



CHAPTER III

Research Methodology

3.1. Study Design

The study design was the research and development design (Action Research) which contain three phases as:

Phase I: Situational analysis of reproductive health situation, it was need assessment among Myanmar migrant adolescent and youth in Samut Sakorn Province, Thailand by documents review and in-depth interview of key informants and stakeholders. The objective of the study was to assess the information for the situation of Myanmar migrants focusing specifically on adolescent age (15- 19 years old) and youth age (20-24 years old) in Samut Sakorn Province by key informant interviews. The empirical evidence and the set of recommendations resulting from this analysis were served as basis for developing PEARL MODEL intervention to reduce the adolescent unintended pregnancy among Myanmar migrants in Samut Sakorn Province.

Study period was in May 2010. Inclusion criteria were 15-24 years old Myanmar migrants, 15 – 19 years aged group represented for adolescent and 20-24 years old represented for youth, both Female and Male, marriage or single, both registered and unregistered of work permission in Samut Sakorn Province, and can communicate with Myanmar language. A set of topic guidelines were prepared beforehand for each respondent type as well as for the in depth interview. The identification and recruitment of respondents was carried out in conjunction with the Provincial Migrant's Health Office, Samut Sakorn Province through the networks and knowledge of existing undocumented migrants according to inclusion criteria. Qualitative research method was

applied among 30 Myanmar migrants by in-depth interviews. Myanmar migrants were selected by random sampling in the aged group 15 – 24 years old. In addition, stakeholder in-depth interviews were also conducted with government officials from Migrant's Health Office, Provincial Health Office), local NGOs and education class teacher. Where appropriate, and with informed consent, the interviews were recorded, 45 minutes per person, in their home or office and appropriate visual techniques was identified.

For data analysis, NIVO version 9 qualitative analyzing management soft ware was used. A set of coding emerging from the interviews and responding to the questions raised above were identified; content analysis will then be carried, searching for these themes in the data.

Phase II: Model Development of PEARL programme to prevent unintended pregnancy among Myanmar migrant adolescent and youth, Samut Sakorn Province, Thailand. This phase was classified into 2 steps as follows:

Step I: Model Development and content validity (Planning of the PEARL the programme) using data from situational analysis and validity and reliability test of instruments.

Step II: Implementation of PEARL programme using a Quasi-experimental study, pretest posttest design with non equivalent group.

Phase III: Programme evaluation on immediate and intermediate improvement. This phase was classified as:

(i) Immediate outcome evaluation:

Knowledge on puberty, adolescent and youth pregnancy, pregnancy prevention, and induced abortion (after 1, 3, 6 months)

Attitude towards unintended pregnancy prevention, induced abortion, norm on safe sex and induced abortion, and intension to refuse sex and to use condom in the next 6 months (after 1, 3, 6 months)

(ii) Impact Evaluation: Contraceptive practice rate (after 6 months)

Unintended pregnancy rate (after 6 months)

Induced abortion rate (after 6 months)

Table 13 Study design among the groups and timing of assessment

PEARL group: → O₁₀ → X₁ ---- O₁₁----- O₁₃-----O₁₄

Teaching only group: →O₂₀ → X₂---- O₂₁----- O₂₃-----O₂₄

Control group: → O₃₀ ----- O₃₁----- O₃₃-----O₃₄

X₁: Intervention in PEARL group (Teaching plus PVs facilitation)

X₂: Intervention in Teaching only group (Teaching only)

O₁₀: Pretest for KAP in PEARL group

O₁₁: Posttest 1 month for KAP in PEARL group

O₁₃: Posttest 3 months for KAP in PEARL group

O₁₆: Posttest 6 months for KAP in PEARL group

O₂₀: Pretest for KAP in Teaching only group

O₂₁: Posttest 1 month for KAP in Teaching only group

O₂₃: Posttest 3 months for KAP in Teaching only group

O₂₆: Posttest 6 months for KAP in Teaching only group

O₃₀: Pretest for KAP in control group

O₃₁: Posttest 1 month for KAP in control group

O₃₃: Posttest 3 months for KAP in control group

O₃₆: Posttest 6 months for KAP in control group

3.2. Site of the study (Phase II and III)

This study was performed in Samut Sakorn Province, located 30 kms from Bangkok. The province occupies a total area of 872 square kilometers and is administratively divided into 3 districts: *Muang Samut Sakhon*, *Krathum Baen*, and Kokrak. It is a major fishing port. The districts are further subdivided into 40 communes (tambon) and 288 villages (muban). The biggest one is Muang district. Most of the registered migrant workers live in Muang Districts and of which 97% are Myanmar migrants.

