CHAPTER IV

RESEARCH METHODOLOGY

4.1 Introduction

Based on concepts, theories and relevant research reviewed in chapter II and III, a research framework was formulated to meet the objectives of the study, which is to examine the influence of parent-youth interaction on youth's sexual attitudes and behaviors. This chapter provides a description of the research design, target population and sampling, research instruments, procedures for data collection, the pilot study, procedures for consent informed and data analysis.

An observational approach was employed in this research in order to meet the objectives of this study. However, it was inadequate to use only quantitative methods to collect information on youth's sexual attitudes and behaviors because sexual attitudes and behaviors are social issues, thus focus group discussions were utilized before development of the questionnaire, to explore factors affecting parent-youth interactions and youth's sexual activities.

4.2 Methods

4.2.1 Qualitative Research Methods

Qualitative methods are 'appropriate when the phenomena under study are complex, are social in nature, and do not lend themselves to quantification" (Liebscher, 1998). The qualitative methodology was used to obtain complete information regarding perceptions of societal attitudes and practices in the areas under the study, providing a well-rounded set of information about sexual attitude and behavior of unmarried youth, the factors influencing their sexual active such as parent-youth interactions.

4.2.1.1 Focus Group Discussions (FGDs)

Before fielding a survey using a structured questionnaire, focus group discussions was carried out in order to obtain qualitative data on sexual attitudes and behaviors, parent-youth interaction communication that would provide meaningful insights into societal norms and values regarding sexual attitudes and behavior of unmarried youth. Qualitative research has enabled the exploration of concepts within communities.

Focus group discussion was a method for collecting qualitative data from unmarried youth on youth perceptions of parental-youth interactions, which might influence youth sexual attitudes and behaviors. The objective of focus group discussion was to understand how youth perceive the situation in their particular society with regard to sexual relations, the difference between males and females, relations with their parents, and discussion of sex with parents and provide directions for future quantitative and qualitative research on parent-youth interaction related to adolescent reproductive health. The strength of qualitative research methodology, particularly focus group discussions, was that they can obtain information on values and norms of subgroups within society. As this research was particular interested in describing the sexual attitudes and behaviors of Lao youth in Vientiane Capital City, Lao PDR, and focus group discussions was a particularly valuable methodology. The theoretical basis underlying the use of FGD was that the sexuality of young people was to large extent, shaped and influenced by conversations and interactions with peers (Hennink & Diamond, 1999). It is important to note that the qualitative study we were not interested in the specific behavior of attitudes of the individuals in the focus group. Rather we encouraged the members to discuss each particular topic and get the values, the range of meanings ad get to identify the general situation as applied to their peers and youth in general in which there is agreement or disagreement. FGD encourage the expression of opposite views rather than seeking common opinion. The detail of focus group guideline was summarized in the Appendix A.

Moreover, focus group discussions are important tool for studying parent-youth interactions as it related to societal factors that influence youth sexual attitudes and behaviors, even though they do not provide quantitative or sample survey data that can

generalized to the wider population. Another limitation of focus group discussions was that the majority opinions can predominant minority opinion.

4.2.2 Quantitative Research

Quantitative research is based on statements such as "anything that exists in a certain quantity and can be measured." (Custer, 1996). 'A quantitative research methodology is appropriate where quantifiable measures of variables of interest are possible, where hypotheses can be formulated and tested, and inferences drawn from samples to populations' (Liebscher, 1998). The instrument of quantitative research method used in this study was structured questionnaires that quantify pre or post-categorized answer to the questions.

4.2.2.1 Structured Interview of Adolescents

A structured questionnaire was used to collect information from the youth selected for study on the characteristics of the youth and their parents, family background, their sexual attitudes and behaviours of youth and of their perceptions of the parent-child interactions. Face-to-face administered questionnaire was used because many youth have low educational qualifications and there might be a lot of missing responses if the study relied on self-administered questionnaires. Previous studies have demonstrated that face-to-face interviewing often results in lower levels of reported sexual behaviour when compared to self-administered questionnaires (Williams & Suen, 1994; Mensch, Hewett & Erulkar, 2001). However, building trust and confidentiality between interviewer and respondents can increase the quality of data from face-to-face questionnaire used in the interview. Interviewers explained the rationale and format of the study directly. They may have a motivating effect on the respondents by providing full, clear definitions, probing ambiguous responses, or querying inconsistent answers. Previous research had shown that females were more likely to underreport sexual behaviors to male interviewers (Declamater, 1974). Male interviewees with good relations with the interviewers also reported more frequent of sexual activities (Johson & Declamater, 1976).

4.3 Study Design

Cross sectional studies are used to describe application in individual and family care and considers in community-oriented primary care. They yield useful data on prevalence of events and this is often good enough to assess the health situation a population. The purpose of this cross-sectional study was to measure the magnitude of a specified problem in a defined target population (Beaglehole, Bonita & Kjellstrom, 1993).

Thus, a descriptive cross-sectional study has been applied by using qualitative and quantitative methodology to determine the sexual attitudes and behaviors of unmarried youth (aged 18-24 years) in Vientiane Municipality, Lao PDR and in the view of the youths, the influence of parental-youth interactions (parental-youth connectedness, parental-youth communication and perceived parental expectation regarding sexual behaviour) on sexual attitudes and behaviors of these youths. Moreover, sexual behavior is largely private activity, subject to varying degree of social, cultural, religious, moral and legal norms and constraints. A challenge faced was to generate unbiased and precise measures of individual and population pattern. So the research methodology requires minimizing measurement error, recall and comprehensive problems, willingness to report sensitive issues (Fenton, Johson, Mcmanus & Erens, 2001).

