CHAPTER III

METHODOLOGY

3.1 Study site

This study was carried out in Takuapa and Kuraburi Districts of Phangnga

Province, Southern Thailand.

3.2 Study population

The study population was working age group of both female and male

Myanmar migrant workers from rubber plantation, fishing boats, construction sites,

and so forth in Takuapa and Kuraburi Districts, Phangnga Province. Nearly seventy

percent of the total numbers of Myanmar migrant workers, according to data from the

World Bank Report 2006, are at the age of highly productive age from 15 to 59 years.

According to IOM (IOM, 2005), an estimated number of 22,284 Myanmar migrant

workers were in Phangnga Province.

3.3 Study design

The study design was descriptive and analytical cross sectional study. This

design, according to Ranjit Kumar, is best suited to studies aimed at finding out the

prevalence of a problem, situation, phenomenon, attitude or issue, by taking a cross-

section of the population. The question tools contained such independent variables as

questionnaires on socio-demography, on interviewee's social relationship, on

interviewee's sense of security and on workplace situation, and, such dependent

variable as structured Medical Outcomes 12-item Short Form Health Survey (SF12, Version 2).

However, there are many instances proving that a four-week recall period is inappropriate, particularly in studies that require relatively short intervals between follow-up assessments because changes in health status occur more rapidly. The acute form of the SF 12, however, was designed for applications in which health status would be measured weekly or biweekly. It was created by changing the recall period for six SF 12 scales (Role Physical, Bodily Pain, Vitality, Social Functioning, Role Emotional, and Mental Health) from "the past four weeks" to "the past two weeks". Two SF 12 scales, Physical Functioning and General Health, do not have a recall period, so are identical across acute and standard forms (Ware at el., 1996). This study used the recall period of two weeks for getting more sensitive recall period.

3.4 Sample size

The below formula, provided by Daniel, will be used for calculating sample size (Daniel, 2005).

$$n = \frac{Z^2 (1\text{-}\alpha / 2) (p^*q)}{d^2}$$

$$= \frac{(1.96)^2 (0.89) (0.11)}{(0.05)^2}$$

$$= 150$$

Therefore, the total sample size is 150

Where   n = minimum sample size

α = level of significance (0.05)

Z^2 (1-α / 2) = critical value for 95% confidence level (1.96)

p = proportion of targeted population estimated to experiences of stress,

depression and anxiety = 89 % = 0.89 (prevalence of psychological

disorders among Myanmar migrant workers is 89%, according to data

from Raks Thai Foundation's PHAMIT Project.:Migrants' Health and

Vulnerability to HIV/AIDS in Thailand, 2005)

q = (1-p) = (1-0.89) = 0.11

As the prevalence included psychological condition only, another half of the total sample size (50%) for physical condition was included in the calculation to cover both conditions of physical and mental. Also, an additional 10% for losing sample was taken into consideration and eventually made the total sample size to 240. Totally, 241 samples were collected in the study.

3.5 Sampling method

Among the total eight districts of Phangnga Province, Takuapa and Kuraburi Districts were selected purposively. Cluster sampling method was applied for data collecting. There are eight sub-districts in Takuapa District and four sub-districts in Kuraburi District. Random sampling was utilized in these sub-districts and samples of both men and women from 15 to 49 years were collected. If the samples in one sub-district were insufficient, another sub-district was included until the required number

met the sample size. Totally, 3 sub-districts in Takuapa and 1 sub-district in Kuraburi were included in the study.

3.5.1 Inclusion criteria

The researcher determined the inclusion criteria as follows:

1. Migrant workers from Myanmar in Takuapa and Kuraburi Districts

2. Able to speak Myanmar language fluently with no hearing problem

3. Have already stayed in this community for at least six months

4. Willing to cooperate with researcher and participate in the study

5. Must be at the age between 15 and 49 years by the time of interview

3.5.2 Exclusion criteria

The researcher defined the exclusion as follows:

1. Have difficulties in speaking Myanmar language and hearing

2. Stayed less than six months in this community

3. Reluctant to participate in the study

4. Those less than 15 years old or older than 49 years during the interview

3.6 Validity and reliability

3.6.1 Validity

Validity is the ability to measure what it is designed to measure. The content and face validity were checked by experts after constructing the draft questionnaire.

3.6.2 Reliability

Reliability was pre-tested on the similar population in Samut Sakorn Province on 24 Myanmar migrant workers of both genders. The Cronbach's alpha coefficient in pre-test was 0.7.

3.7 Data collection

The data collection process of this research was done as follows:

1. The researcher submitted the letter of request from the Dean of the College of Public Health, Chulalongkorn University, to the Director of Foundation of Education and Development (FED) and the International Organization for Migration at Takuapa District, Phangnga Province, Thailand for obtaining the required data and asking the permission to collect data from the field.

2. The researcher contacted and coordinated with the staff from Foundation of Education and Development (FED) during data collecting.

3. The researcher collected the data from the respondents in each studied site by face to face interview under a place in good privacy. After that, the completeness of the questionnaires was checked after each interview.

