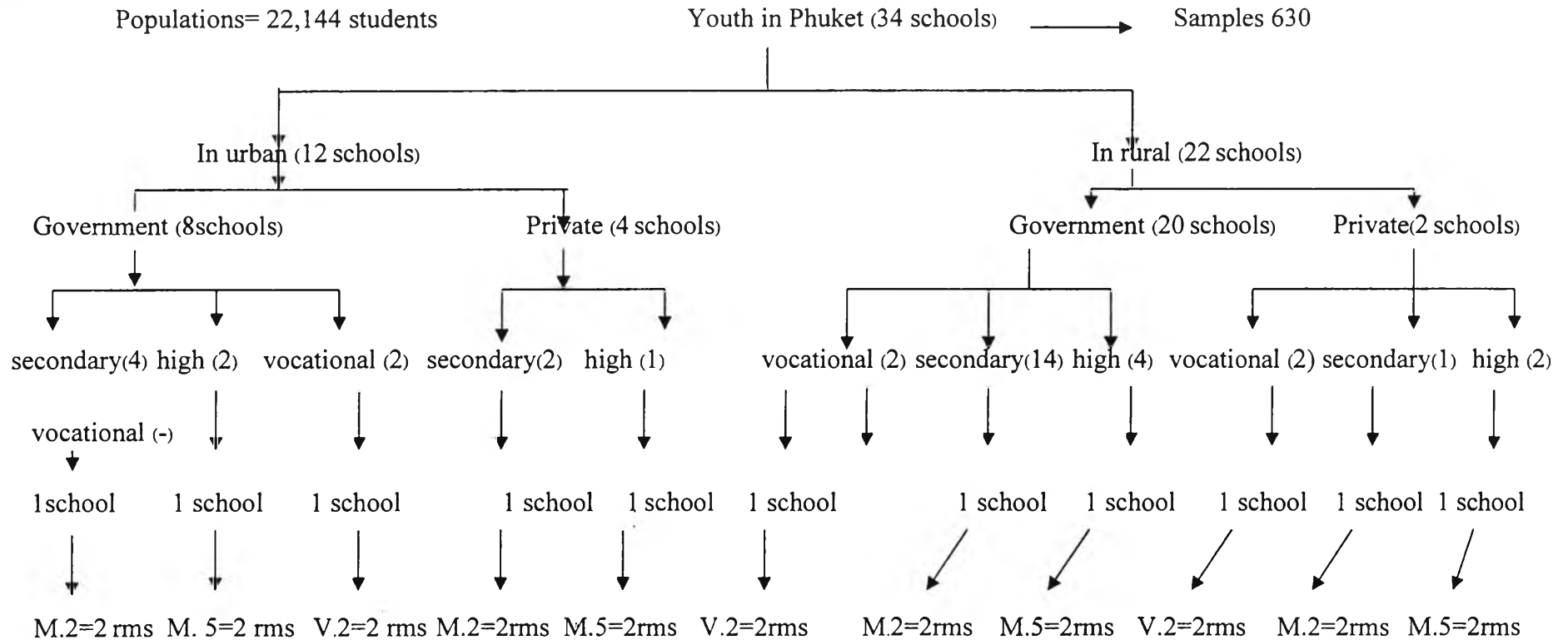


Figure 3: Procedures of Stratified Random Sampling

Remark:

1) V = Vocational Level

2) rms = rooms

3) Each room in each level of each school contained about 30-50 students (sample = 630)

3.3 Research instrument

Instrument used for the research to collect data were developed particularly to respond to the concept and objectives of the research. Therefore, self-administered anonymous questionnaires were used. The questionnaires constructed by the researcher and three experts commented on content validity and clarify of language and were tried out with 30 students who had the same characteristics as the sample before using. The Cronbach's Alpha coefficient was used to calculate the reliability of attitude and self esteem, which equal 0.92 and 0.80, respectively.

3.3.1 The questionnaires were divided into 5 parts

Part 1 Demographic characteristics: there were 6 questions related to:

Gender, Age, GPA, Level of educational institution, type of education

Part 2 Economic and Social characteristics: there were 3 questions related to:

Monthly income, accommodation while studying, marriage status of parents

Part 3 Environment characteristics: there are 5 sub-parts below

Sub-part 1: Questions about smoking behaviors of students and people who were closed to students (6 questions).