The unmarried youth for both qualitative and quantitative parts of this study were recruited from the community. For the qualitative study, a purposive sampling was used to select unmarried youth participated in the focus group discussions. For the quantitative study, a multi-stage cluster sampling of unmarried youth, including males and females, was used to recruit the study population.

4.4 Study Site

Vientiane Municipality is a capital city of the Lao PDR and comprises of four districts of Chanthabury, Sikhotabong, Saysetha, Sisattanak. The distribution of population in Vientiane Municipality is unequal with respect to the size of districts and villages.

Sex ratio between districts shows little difference. Only Chanthabouri and Sisattanak has relatively low sex ratio of 98.2 and 94.5 respectively. The majority of the population lives in urban areas (63.1 percent). Chanthaboury district has the highest proportion living in urban areas (98.1 percent). In contrast, Saysetha has the smallest proportion - 20.6 percent (National Statistical Centre, 1997).

The Vientiane Municipality is selected, as adolescent reproductive health problems are increasingly evident in this area. All four districts will be selected as the sample because there is heterogeneity in the population structure. The study will be conducted in the community setting of the four districts rather in schools in order to increase the chances of reaching high-risk adolescents and out-of-school youth.

However, little is known about the sexual attitudes and behaviors of the unmarried youth in the Vientiane Municipality, particularly the influence of family on the sexual attitudes and behaviors of unmarried youth. Youth are increasing at high-risk behavior, including high-risk sexual behavior. Therefore the protective factors of the high-risk sexual behavior and sexual attitudes will be determined in order to reduce the risk factors and improve the well being of youth which will affect the quality of life of adults in the future.

4.4.1 Description of the Vientiane Capital Profile

Vientiane Prefecture, now calls Vientiane Capital City is also one of the 17 provinces and one Special zone. It has borders with Vientiane Province and Sayaboury in the north, Saysomboun Special Zone in the north-east, Bolikhamxai in the south and national border with Thailand in the west. The land area consists of 3,920 km^2. It has a population about 633,100 (315,800 females). The Vientiane Prefecture consists of 9

districts and 496 villages and 108,083 households. The average household size is 5.85. The population density was 161.5 persons/ km^2.

The Vientiane Municipality is included in the Vientiane Prefecture; however, the municipal areas consisted of 4 districts as mentioned above. It has a population of 277,979 people, of which males account for 140,835 (50.6 percent). This Capital City is a first place for tourists before going to other provinces within the country and its economics is expanding rapidly. As a consequence, entertainment places such as bars, nightclubs, pubs, large beer gardens, small roadside beer gardens and others are growing dramatically.