The three groups of study (intervention group I PEARL, intervention group II UPP education only and control group no intervention) were carried out at Muang district, Kokrak and Krathum Baen district.

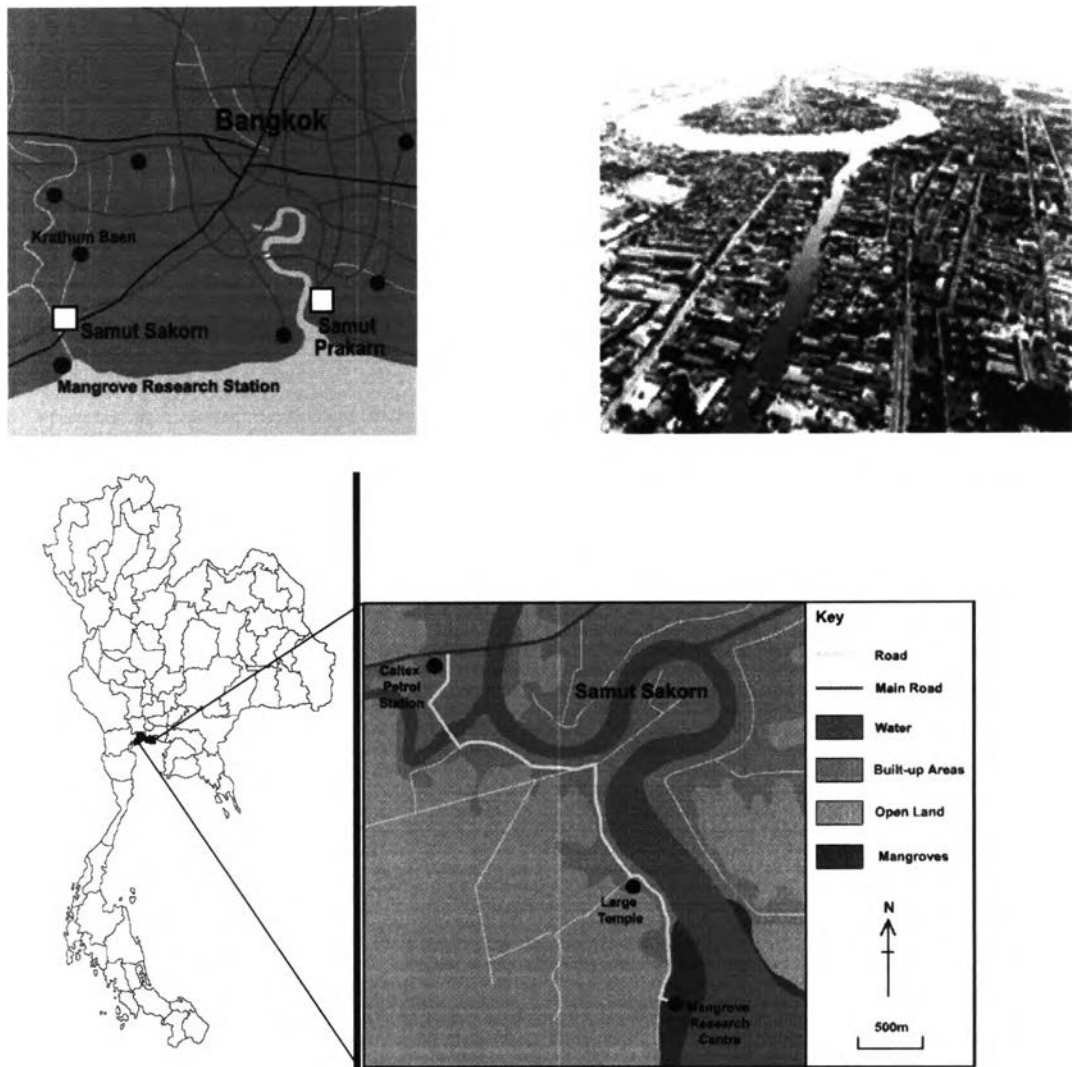


Figure 6 Map of Thailand highlighting Samut Sakorn province

3.3 Population, sample, sample size and sample selection (Phase II and III)

3.3.1. Study population

The study population for this study was Myanmar migrants both female and male, 15-24 years of age both registered and unregistered living in Samut Sakorn province, during the study period, from 17 July 2010 to 22 January 2011. The researcher classified them according to their community, into 3 studied groups as an experimental group I