4. Data collection continued until the complete information from all samples was collected. The questionnaires were then verified for data analysis.

3.8 Data analysis

Before entering data into computer, all the questionnaires were coded and double-checked. After reviewing the data for completeness, they were then processed for statistical analysis by using Statistical Package for Social Sciences (SPSS). Descriptive analysis of frequency, mean, standard deviation and percentage were used for analyzing data. For analytical data analysis, Mann-Whitney test and Kruskal-Wallis test were applied for test of association between independent variables and dependent variable because the data were not normally distributed. Furthermore, Mann-Whitney test was to test in two independent groups, whereas Kruskal-Wallis test was to test more than two independent groups.

In SF 12 questionnaire, the highest score for each item was 5, with the exception of two questions on physical functioning because it has only three scales, and the lowest was 1 with higher score indicating better health related quality of life. The highest score that every single respondent can get was 56 and the lowest was 12. In calculating the SF 12 score, scores from each question answered by individual respondent was divided by the possible maximum scores and then summed up those scores to create a standard score for every single respondent.

Table 3.1: Independent variables of socio-demographic characteristics

Conceptual variable	Operational variables	Measurement scales	Level of measurement	Measurement methods
Socio-demographic factors	Gender	Nominal	2 scales	Questionnaire
	Age	Ratio	In years	~
	Ethnicity	Nominal	6 scales	~
	Marital status	Nominal	4 scales	~
	Current migrants status	Nominal	2 scales	~
	Educational achievement	Ordinal	4 scales	~
	Length of staying in the community	Categorical	in months	~
	Type of occupation	Nominal	11 scales	~
	Monthly income	Ratio	5 scales	~
	Working days per week	Categorical	in days	~
	Working hours per week	Categorical	in hours	~
	Days-off in a week	Categorical	in days	~
	Number of family members in the community	Categorical	3 scales	~
	Number of children in the community	Categorical	4 scales	~
	Number of dependents in the community	Categorical	4 scales	~
	Thai language skill	Categorical	4 scales	~

Table 3.2: Independent variables of social relationship with people

Conceptual variable	Operational variables	Measurement scales	Level of measurement	Measurement methods
Social relationship with people	Talk with other people	Categorical	4 scales	Questionnaire
	Consult with people	Categorical	5 scales	~
	Activities in leisure time	Categorical	6 scales	~
	Friendliness of people	Nominal	3 scales	~

Table 3.3: Independent variables of sense of insecurity in community

Conceptual variable	Operational variables	Measurement scales	Level of measurement	Measurement methods
Sense of security in community	Safety at home	Nominal	3 scales	Questionnaire
	Personal security	Nominal	3 scales	~
	Things most concern/s	Categorical	7 scales	~

Table 3.4: Independent variables of workplace situation

Conceptual variable	Operational variables	Measurement scales	Level of measurement	Measurement methods
Workplace situation	Relationship with employer/supervisor	Nominal	3 scales	Questionnaire
	Job satisfaction	Nominal	3 scales	~

Table 3.5: Dependent variables of SF 12

Conceptual variable	Operational variables	Measurement scales	Level of measurement	Measurement methods
Health related quality of life:				
General health	self-perceived health related quality of life	Ratio	5 scales	Questionnaire
Physical functioning 1	sweeping floor, moving a table	Ratio	3 scales	~
Physical functioning 2	walking for a few minutes	Ratio	3 scales	~
Role physical 1	accomplished less due to physical health	Ratio	5 scales	~
Role physical 2	limited kind of work due to physical health	Ratio	5 scales	~
Role emotional 1	accomplished less due to emotional problems	Ratio	5 scales	~
Role emotional 2	less careful than usual due to emotional problems	Ratio	5 scales	~
Mental health 1	felt calm and peaceful	Ratio	5 scales	~
Mental health 2	felt downhearted and depressed	Ratio	5 scales	~
Vitality	have a lot of energy	Ratio	5 scales	~
Social functioning	social activities	Ratio	5 scales	~
Bodily pain	pain interferes normal work	Ratio	5 scales	~

Table 3.6 Items description and domains in SF 12

SF 12 domain	Items description
General Health	Health in general
Physical Functioning 1	Moving a table, sweeping floor
Physical Functioning 2	Walking for a few minutes
Role Physical 1	Accomplished less due to physical health
Role Physical 2	Limited in kind of work due to physical health
Role Emotional 1	Accomplished less due to mental problems
Role Emotional 2	Less careful than usual due to mental problems
Mental Health 1	Felt calm and peaceful
Mental Health 2	Felt downhearted and depressed
Vitality	Have a lot of energy
Social Functioning	Social activities interfered by physical and emotional problems
Bodily Pain	Pain interferes normal work

3.9 Ethical consideration

The objectives and aims of the study were mentioned to the respondents before the interview was taken place. Oral consent as well as written consent were asked from every single respondent who are willing and enthusiasm to participate in the study. Moreover, all the respondents were granted a place well in privacy and their names were kept anonymously as well so that they cannot be traced back to the respondents. The respondents, however, can terminate the interview at any single point of time if they felt inconvenient to the questionnaire or their interest had run out.