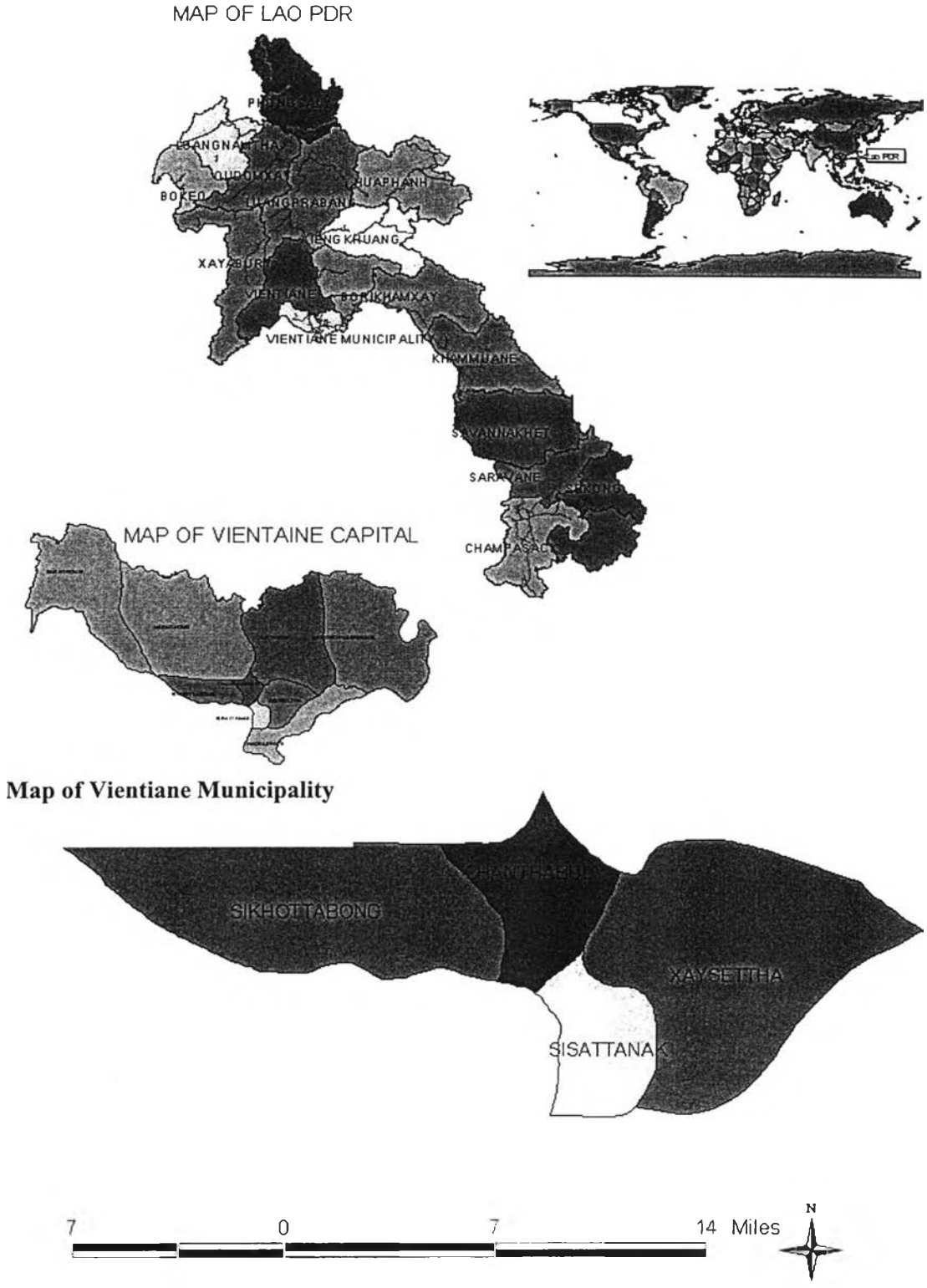

Figure 6: Map of Laos depicting the location of surveyed villages.

4.5 Study Population

The study population comprises unmarried youth 18-24 years of age from 4 districts in the Vientiane Municipality. This age group has been selected because their reported sexual activity is four times higher compared to younger counterparts (17 percent versus 4 percent) (National Statistical Centre, 2001), because adolescents under the aged of 18 are usually not sexual active and because very few of those aged 24 years or more are unmarried. The study did not recruit parents because the objective of the study is to determine youths' perception of parental-child interaction (connectedness, communication and parental expectation regarding sexual behavior and attitude). Adolescent's perceptions and reports have been found to be more predictive the youth sexual attitudes and behavior than maternal reports (Jaccard, Dittus & Gordon, 1998). The other reason of not recruiting parents was due to resource restrictions.

4.5.1 Inclusion criteria

- Male and female unmarried youths aged 18 – 24 years.
- In-school and out-of school
- Free of major psychological or medical illness
- Verbal consent informed.

4.5.2 Exclusion criteria

- Married youth aged between 18 years and 24 years.
- With a major psychological or medical illness
- Refuse to participate

4.6 Recruitment of Respondents for the Focus group Discussion

Unmarried youth were drawn from each district and were selected purposively for the focus group discussions. Each focus group discussion comprised of six to ten unmarried youth as usually recommended (Morgan & Spanish, 1984). In each district, two focus group single sex discussions were carried out consisting of one focus group discussion for boys and girls. In total eight focus group discussions were carried out.

4.6.1 The selection criteria for the participants of focus group discussions were:

- Male and Female
- Aged between 18-24 years
- Unmarried youth
- School and out-of-school

The participants for the focus group discussions were selected by convenience strategies (Scrimshaw & Hurtado, 1987) and the leader of mass organization such as Lao youth union and Lao women's union helped us to select among young people they knew in the village. While this method of group selection introduced selection bias, we sought youth who feel comfortable discussing issues related sexuality, peer influence, influence of parent on youth sexual attitudes and behaviors. Even though, it is possible that the local coordinators choose youth who had higher knowledge of these issues.

4.6.2 Selection of respondents for the face-to-face administered questionnaire

Not all unmarried youth in the Vientiane Municipality were recruited in the study due to the time and resources. Thus probability sampling has decided to be used in this research. The unmarried youth included in the study were selected by using a two-stage cluster sampling design. Probability sampling, where every member of the population has an equal chance of selection are the simplest to visualize and the level of precision of results derived from them is easy to calculate. In practice, however, Simple Random Samplings are relatively inefficient ways of obtaining a particular number of responses, in terms of fieldwork and traveling costs. Thus, it would be more economical and realistic to focus on specific localities (or clusters) within the country (e.g. constituencies or wards); sampling from some localities but not from others (MORI, 2003).

Multistage cluster sampling is used where single subjects are selected in groups or clusters. This approach allows overcoming the constraints of costs and time associated with a much-dispersed population. If the subjects to be interviewed are selected

randomly within the selected clusters, it is called "two-stage cluster sampling". Thus this technique is more appropriate for this study due to the number of subjects within a unit is very large (Abramson, 1990).

Villages and households are the first and second stages units of sampling. All four districts of Vientiane Municipality are included. A multistage clustered sampling technique in which census enumeration areas are first selected; all households are listed and then sampled.

Step 1: For each district, a list of villages with the number of youths aged between 18-24 years were prepared as a sampling frame for the first stage and approximately 50 villages were selected by simple random sampling with probability of selection proportional to the number of villages.

Step 2: When we got the sample villages, we estimated it by proportional to size of the villages i.e. the number of youth in the village. For each sample village, a list of households with unmarried youths aged 18-24 years old is the unit of sampling frame to identify the eligible households and was selected by systematic sampling with probability proportional to size in the selected villages. A list of unmarried youth male and female was prepared separately.

Step 3: We were sampling by systematic random sampling interval of the household with unmarried youth (I=N/n) for each sample village. The first sampling that was randomly start and the next sampling got one sample of every sampling interval and continue until all required subjects were recruited. From each identified household, if there is more than one youth aged 18-24 years, youth aged 18-24 years old was randomly selected. If there is more than one male and female in each identified households, one male and female was randomly selected.