(Received PEARL programme), an experimental group II (Received Teaching only), and a control group (no intervention).

Inclusion criteria: (For all 3 studied groups)

1. Myanmar migrant age between 15-24 years with homogeneous in socioeconomical status and occupation
2. Male or female, married or single
3. Registered or unregistered of work permission in Samut Sakorn Province
4. Constantly stay in Samut Sakorn province during the study period (at least six months)
5. Willing to participate in the study by signed the informed consent form
6. Mentally fit for the study

Exclusion criteria: during an experimental period (For all 3 studied groups)

1. Past history of attended in reproductive health education training such as HIV/AIDS, family planning etc.
2. Withdrawn from the study with any reasons
3. Incomplete participation to the programme and incomplete answer on the questionnaire

3.3.2. Sample Size Calculation

The estimated sample size was calculated by following formula: (Comparisons of two means)

$$M = \frac{(Z\alpha + Z\beta)^2 (\sigma_1^2 + \sigma_2^2 / c)}{(\mu_1 - \mu_2)^2}$$

$$= \frac{(1.96 + 1.28)^2 (2.31^2 + 2.16^2)}{(10.22 - 7.98)^2}$$

$$= 21 + \text{expected missing follow up (11)}$$

= 33 (per each group), (Sample size requirement is at least equal to 21 but in this study researcher increase the sample size to 33 participants in each group to increase validity of the study results)

$(\mu_1 - \mu_2)$ = Difference between means of intention to use condom before and after sex education (effect size) (Thato et al, 2008), studied in Thailand among the school adolescent Thai.

σ_1, σ_2 = Standard deviations

C = Ratio of the sample size of the two groups, $C = n_2 / n_1$ and $n_1 = n_2 = n_3 = m$

n_1, n_2 = Sample size of group 1 and of group 2

Z = critical value for 95% confidence interval

$\alpha = 0.05$

$1 - \beta$ (power) = 90%

$Z\alpha = 1.96$ (Type 1 error of 2-sided test)

$Z\beta = 1.28$ (for power of test equal to 90%)

3.3.3 Sampling technique

1. Announcement for participation in PEARL program through provincial health office and criteria of participant was mentioned in announcement. (Myanmar migrant Age between 15-24 years, Male or female; Registered or unregistered, can constantly stay in Samut Sakorn province during the study period (six months), willing to participate in the study, mentally healthy and can read and write Myanmar language).

2. One Peer volunteer supervisor was selected by researcher and provincial health office, one Myanmar migrant staff working in Myanmar migrant health system development office, Samut Sakorn provincial health office for 5 years, he graduated Bachelor of Nursing from Thailand, willingness to participate in this study.

3. Upon the number of application in three sites of study (Golden Price community, Krathum Baen community and Krokot community), out of 40 to 50 participants from each group, those entitle the inclusion criteria, 33 participants were selected by researcher and peer volunteer supervisor according to simple random sampling in each three study groups. In the group with peer volunteers, 36 participants were selected and along with three peer volunteers were selected by their group members i.e one out of twelve peer participants (bottom up approach).

3.4 Research Instruments

3.4.1.1 Questionnaire to assess knowledge, attitude, norm, intension and sex behavior

It can be classified into four sections as;

Section I .Socio-demographic Characteristics

Section II. Information related to adolescent and youth unintended pregnancy prevention and sexual health such as knowledge on puberty (1-17 questions), knowledge on adolescent and youth pregnancy (1-5 questions), knowledge on pregnancy prevention (1-17 questions), and knowledge on induced abortion (1-5 questions). The questions had to answer “Yes”, “No”, and “Don’t know”. Scoring was done as correct= 1, wrong=0, don’t know=0, and missing=0.

