

CHAPTER THREE

METHODOLOGY

This chapter describes: (1) the subjects, (2) the materials, (3) the procedures used in the collection and analysis of the data, and (4) the data analysis.

3.1 SUBJECTS

The population of this study is the people who have resided in 43 communities of Anusaowaree Sub-district, Bangkhen District, Bangkok. The total number of population in the sub-district was 100,813 (สำนักงานเขตบางเขน, ม.ป.ป.ช)

Community Type	No. of Community
1. Urban Community	14
2. Land Development Community	17
3. Crowded Community	9
4. Flat Community	2
5. Suburban Community	1
Total Amount	43

The researcher divided all communities into 5 types as classified by Bangkhen District Office (สำนักงานเขตบางเขน, ม.ป.ป.ค) – urban community, land development community, crowded community, flat community and Suburban community. However, only 4 of 5 community types were selected to collect the data, because the researcher could not enter military area where the flat community was located. Then the fishbowl sampling was applied to select 2 representative communities from each community type, this technique didn't apply with the suburban community because it had only one community. Finally, the accidental sampling technique was employed to select the sample.

Fifty questionnaires were distributed in each community; however, only 127 questionnaires were returned: 13 from urban community, 50 from land development community, 52 from crowded community and 12 from suburban community, respectively.

3.2 MATERIALS

The research instrument in this study was a self-administered questionnaire properly adjusted from those in the related studies. The questionnaire was divided into 3 parts. The first part comprised 5 closed-ended questions concerning demographic information of the respondents including the respondents' sex, age, occupation, educational level and monthly income.

The second part concerned the knowledge of respondents about solid-waste separation. It contained 13 closed-ended statements which were categorized into 2 aspects:

(1) Dried waste: 8 statements

(2) Biowaste: 5 statements

There were 3 answers provided in each question – Yes, No, Uncertain; respondents would have to choose only one for each statement.

The third part was designed to evaluate the solid-waste behavior of respondents. It was composed of 17 closed-ended questions to which the 3-point scale was applied to score each response.

3.3 PROCEDURES

3.3.1 Research Design

This research was a cross-sectional design to investigate the relationship between the solid-waste separation behaviors of people in Anusaowaree sub-district and the knowledge of waste-separation.

3.3.2 Data Collection

The self-administered questionnaires were used to gather primary data from sampling people in Anusaowaree sub-district during January – February 2009. The questionnaires were distributed every weekend; 2 weekends for 2 land development communities, another 2 weekends for 2 crowded communities, 1 weekend for urban community and 1 weekend for suburban community. The researcher applied an accidental sampling technique to get the data by doing fieldwork in selected communities, only houses where voluntary people were

available would be requested to fill in questionnaires by themselves and then the questionnaires were collected one hour later.

3.4 DATA ANALYSIS

The researcher analyzed the data obtained from the questionnaires by using the SPSS (Statistical Package for the Social Science) version 14.0. Both descriptive and inferential statistics were used to analyze the data as follows:

Part 1: Frequency Distribution and Percentage will be used to describe the general information (demography) of the respondents.

Part 2: Mean and Standard Deviation were calculated to find out the level of knowledge of solid-waste separation among people.

The statements in part 2 were divided into 2 groups. Each correct statement had one score. The correct statements under the dried-waste sub-component were statement nos. 1, 2, 4, 5, 6 and 7, while the wrong statements were nos. 3 and 8. Similar to biowaste statements, the correct statements were nos. 9, 11 and 12, while the wrong statements were nos. 10 and 13. Moreover, the wrong answers and uncertain answers had been also counted and reported the result in chapter 4.

Range of scores for each knowledge level was indicated below:

Range of Score	Knowledge Level
0.00 – 2.60	Very Poor
2.61 – 5.20	Poor
5.21 – 7.80	Moderately Good
7.81 – 10.40	Good
10.41 – 13.00	Very Good

Part 3: Mean and Standard Deviation were calculated to find out the level of the behavior of solid-waste separation among people.

In this part, the 3-point rating scale was applied to score each statement. The respondents were asked to rate their level of agreement with each statement about

different methods to separate solid-waste. The responses were rated at 3 levels and scored as follows:

0	=	Hardly
1	=	Sometimes
2	=	Always

Range of behavior levels were classified as follows:

Range of Score	Behavior Level
0.00 – 11.33	Hardly
11.34 – 22.66	Sometimes
22.67 – 34.00	Always

The total score of behaviors from 127 respondents was found out and then calculated for Mean (\bar{X}) and ranked in behavior level to interpret for its meaning.

Part 4: T-test and F-test

Hypotheses 1, 3 were tested by using T-test.

Hypotheses 2, 4 were tested by using One-way ANOVA (F-test) and Scheffé

Hypothesis 5 was tested by using Pearson's Correlation.