4.7 Number of Subjects and Statistical Power

Sample size determination is an important and critical issue in planning a study. In fact, sample size calculations should be performed for all important population parameters. The sample size must take into account the largest sample size calculated in order to meet the requirements of the population parameter requiring the most precision. More often, the decision on sample size will require compromises with theoretically correct sample sizes and the sample sizes allowed by available resources, which refer time, human resources transportation.

The formula for the sample size, which is obtained by solving the maximum error of the estimate formula for the population proportion for n, is showing below (Kish, 1965). From the National Reproductive Health Survey conducted in 2000 (National Statistical Centre, 2001) showed that the proportion sexually active among unmarried youths aged 18-19 years and 20-25 years was 7.7 percent and 17 percent respectively. However there was no data available by sex of this age group 18-24 years. The data showed that the proportion of unmarried adolescents aged 15-24 years old that were sexually active was 12 percent for male and 4 percent for female. This data was nationwide, not representative for the Vientiane Municipality. Based on these data, we assumed that the proportion sexually active in Vientiane Municipality for male is 13 percent and for female is 9 percent.

Sample size for male and female:

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

Where: n= estimated sample size

Z – standard normal deviant which corresponds to alpha level = .005

P – anticipated proportion of individual in population possessing a characteristics of interest.

Q – 1- p

d – absolute precision of the study 2.5 percent.

Male: P=.13 Female: P=.09

Q=.87 Q=.91

Sample size for male unmarried youth:

1.96^2 x.13x.87/$.025^2$ = 694 which is taken as 700

Sample size for female unmarried youth:

1.96^2 x.09x.91/$.025^2$=503 which is taken as 500

Assuming the study is designed with confidence level of 95 percent at the 5 percent level of significance and precision 2.5 percent. So the total sample 1200, which female youth consisted of 500 and male, is accounted for 700.

Assume that there is variation of the young population size aged 18-24 years old in the four districts and variation in terms of socio-economic status within the four districts. Estimate that the young population size in the four districts (Chanthabury, Sikhotabong, Sisattanak and Saysetha) was 5,620, 6,140, 4,205 and 6,118 respectively, thus the sample size was distributed with proportional to size of the youth population in these districts (see Table 4.1).

Table 4.1: Distribution of sample size by district

No	Districts	Population aged 18-24 years (Nh)	Weight Wh	Number of Villages	Weight	Sample size
1	Chanthabury,	5,620	0.25	37	0.19	300 (F=125, M=175)
2	Sikhotabong,	6,140	0.28	59	0.31	336 (F=140, M=196)
3	Sisattanak	4,205	0.19	40	0.21	228 (F=95, M=133)
4	Saysetha	6,118	0.28	51	0.27	336 (F=140,M=196)
	Total	22,083	1	187	1	1200 (F=500,M=700)

According to the Vientiane Municipal Office, there are 163 villages. Approximately 50 villages were selected with probability of selection proportional to size. Eleven villages were selected in Chanthabury, 14 villages were selected in Sihkothabong district, 12

villages were chosen in Sisattanak district and 13 villages were selected in Saysetha according with probability proportional to size (see Appendix B)

4.8 Measurement

Variable is any characteristic or attribute measured that vary for different subjects (Hyperstat, 2004). Variables can be quantitative or qualitative. Qualitative variables are sometimes called "categorical variables." Quantitative variables are measured on an ordinal, interval and ratio scale; qualitative variables are measured on a nominal scale. In the research numerical and categorical variables are often used. For the purpose of this study both numerical and categorical variables were used.

It should be noted that the variables in quantitative research that have been used in the study is summarized below. The dependent variables for the study were sexual attitudes and behaviors. For the outcome of sexual behaviors, it was break down into ever had sex, age at first sexual intercourse, and condom use at the last sexual intercourse during the last ix month, number of sexual partners and frequency of sexual intercourse during the last six months. The detail of questionnaire survey was shown in Appendix C.

4.8.1 Independent variables:

Socio-demographic characteristic: interval scale for age, ordinal scale for education and nominal scale for the most variables.

This information includes mother's, father's age, parent's employment status, marital status, mothers, fathers living with the same house with youth and family size - based on the number of children living in the family. Adolescent's information includes sex, age, education, occupation, sufficient income, living arrangement, sex education received and feeling towards family.

Peer Influence and partner's behaviors: nominal scale

Youth were asked about the number of friends, their partner's undesirable behaviors (smoking, use drugs, alcohol use and going out during the night-time), peer influence

having steady girl/boy friends, dating, peer influence having sex and indicating having sex with.

Intimate relationship: dichotomous scale

All different stage of sexual behaviors included dating, holding hands, necking, kissing, petting upper part and lower part of the body.

Parental-youth connectedness: interval scale

This measurement is measured by adolescent's perception of the quality of their relationship with parents. The index of mother/father-child closeness is based on 11 items.

Response options ranges from strongly agree (5), somewhat agree (4), uncertain (3) somewhat disagree (2), strongly disagree (1). High score indicate high parent-child connectedness. The parent-child closeness index was added up together and separated for mothers and for fathers. The scale was tested for the internal consistency reliability by constructing alpha coefficient for mothers .789 and for fathers .859 and for parents .885 (Appendix D1). This measure is adapted from Sieving et al. (2000).

Parent-youth general communication: interval scale

This measure is adapted from Barnes and Olson (1985) used to measure general communication between parents and children. After pre testing, two items of questionnaire were deleted because of overlapping and repetition of questionnaire and the internal validity is increased after deleting the two items (Appendix D2).