Sub-part 2: Questions about being influenced by media related to smoking (2 questions).

Sub-part 3: Questions about access to cigarette (2 questions).

Sub-part 4: Questions about price of cigarette (1 question).

Sub-part 5: Questions about law of cigarette (1 question).

Part 4 Attitude towards smoking:

This part contained 12 questions (cited in Kun-asa, 1998: 150). The reliability was calculated as 0.95. Multiple choices and Rating Scale were used. There were 5 choices to select and only one choice must be selected. All of 12 questions were positive attitude toward smoking behavior.

Points given were below:

Message with positive attitude definitions:

Choices	Points
Strongly agree	1
Agree	2
Not sure	3
Disagree	4
Strongly disagree	5

Message with negative attitude definitions

Choices	Points
Strongly agree	5
Agree	4
Not sure	3
Disagree	2
Strongly disagree	1

Score range of attitude toward smoking showed the total points were between 12-60 points and divided by numbers of questions, its results was true score range which was 1 – 5 points. Points were divided into 3 levels below:

Points between 3.51–5.00: A person had a high level score (negative attitude) toward smoking (**defined as well attitude**).

Points between 2.51-3.50: A person had a medium level score (neutral attitude) toward smoking (**defined as medium attitude**).

Points between 1.00-2.00: A person had a low level score (positive attitude) toward smoking (**defined as low attitude**).

Part 5 Self-esteem:

This part contained 15 questions (Kun-asa, 1998). The reliability was 0.85 by integrating questions from self-esteem assessment developed by Harry (Hare Self-Esteem Scale) which later Emery et al. studied about it (Emery et al., 1993). In total of 15 questions were used by using multiple choices measurement “Rating Scale” by Renis Likert was used. There were 5 choices, and only one choice must be selected. The 2nd, 4th, 6th, 11th, 12th and 13th of the questions were negative self esteem and the others were positive self esteem.(the 1st, 3rd, 5th, 7th, 8th, 9th, 10th, 14th and 15th).

Points given were below:

Messages with positive self esteem definitions:

Choices	Points
Strongly agree	5
Agree	4
Not sure	3
Disagree	2
Strongly disagree	1

Messages with negative self esteem definitions:

Choices	Points
Strongly agree	1
Agree	2
Not sure	3
Disagree	4
Strongly disagree	5

Score range of self-value showed that the total points were between 12-60 points and divided by numbers of questions, its results was true score rage which was 1-5 points. Points were divided into 3 levels below:

Points between 3.51-5.00: A person with high level score of self-esteem.
(defined as well self esteem)

Points between 2.51-3.50: A person with middle level score of self-esteem.
(defined as medium self esteem).

Points between 1.00-2.50: A person with low level score of self-esteem.
(defined as low self esteem)

3.4 Data collection

1. Explained the research objectives, implementation steps, period of the thesis , and work plan to the Office of Phuket Educational Service Area Office in order to get further supports.
2. Sent out a letter signature by Director of Thalang Hospital, requesting supports from selected and sampled secondary and vocational schools to collect data.

3. Prepared documents, equipments, and coordinated with relevant teachers who were on responsibility for the research.
4. Made appointments, informed dates and times, and other information to sample group for collecting data by the researcher.
5. Collected data from samples by arranging seats with enough distance between each person in order to not disturb between each of them. Before data collection, information about objective of the research, collaboration and advantages in providing true data, and data confidentiality were clearly made to the sample. Completed questionnaires were folded and put in the prepared box

3.5 Data analysis and statistic used in the research:

1. Descriptive statistics: To present several factors of samples, the research presented frequency, percentage, mean, and standard deviation.
2. Inferential statistics: To study about relationship between factors and smoking behaviors
 - 2.1 Used chi - square test to study about relationships between 2 variables that can be measured in term of nominal and ordinal.
 - 2.2 Used t - test to study about difference between 2 variables that can be measured in term of nominal, ordinal and scale. In addition, it also was used to test about difference of proportion, attitude, and self-esteem between smoking and non-smoking group.