Good level: Scores of 80-100%

Moderate level: scores of 60-79%

Low level: scores of 0-59% (Lacharaj S, 1994)

Section III: Motivation for unintended pregnancy prevention included Attitude, norm and intension for safe sex and induced abortion. Those questions were asked by 5 likert scale as strongly disagree, disagree, neutral, agree, and strongly agree. Detail of those questions was attitude towards unintended pregnancy prevention (1-19 questions), attitude towards induced abortion (1-5 questions), norms for safer sexual behavior and induced abortion (1-6 questions), intention to refuse sex in the next six months (1-6 questions), and intention to use condoms in the next six months (1-2 questions). Scoring was giving as follow: for positive statement, strongly disagree=1, disagree=2, neutral=3, agree=4, and strongly agree=5. As for negative statement, strongly disagree=5, disagree=4, neutral=3, agree=2, and strongly agree=1.

Section IV: Sex behavior and sex experiences

3.4.1.2 Validity and Reliability of questionnaire

Content validity: The researcher used self-administered questionnaire that was developed by researcher according to IMB model (Fisher & Fisher, 1998) and participatory learning, and revised by the thesis's committee. After that the questionnaire was revised and it was submitted to two experts assess its' contents validity. Recommendation from the experts were collected and used to revise and upgrade the study measurement tool accordingly.

Reliability: The revised questionnaire was used as the pre-tested among 30 adolescent (15-24 years) Myanmar migrants in Samut Sakorn and tested reliability by Cronbach's Alpha's coefficient, and if it is less than 0.7, was revised the questionnaire again until ≥ 0.700 . The reliability tested by Cronbach's Alpha's coefficient was as follows:

Knowledge on puberty: 0.757,

Knowledge on adolescent and youth pregnancy, prevention of pregnancy and induced abortion: 0.841,

Attitude towards unintended pregnancy prevention, induced abortion, and norms for safer sexual behavior and induced abortion: 0.755,

Intention to refuse sex and use condom in the next six months: 0.760; respectively.

3.4.2 Validity and reliability of intervention tool (PEARL training manual guide)

The researcher was used "PEARL training manual guide" that was developed by researcher according to participatory learning (David A Kolb, 1991) and life skills

training (WHO, 1994) and some of them were applied from other's researches that have done on HIV prevention intervention. After that the manual was submitted to three experts to assess its contents validity. Recommendations from the experts were collected and used to revise and upgrade the study tool accordingly. Moreover, the revised "PEARL training manual guide" was translated into Myanmar language and was conducted pilot study among 10 Myanmar migrants in Samut Sakorn for appropriateness, sequential and smoothness to reach the objectives. Finally, the manual was revised according to weakness found in pilot study.

The "PEARL training manual guide" was containing 9 modules, 4-5 activities are included in each module and it takes 2 hours for each module. The module number 2 and 3 are only for 3 peer volunteers and 1 peer volunteer supervisor. After selecting these four persons, researcher taught them all 9 modules. At the end of all activities and modules there are evaluation sections by check list, questions and answers.

Module 1: Introduction to PEARL training

Module 2: Identifying participants, Collecting, Analyzing, and Using Monitoring

Data, Developing a Monitoring and Evaluation Work Plan

Module 3: Communication Skill and Problem Solving Skill

Module 4: Puberty (Anatomical and Physiological Changing of Human

Reproductive Organs)

Module 5: Adolescent Pregnancy and Unintended Pregnancy

Module 6: Sexually Transmitted Infection(s), HIV/AIDS

Module 7: Abstinence and Natural Family Planning Methods

Module 8: Other Contraceptive Methods (Barrier, Temporary, Permanent and

Emergency pills)

Module 9: Visit to Provincial Hospital and ANC Clinic

3.5 Peer Volunteers and Peer Volunteers' Supervisor

3.5.1 Peer Volunteers

Selection criteria:

1. At least high school level education
2. Age between 18 to 24 years
3. Male or Female
4. Single or married
5. Registered migrant
6. Willing to participate in the project and was selected by participant adolescent and youth (one in 11 participants, during the introduction module “selection of peer volunteers section”)
7. Preference on past experience with NGO or Provincial health office

Roles and responsibilities:

1. Serve as a facilitator within the 10 adolescent participants for sharing information and awareness rising by daily telephone counseling and monthly small group counseling by case scenarios.
2. Serve as a facilitator between researcher, peer volunteer supervisor and group members to clarify information and better decision making on safe sex behavior.
3. Serve as a tutor within the migrant group during the lecture given by me.