The scale response ranged from strongly agree (5), somewhat agree (4), uncertain (3) somewhat disagree (2), strongly disagree (1). The scale was summed up together and separately for mothers and fathers. High score is indicated high communication. The scale was tested for reliability for mothers alpha Cronbach's coefficient .802, for fathers α Cronbach's coefficient .881, and for parents α Cronbach's coefficient .861.

Parent-youth sexual communication: interval scale

This scale is measured in the frequency of talking to the child about sex, condom use, the consequence of having sex, including STDs, HIV/AIDS and so on. Response options ranges from very often (5), often (4), occasionally (3), rarely (2) and never (1). High score indicate high parent-child communication. The parent-child communication index was added up together and separately for mothers and fathers. The scale was tested for the reliability by constructing alpha coefficient for mothers .8127, for fathers .8357 and for parents .887 (Appendix D3). This measure is adapted from Rodgers (1999).

Perceived parental expectations: interval scale

This measure is based on the youth's report as subjective norm, which is related to the Theory of Reasoned Action developed by Azjen and Fishbein (Fishbein, 1980).

The responses range from strongly approve (5), moderately agree (4), uncertain (3), moderately disagree (2) to strongly disapprove (1). High score indicate high-perceived parental approval of having sex. The perceived parental expectation index was summed up together and separately for mothers and fathers. The scale was tested for the reliability by constructing alpha coefficient for mothers .733, for father .775 and for parents .882 (Appendix D4). This measure is adapted from Sieving et al. (2000).

4.8.2 Dependent variables:

Sexual behavior:

The questionnaire-included items of sexual behavior which comprised of 4 items, which involve heterosexual behavior: ever had sex (nominal scale/ dichotomous), age at first sexual intercourse (ratio scale), condom use at the last sexual intercourse (nominal scale/dichotomous), number of sexual partners (ratio scale). For Ever Had Sex, it was measured by three items, which asked if youth ever had vaginal, oral and anal intercourses. If youths reported one of these intercourses, it connotes that they ever had sexual intercourse.

Sexual attitudes: ordinal scale

This scale is measured the belief, opinion and intentions to act concerning the premarital sexual activity, condom use and various sexual relationships. This measurement contained 18 items (Appendix H). After pretesting, the last five items were deleted to improve internal consistency reliability (Cronbach's alpha coefficient less than .60) in the study sample. If deleted these mentioned above items, the Cronbach's alpha coefficient increased to 0.773. So the 13 items retained in the sexual attitude scales.

Responses was ranged from strongly disagree (1) to strongly agree (5). High score represents positive attitude towards sexuality. The sexual attitude index was added up together. The scale was tested for the reliability by constructing alpha coefficient was 0.773 for this sample (Appendix D5).

The dependent and independent variables in quantitative technique are summarized in Table 4.2.

Table 4.2: Variables used to investigate in this study

Group variables	Variables
Independent	
A. Parent's background	Age, Sex, Education, Employment's status, occupation, Marital status, Mothers and Fathers living in the same house and Family size.
B. Unmarried youth	Age, Gender, Education, Income, Living arrangement, Occupation, Sex education, Feeling towards family
II. Peer influence	Have boy/girlfriends, Number of friends, Go out with friends, Encourage to have sex, Express desire to have Sex with.
III. Intimate relationship and Partner's Deviant behavior	Different stage of sexual behaviors of youth, friends smoke, drink, use drugs, go out during the night time,
IV. Parent-youth interaction	Parent-youth connectedness, Parent-youth general communication, Parent-youth sexual communication and perceived parental expectation regarding sexuality
Dependent variables	
V. Sexual Behavior	Ever had sex, Age at first sexual intercourse, Condom use at the last sexual Intercourse, Number of Sexual partners.
VI. Sexual attitudes	Attitudes regarding sex.

4.9 Quality Control of Instruments

Since measurement is one of the most important parts of the study, so the quality control of instrument is crucial. This is referred to the two characteristics of a measurement: validity and reliability.

Validity refers to the degree to which instrument measures what it is intended to measure. It was difficult to determine the absolute validity of sexual behaviors, thus a number of indirect measures, namely internal and external consistency are used. External validation of reports may be achieved by using independent data sources as external references. The internal consistency for questionnaire responses is checked for

logical agreement with related questions and might be used to assess the reliability and validity.

There are content, criterion and construct validity. The content validity is a degree to which a test measures an intend content area (item validity and sampling validity). For the content validity, experts are asked to comment on the clarity and completeness of questionnaire (Bergner & Rothman, 1987). For this study three experts namely psychologist, sociologist and expert in adolescent reproductive health were reviewed the content of the questionnaire to ensure that it included the entire dimension of the construct that intended to measure and nothing more. For the construct validity, the measurement is consistent with other measurement of the same phenomenon. The criterion validity is a degree to which the scores on a test are related to the scores from the criterion test that is not applied in this study because there was no gold standard to measure the sexual attitudes and behaviors of unmarried youth and the parent-child interaction.

Another characteristic of the quality control of instrument is the reliability. When human is used to take a part of measurement, it should be taken into consideration on the inter-rater reliability which is used to assess the degree to which different raters give consistent estimates of the same phenomenon. To minimize the inter-rater reliability, the rater/observer is giving a number to each observation and calculates the correlation between the rating of two observers, which should be equal or more than 0.8. Internal consistency is an estimate of the homogeneity of an instrument or the extent to which instrument measures a single trait or characteristics (Bergner & Rothman, 1987). Internal consistency is the most frequently encountered measure of reliability because it addresses a major source of measurement error. The scale of the responses from each questionnaire, particularly parent-youth interaction and sexual attitude scales was tested for the internal consistency reliability by constructing alpha coefficient that should not be less than 0.7 for group comparisons.

