

CHAPTER 3

RESEARCH METHODOLOGY

Design of the Study

A descriptive correlation design was employed in this study to describe the levels of religiosity and health status among middle aged male Muslims, and also to examine the relationship between those variables.

Setting

This study was conducted in certain places in Jakarta. The Muslim population in Jakarta is about 85 percent of the total population of 7,471,866 according to the 2004 census (Balai Pusat Statistik, 2005; Indonesian Embassy-China, 2006). The subjects of the study were recruited in difference places through nine mosques. These mosques were located in the residents' housing and people who lived near the mosques usually came to perform congregation prayer. In all nine mosques the majority of prayer attendees were men. Every prayer time at least ten people attended the congregation prayer, and came from all the age groups: children, teenagers, adults and elderly. However, at the night prayers (Maghrib and Isya') usually more people came since they had arrived from their daily activities such as work. Every mosque has a group of people who manage and take care of the mosque and all the activities that take place there. There is also a leader of the management who is responsible for the regulations and administration such as asking permission needed for all activities in the mosque.

Population and Sample

The population of this study were all middle aged male Muslims who lived in Jakarta. Sample size was 126 Muslims, which was calculated by using power analysis

with the accepted minimum level of significance (α) of 0.05 and the expected power ($1-\beta$) of 0.80 which is the accepted minimum level of power for the test (Polit & Hungler, 1999). The effect size of 0.25 was estimated based on previous related studies (Francis *et al.*, 2004; Namara, Andresen, & Gellard, 2003).

The Samples were selected by a convenient sampling method and to control the homogeneity of the sample recruitment followed the inclusion criteria of:

1. Middle aged male Muslim (40 – 65 years old)
2. Jakarta residents
3. Those who did not have any serious illness or were not dependent on others, did not have moderate to severe symptoms of diseases, and had not being hospitalized
4. Were fully conscious and able to communicate in the Indonesian language

Instruments

1. Instrument

The instrument of the study comprised of three parts (1) the Demographic Data and Health Information Questionnaire, (2) The Islamic Involvement Questionnaire, and (3) The Health Status Questionnaire (Appendix B).

1.1 The Demographic Data and Health Information Questionnaire

This instrument consisted of eight items and was developed by the researcher to gather the data of subjects which included: age, educational background, occupation, family income, health history covering chronic disease and the risk of genetic sickness, and environment surrounding home.

1.2 The Islamic Involvement Questionnaire (IIQ)

The IIQ was modified from the Religiosity Orientation Scale (ROS) by Allport and Ross (1967); the Sahin - Francis Scale of Attitudes toward Islam (Sahin & Francis, 2003), and was also based on a review of the literature of Islamic principles. The original ROS was developed in Christian populations. It has 20 items which measures the intrinsic orientation (11 items) and 9 items to measure extrinsic orientation. Whereas, the Sahin – Francis Scale of Attitude toward Islam consists of 24 items, it is further derivation came from the original of the Francis Scale of Attitude toward Christian (Sahin & Francis, 2003). In this study, the measure of religious attitude dimension covered questions regarding intrinsic orientation and knowledge of Islam. Meanwhile, questions regarding dimensions of religious behavior were developed by the researcher based on a literature review of Islamic principles.

In the first version the researcher proposed 35 items for the IIQ with 21 items assigned to religious attitude (8 items of intrinsic motive scale, 8 items of attitude toward Islam, and 5 items of Islamic knowledge) and 14 items of religious behavior. However, following both the process of content validity by experts and pre-test study, the form was revised so that the new IIQ consisted of 26 items: 12 items of religious attitude intrinsic orientation and 14 items for religious behavior.

The religious attitude intrinsic orientation and religious behavior questionnaires, both were assessed on a five-point Likert scale. The value of both the attitude and behavior dimensions were categorised into low and high, which were determined using median score as the cut point. Scores above the median were classified as high and those below the median were low (Holt, *et al.*, 2005). The total score of the intrinsic questionnaire was summed from the score of all items, and ranged from 12 to 60. The

median score of this attitude dimension was 56 which was the cut point of categorisation.

Low = 44 – 56

High = 57 – 60

Meanwhile, items pertaining to religious behavior consisted of 14 items. The total score was summed from the score of all items, and ranged from 14 to 70. And the median score was 57 as the cut point.

Low = 41 – 57

High = 58 - 70.

These two dimensions of religious attitude intrinsic orientation and religious behavior were in advance used to classify subjects into four levels of religiosity: high religious, behavior only, attitude only, and low religious. High religious was the level of those who had high scores for both the attitude intrinsic orientation and behavior dimensions. For the level of behavior only, it was a categorization for subjects who had high behavior and low attitude intrinsic orientation. If the subjects had high attitude intrinsic and low behavior, then they were categorized as in the level of attitude only. Low religious was a level where the subjects had low scores for both the attitude and behavior dimensions. The categorization was adopted from Holt *et al.* (2005) as presented in the Table 2.

1.3 The Health Status Questionnaire (HSQ)

The HSQ was modified from the HSQ 2.0 (Yeomans, 2000) and the self assessment of Dossey *et al.* (2005), consisted of 15 items yielding general health perception (HSQ 1), physical functioning (HSQ 2 - 4), role physical (HSQ 5), role mental (HSQ 6), mental health (HSQ 9 – 12), social function (HSQ 7 & 8), and spiritual health (HSQ 13 -15).