4. Give the special attention on risk person within the group such as those married, having boy friend-girl friend, and working at massage room and sex worker. Provide frequent meeting with them for increase awareness on safe sex and/or abstinence.

Incentive of PVs:

1. Travel allowance
2. Free minor health care for six months, will arrange by peer volunteers' supervisor
3. Certificate was given by joint venture with College of Public Health Science, Chulalongkorn University and Samut Sakorn Provincial Health Office upon satisfaction after the project. This certificate can be useful for her/his future job such as job carrier from international or National NGOs' migrant health projects.
4. Competition of satisfaction on job performance by performance checklist, peer volunteer supervisor's feedback, monthly feedback from facilitated participants, final post-test score (after six months) of the facilitated participants. We gave the grant of first price (5,000 baht), second price (3,000 baht) and third price (2,000 baht) for these three PVs.

3.5.2 Peer volunteer supervisor

Selection criteria:

1. Education: at least passed high school final examination. Bachelor degree will be preferable.
2. Work experience: at least two years working in Myanmar migrant reproductive health project either provincial health office or NGOs
3. Female or male

4. Registered migrant
5. Married or single
6. Willing to participate in the project for one year
7. Selection: researcher, was consulted and approved by consultants and provincial health officer

Roles and responsibilities:

1. Serve as a supervisor on 3 peer volunteers for sharing information, providing advice if they had some issue among their groups, monitoring the monthly data management, and planning and discussion on monthly small group counseling by case scenarios.
2. Serve as a coordinator among researcher, provincial health office and peer volunteers to clarify information and better project management.
3. Serve as a tutor during the lectures given by researcher to peer volunteers and participants.

Incentive of peer volunteer supervisor:

1. Travel and other allowances
2. Free minor health care for six months, will arrange by researcher
3. Certificate was given by joint venture with College of Public Health Science, Chulalongkorn University and Provincial Health Office upon satisfaction after the project. This certificate can be useful for her/his future such as job carrier from international or National NGOs' migrant health projects.

Monitoring and evaluation of PVs and peer volunteer supervisor (Job performance)

1. Daily checklist for job performance
2. Creative thinking of developing new scenarios related to seven modules based on 10 life skills (WHO, 1994) especially Critical thinking- Creative thinking; Problem solving- Decision making; Effective communication - Interpersonal relationship skills and Self-awareness – Empathy.
3. Monthly feedback from facilitated participants and peer volunteer supervisor
4. Monthly small groups activities' reports
5. Participant's monthly practice checklist
6. Monthly feedback from researcher

3.6. Data analysis (Phase I)

For data analysis, NIVO version 9 qualitative analyzing management soft ware was used. A set of coding emerging from the interviews and responding to the questions raised above were identified; content analysis will then be carried, searching for these themes in the data.

Data analysis (Phase II and III)

Data Entry, Editing and analysis

After the data collection process, all data was edited and verified before analysis. All data was entered into the Epidata version 3.1 program and then transferred into statistical software. Data was analyzed by SPSS 17.0 Statistical software. Then, data analysis was done by applying descriptive and inferential statistics. To compare demographic characteristics among the groups (Test of group differences) was analyzed by one-way ANOVA and Chi-square test. To test

intervention effects (before-after test) within group by Paired *t*-test. All the sum of scores was tested by normal distribution by kolmogorov-smirnov test. To compare intervention effects among groups was analyzed by one-way ANOVA and general linear model, repeated measures. P-value was at 0.05.

3.7. Ethical consideration

This study was submitted approval for ethic issue by the Ethical Review Committee of the Chulalongkorn University. The Ethical Review Committee for research involving human research subjects, Health Science group, Chulalongkorn University, Thailand, had approved and the study title number is 038.1/53.

3.8. Rights of the respondents and Confidentiality: Anytime they can stop from the study if they want to. Confidentiality of all personal data was keep secret and do not mention in presentation of results.