4.10 Data Collection

The fieldwork activities for the survey were begun with recruitment of 8 interviewers (4 males and 4 females). The enumerators were selected from young medical students or staff within the Faculty of Medical Sciences. Additionally two local coordinators were employed at each district. Preference was given to the enumerators with previous interviewing experience and good interpersonal skills. Interviewers were matched with the sex of interviewees in all cases. Interviews were conducted in Lao language. At the beginning of the interview, confidentiality and procedural issues were explained to the participants due to asking highly sensitive questions about sexual issues such as first sexual intercourse, frequency of sexual intercourse, use of condom in the last intercourse, thus it depend heavily on the degree of trust and confidence that is developed between researchers and respondents. In order to keep confidentiality and disclosure of information from their parents, interviews were taken in a security place and anonymously. The survey questionnaire was conducted in the evening time or at the weekends when youth returned from school or from work. The team asked the head of village or the leader of the youth's union in the selected villages to identify the houses with youth aged 18-24 years that had been selected by using systematic random or in case bring them at the temple or the head village office.

The measurement validity of the questionnaire depended heavily on the skills of the interviewers who were designated to conduct face-to-face interviews. When more than one interviewer is used, inter-interviewer variations may be a source of error. Therefore, there was a need to train and supervise all interviewers closely during interviews. The interviewers were trained for 3 days by the project's principal investigator. The training schedule included the aim and objectives of the study, general principles for survey interview, and familiarisation with the questionnaire form for adolescents, techniques for asking questions and practice interview in a natural setting. After this stage of training, a few days was set aside for discussing problems and improving the study instruments. The questionnaire for quantitative data and guideline for focus group discussion are prepared in both English and Lao language. At the first stage of data collection focus group discussion was carried out with the unmarried youth in order to gain qualitative data on the sexual attitudes and behavior and their

perception of parent-child relationship. Then the data was fully transcribed and content analysis was applied for focus group discussion reports.

Before conducting a questionnaire survey, the field team with the local public health worker and head village walked in the village to get a sampling frame of youth aged 18-24 in 50 villages. In the last stage, face-to-face administered questionnaire was carried out with 1200 unmarried youth in the Vientiane Municipality. Questionnaires and samples were identified by number. If respondent was not at home after two visits or refused to participate, a next house with youth age 18-24 was selected to substitute respondent. The principal investigator closely monitored the field teams.

The data collection process consisted of 2 parts: focus group discussion and face-to-face administered interview (see figure 7).

4.11 Data Management

The researchers checked the data in the field for completeness and consistency daily before coming back to the Faculty. The team leader monitored fieldwork regularly. Checks to validate data were employed to increase the accuracy of data entry and the data were checked for consistency and completeness. A codebook was created and kept in a separate file.

The moderators and note-takers were trained according to the objective of focus group discussions. Because of the sensitive issue, male moderators and note-takers were carried out male focus group discussions. Trained female research assistant was conduct focus group discussions with female respondents. Focus group discussions were ranged from 90 to 120 minutes and undertook place in a private room. For the focus group discussion, a focus group discussion guideline was used.

During the focus group discussion, notes were taken in as much detail as possible and these notes will be elaborated after completion of the interview. Tape recordings were made of all focus group discussions where respondents give consent to ensure the accuracy of data. The transcripts were supplemented with the written field notes.

4.12 Pilot survey

The questionnaire was tested for a language level. The purpose of pre-test research tools is to test the content, wording, and expression, the logical sequence of question and reliability of the questionnaire and to identify weaker items and drop them from the survey. Additionally, the objective of pre-test is to see if respondent interest is aroused, if respondent attention can respondents wanted to say more, or questions which seemed sensitive (American Statistical Association, 1997). After pre-testing, the tool was modified to ensure the content coverage, reliability and validity of the study. As mentioned earlier, after pretesting, the questionnaires were modified in order to improve the content of each part.

For the qualitative research method, focus group discussion was pre-tested for appropriate wording, and contents that are appropriate for the study. The purpose of pre-testing was to examine comprehension and reliability. After pre-testing, the tool was modified to improve content coverage, reliability and validity of study.

The Pilot testing was carried out in two villages of the Chanthabury district namely village Dongmiang and Thonhtoum which were selected for the pilot study and did not included in the final study. The participants for the pilot study are the same in terms of socio-demographic background of the unmarried youth as those in the major study. Before pretesting, the field team did walk in the village to get a sampling frame of the household having youth aged 18-24 years. After getting sampling frame separately for males and females, 25 youth in each village were randomly selected within two villages.