Table 2

Categorization of the Level of Religiosity

Religious Dimension		Attitude Dimension: intrinsic orientation	
		High	Low
Behavior Dimension	High	High Religious	Behavior Only
	Low	Attitude Only	Low Religious

Each sub scale employed its own response format and was analyzed independently, so that they were not summed together to form an overall score. Scoring and interpreting the results followed this rule: 1) recoding response values by using the recoding version, 2) calculating the average of the recoded values for the multi-item scales by summing across the responses items and then dividing through by the number of completed items 3) higher scores indicate a better health status (Yeomans, 2000). Determination of the level of each sub scale, except for health perception sub scale, used mean and standard deviation as the cut point to categorize between low, moderate, or high. Meanwhile, health perception used the same categorization as in the questionnaire: excellent, very good, good, fair, and poor. Detail of the scoring is presented in Table 3 below.

2. Translation of the Instruments

The original instrument had been developed in English. In order to be used in Indonesian community it needs to be translated into Indonesian language. The translation process was done by three bilingual English – Indonesian speakers in the Faculty of Nursing at the University of Indonesia. The original instrument was translated into Indonesian by the first translator and confirmed the correctness and appropriateness of language used by other two bilingual English-Indonesian translators.

Table 3

Categorization of the level of health status

Sub Scale of Health Status	Level of each Sub Scale of Heath Status		
	Low	Moderate	High
Physical Functioning	16 – 47	48 – 89	90 – 100
Role Physical	25 – 39	40 – 97	98 – 100
Role Mental	0 – 49	50 – 97	98 – 100
Mental Health	35 – 45	46 – 75	76 – 100
Social Functioning	12.5 – 54	55 – 95	96 – 100
Spiritual Health	33.33 – 58	59 – 92	93 – 100

3. Validity and Reliability of the Instrument

The instrument evaluated for its content validity by three lecturers at the Prince of Songkla University (PSU) who mastering both health and Islamic religion sciences. They were two experts from the Faculty of Nursing and one expert was a physician and lecturer from the Faculty of Medicine. Each item was evaluated for appropriateness with its related construct. Modification and revision of the contents of the instruments were done following suggestions and recommendations of the experts.

Pre-testing study was performed twice to test the reliability of the Indonesian version using 20 independent subjects who had similar criteria as the final samples. The first pre-testing gave an unsatisfactory result, the alpha coefficients were about 0.50 for the Religiosity Questionnaire and 0.61 for the Health Status Questionnaire. Revision was done by omitting 9 of the 21 questions of the Religious Attitude Questionnaire that were too abstract and complicated as well as considering feedback from participants who suggested that the form was too long. The Religious Behavior Questionnaire was revised by changing three questions. However the total number of questions still

remained the same, 14 questions. The Health Status Questionnaire seemed confusing for the participants since the statements were long and there were many detailed instructions. The researcher found that some participants answered it even if the statement was just an instruction and not actually part of the questions. The fact that it was in the last part of the set of questionnaires, the participants might have felt tired from answering the previous long religious questionnaire part thus influencing how they answered the health status part. Revision was, therefore, omitting the detail instruction and making the sentences simpler.

The second pre-testing study was made among another independent group of 20 middle aged male Muslims in Jakarta. The results reached the desired alpha coefficient, religious attitude part was 0.78, religious behavior was 0.71, and health status questionnaire was 0.71, which were considered satisfactory and acceptable for a well-developed tool (Pollit & Hungler, 1999).

Data Collection

Data collection was performed during May to June 2007. The process of data collection followed these steps:

1. Preparation Phase
 - 1.1 Obtained permission for data collection from the committee of the Faculty of Nursing, PSU Thailand
 - 1.2 Asked for permission from the Governor of Jakarta to collect data in the community of a city in Jakarta area
2. Implementation Phase
 - 2.1 The researcher visited the mosques where the prospective subjects could be found and identified. Firstly, approached the manager of mosques, explaining

the study and asking permission and help from them to gather data from subjects who prayed in those mosques and had agreed to participate in this study.

2.2 The manager of the mosques' informed to the prayer attendees about the researcher and her study activities, and asked for participating in this study.

2.3 The researcher explained to the subjects who volunteered involvement in this study about the data collection process and also the ethical considerations.

2.4 The researcher then asked them to complete the questionnaire and checked the completion of the questionnaire after the subjects had finished answering them.

Ethical Consideration

The researcher briefly explained who she was and informed participants that she had permission to collect data, obtained from the Ethical Committee for Research in the Faculty of Nursing, PSU and from the Governor of Jakarta. Then, the researcher explained the purposes of the study to the subjects and also the expectation from their participation in this study. The subjects received an explanation about the voluntary nature of their participation and data confidentiality. They were also informed about their rights to discontinue participation in the study for any reason without fear of any negative consequences to them. Furthermore, the subjects were informed how to complete the questionnaires and how long it might take.

Data Analysis

The analysis included descriptive statistics and inferential statistics. Descriptive statistics including frequencies, percentages, means, and standard deviations were used to present the description of the subjects regarding demographic data, level of religiosity, and level of health status. Pearson's product-moment correlation coefficients were used to explain the relationship between religiosity and health status.