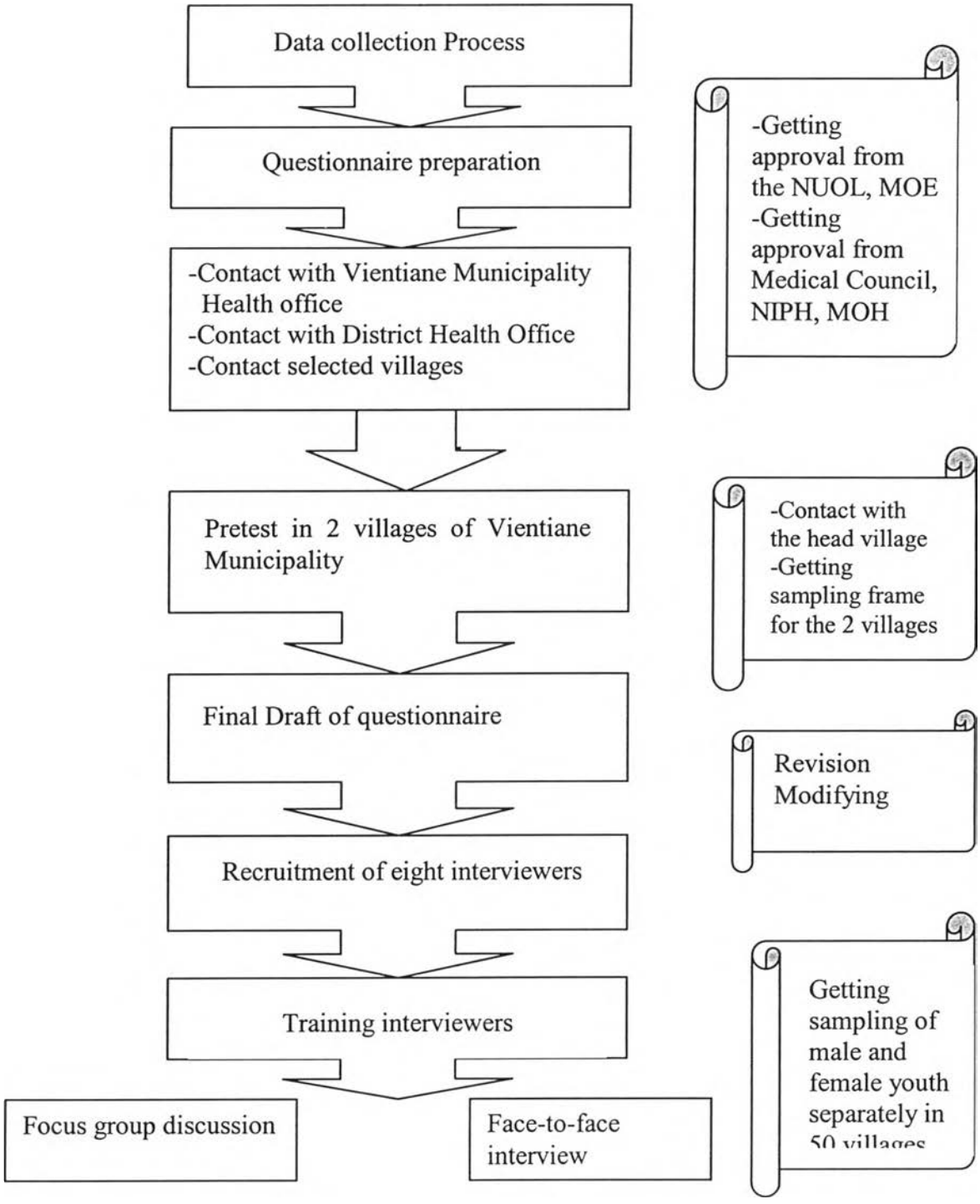

Figure 7: A flow chart of data collection of the research "The influence of parent-child interaction on sexual attitudes and behaviours of unmarried youth in the Vientiane Municipality, Lao PDR

4.13 Data Analysis

The researchers' task is to prepare a statement regarding the collected data. The first step is to transcribe the entire interview. This provides a complete record of the discussion and facilitates analysis of the data. The data from focus group discussions was fully transcribed. The research team undertook preliminary analysis of the transcripts and, based on this analysis and the conceptual framework, they constructed a coding scheme based on major themes. Two researchers in the team independently coded the data according to the themes. The coding from the two researchers was then compared and reconciled. The indicators were developed to guide the coders to code the major themes.

The next step was to analyze the content of the discussion. The aim of this analysis is to look for trends and patterns that reappear within either a single focus group or among various focus groups. Neuendorf (2002) suggests that content analysis begins with a comparison of the words used in the answer. Also, the researcher must consider the emphasis or intensity of the respondents' comments. Other considerations relate to the consistency of comments and the specificity of responses in follow up probes. According to Stewart and Shamdasani (1990), a rather substantial body of literature exists on content analysis. The content analysis was focused on the themes that have been identified. Interrelationships among themes will be also identified. Transcripts were analyzed separately by gender (male and female). In analyzing the focus group materials there were two goals. Firstly, it was established broad areas of consensus amongst focus group on various topics. Secondly, comparisons were made across participants to determine similarities, variations, controversy or debate and development of categories.

The statistical analysis for the quantitative data used in this study was as follow:

1. Descriptive statistic as frequency distribution, number, percentage, range, mean and standard deviation were analyzed to draw the socio-demographic characteristic of the sample and the interest outcome variables.
2. Bivariate analysis was conducted utilizing chi-square tests for categorical variables and Student's *t*-tests for continuous variables to compare outcomes between those

who reported ever having had sex and those who never having had sex. The statistical significance used was Alpha<.05.

3. Correlations were used to assess whether there was correlation among age at first sexual intercourse, number of sex partners and frequency of sexual intercourse during the last six months prior to the interview and sexual attitude scores, and among parent-youth interaction scores.

4. One way ANOVA was applied for comparison the mean score of age at first sexual intercourse, number of sexual partners and sexual attitudes with independent variables more than two sets of categories.

5. Additionally, multivariate logistic regression (for dichotomous outcome variables), linear regression (for continuous variables) and in the case of age first sexual activity, proportional hazards regression were performed. All regression analyses included the potentially confounding variables of family structure, ability to talk to parent(s) about problems, in addition to the indicator variable, ever having had sex and condom use, in an attempt to account for other factors that may affect both indicator and outcome variables. Data were analyzed using Statistical Package for the Social Sciences (SPSS) Version 10.0. In determining difference, an alpha level of 0.05 was used to differentiate true effect from chance occurrence. Logistic regression was used to identify a set of variables that predicted sexual risk taking among sexually experienced. Logistic regression allows us to identify factors that are related to sexual risk taking when other factors are controlled. In addition, logistic regression provides information on how well group status can be predicted from these variables. All predictor variables that were examined in the bivariate analysis were eligible for entry into the subsequent multivariate analysis. A logistic regression was run for males and females separately to assess the predictor of sexual risk-taking.

6. Subsequently, to identify potential covariate, we examined the association between sexual behavior/attitude and socio-demographic (model 1), and parental-child connectedness and parental-child communication (model 2) and perceived parental expectation, peer influence and different stages of sexual behavior (model 3).

4.14 Project Management

The author has overall responsibility for the research. The team researcher conducted research activities under supervision and monitoring of the Supervisor of the College of Public Health, Chulalongkorn University. The investigator prepared and maintained a study logbook and questionnaire forms and regularly reported progress of the study to the supervisors.

The author was responsible for data analysis, report writing and dissemination the findings. Efforts were made to write at least two papers to submit the International Journal for Peer review. A dissemination workshop will be carried out at the local and national level with inviting policy makers, programmers, person who is working in the reproductive health programmers and interested persons to attend the workshop. The free and informed consent of all subjects was obtained. All research was conducted in full accord with ethical principles, including the provision of Declaration of Helsinki. Before conducting the research, the Principal investigator had responsibility to get approval from the Ethical Board within the Faculty of Medical Sciences, Ministry of Education and the National Institute of Public health, Ministry of Health. Additionally, we need to get approval from the Postgraduate training and Research Department within the National University of Lao, Vientiane Municipality Health Office and Head village.

4.15 Coordination with the National University of Laos

A request formal letter, a project proposal with the time schedule of activities and a letter of receiving grant from Rockefeller Foundation has been submitted to Mr. Bounpong Noradom, Director of Postgraduate training and Research, National University of Laos for approval. A brief meeting with Director of the Postgraduate Training and research was organized to explain the fieldwork and the purpose of the study, and a copy of project proposal has been submitted.

4.16 Approval from Ethical Review Committee, Faculty of Medical Sciences

To ensure the ethical issues of the study, a separate project proposal was submitted to the Ethical Board of the Faculty of Medical Sciences, Ministry of Education. After getting approval, the approval letter and ethical clearance was given to the Vientiane Municipality Health Office in order to get approval to coordinate and collaborate with the District Health Office to carry out data collection in the field.

4.17 Ethical Consideration

According to the Declaration of Helsinki, a recognized Ethical Committee must approve the protocol of this study before conducting.

Confidentiality is the right of privacy for subjects concerning their participation in research. All steps must be taken to assure that subjects' participation is confidential. Every attempt was made to ensure confidentiality for the respondents. Anonymous was employed in the study. For instance, the respondents for face-to-face- administered questionnaire were used identification number. The data were kept in a secure place at the Faculty of Medical Sciences, National University of Laos in Vientiane, with only the researchers and supervisors able to access the data.

Participation in the research was on voluntary basis and consent informs were obtained through the verbal consent of all respondents.

4.18 Informed Consent

Informed consent means that potential subjects understand exactly what is expected of them during the course of the research and that the investigator protects participants from physical and psychological discomfort, harm and danger (American Academy of Pediatrics Committee on Bioethics. 1995). Before interview, the interviewees were asked for their permission, and then shared with them all the notes and conversation.

4.18.1 Certificate of Consent

The purpose of this study is to describe the youth sexual attitudes and behavior and the relationship among the parental-child connectedness, parental-child communication and perceived parental expectations regarding sexual attitudes and behavior among unmarried youth in Vientiane Municipality, Lao PDR.

The respondents were asked to answer questions from a survey and last approximately 60 minutes. Before asking questions, the respondents were asked to provide verbal consent.

Al information that was obtained as a result of the subject's help with this study was treated as confidential and used only by the team researchers.

There is no compensation of any resort will be provided for participating in the research.

I have read the foregoing information, or it has been read to me. I have had opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntary to participate as a subject in this study and I have the right to withdraw from the study at any time without in any way affecting my future medical care.

4.18.2 Risk Benefit assessment

There are no psychological and social risks, physical harm or discomfort related to this study. The subjects participated in this study gained benefit such as the increased their knowledge related to reproductive health.

4.19 Summary

The purpose of this Chapter was to provide an introduction to quantitative and qualitative researches. By describing the nature of quantitative and qualitative research and research designs, Sections 2, 3, 4 and 5 started to demonstrate the potential for quantitative and qualitative approaches to be used to investigate research problems in

studying sexual attitudes and behaviors and the influence of parent-youth interaction on these issues. By raising some of the issues involved in measurement, quality control of instrument, collecting and analyzing quantitative and qualitative data in Sections 8, 9, 10 and 11, it was clearly outlined the research process in order to enable to conduct research properly.

This study had been employed a descriptive cross-sectional study design combining quantitative and qualitative research methodology to determine sexual attitudes and behaviors of unmarried youth (aged 18-24 years) in Vientiane Municipality, Lao PDR and the influence of parental-youth interactions on sexual attitudes and behaviors of these youths.