



CHAPTER III

PROJECT EVALUATION

3.1 Introduction

This study aimed to assess a participatory learning project about sexually transmitted diseases for married couples, using questionnaires before and after the training, focusing on changes in knowledge, attitude and STD prevention practices.

3.2 Purpose

To assess the participatory learning process arrangement for married couples who came for service at the Family Planning Clinic of Phuwiang Hospital.

3.3 Question for Evaluation

To establish whether participatory learning can be used as a strategy to improve knowledge, attitude and practice on sexually transmitted diseases.

3.4 Evaluation Design

The participatory learning process would be evaluated by measuring the knowledge, attitude and practice components in regard to STDs before and after the training. In the training process, the samples were divided into groups of five couples. Each group was provided with health education three times, at one-week intervals. The same process was repeated until all 50 couples had completed the program. Data

collection was conducted before the training using questionnaires, during the group process by observation, and again using questionnaires after the training.

3.5 Population and Sample

The samples in this study were married women aged between 15 and 44 who attended the Family Planning Clinic of Phuwiang Hospital for cervical carcinoma screening, and whose pap smears revealed STDs (candidiasis or trichomoniasis). Health education sessions were provided for sample couples until the number reached 50 couples (100 persons).

Study samples:

- (1) Sample group definition: the samples were randomized and enrolled in the project on a voluntary basis, choosing women who had abnormal symptoms of the reproductive system, which were related to infections of the genital organs caused by candidiasis and trichomoniasis. These women attended the Family Planning Clinic of Phuwiang Hospital during the period July-September 2002. A total of 50 female samples was selected. When their 50 husbands were added, the number of samples totaled 100 persons. The confidence level was 95%.
- (2) Sample selection procedure: -
 - 1.1 Run a campaign for women in their reproductive ages 15-44 years to come for cervical carcinoma screening examination during the period July-September 2002.
 - 1.2 Women who attended the clinic were examined vaginally, and pap smears were done. Microscopic slides of the smears were sent to a

cytologist at Khaen Nakorn Lab Company. The results of the pap smear were sent back to Phuwiang hospital within one week.

- 1.3 Women whose pap smears revealed cervical or vaginal infections, and for which the causative agents found to be candidiasis and trichomoniasis, were notified by letter, asking them to return to the clinic again with their husbands.
- 1.4 Appointments were made for samples to come to the clinic as a group of four to six couples (8–12 persons), two groups per week. Each group was provided with 3 health education sessions, at a 1-week interval.

3.6 Instrument

Data for this study were collected using a questionnaire developed by the researcher, from the review of related documents, concepts, theories, research studies and from interviews of the initial target population. The questionnaire was then submitted for examination by experts. The questionnaire was comprised of 4 components, as follows.

Component 1: a total of 8 questions for demographic data, including gender, age, education, marital status, occupation, household income, previous methods of being educated about STDs and sources of such knowledge.

Component 2: a total of 14 questions about knowledge of the STDs candidiasis, trichomoniasis and HIV/AIDS, covering symptoms,

transmission, treatment and prevention. The questions had two choices: correct and incorrect, scoring “1” and “2”, respectively.

Component 3: a total of 12 questions about attitudes towards STDs, including opinions on STD transmission between husband and wife, beliefs about the characteristics of causative agents, treatment and prevention, and beliefs about STDs transmitted from other persons apart from transmission between husband and wife. The answers were of the rating scale type, with 3 levels, “agree”, “not sure” and “not agree”. The scores were defined as 2, 1, 0 for positive opinions and 0, 1, 2 for negative opinions, accordingly.

Component 4: a total of 15 questions about awareness, risks and practices related to sexual intercourse and STDs. The questions were open-ended and were asked separately for men and for women.

- For women, the questions asked about their awareness of contracting STDs from their spouse, their practice of sexual intercourse and their negotiation with their husbands about having sex.
- For men, the questions asked about their awareness of their wives' sickness, their awareness and acceptance of being part of the cause of their wives' conditions, their thoughts about helping their wives, their risk behaviors for acquiring STDs, and preventive measures for not infecting their wives.

In addition, there were questions about discussion of sexual practice and STD transmission between spouses. Scoring for this part was based on “correct” and “incorrect” behaviors, while scoring for questions about awareness, risks and practices of spouses was based on the behavioral characteristics.

Development of the Instrument

Development of the data collection instrument was conducted as follows.

1. Reviewed documents and related research to serve as a guide to define the frame of the questionnaire content.
2. Developed frame of the questionnaire content and used draft questions to ask women who attended the clinic informally.
3. Improved and revised the questionnaire, sent it to experts for examination, review and revision for reliability of content.
4. Tried the revised questionnaire out with 15 married couples (30 persons) receiving services at the clinic.
5. Analyzed the questionnaire for reliability using the formula of Cronbach with Alpha Coefficients from 0.7 upward.

$$R_{tt} = \frac{k}{k - 1} \frac{(1 - \sum pq)}{\sigma^2}$$

R_{tt} = Reliability of the test

K = Number of items in the test

Σ = Sum

P = Proportion of persons who answered each item
correctly

Q = Proportion of persons who answered a given item
incorrectly ($1 - P$)

σ^2 = Variance of all scores obtained from the test

The alpha coefficient obtained was 0.962.

6. The questionnaire was revised again, before using it to collect data from the actual sample group.

3.7 Data Collection Methods

1. Pre-test by study questionnaire
2. Observation
3. Post-test by study questionnaire

3.8 Data Analysis

The researcher analyzed the data using the SPSS/PC computer program, defining the level of significance at 0.05 and the statistics were used as follows.

1. The frequencies and percentages of the demographic data of the persons who responded to the questionnaire were distributed according to age, gender, educational level, occupation, family income, method of receiving information and sources of information obtained.
2. Percentages and means were identified to describe the data for knowledge, attitude and practice about STDs.
3. Knowledge, attitude and practice before and after the training were compared using the T-test.

Table 5: Timetable for data collection

Samplng Group	No.	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12
12 Prs	1	P1	P2	P3									
12 Prs	2	P1	P2	P3									
12 Prs	3				P1	P2	P3						
12 Prs	4				P1	P2	P3						
12 Prs	5							P1	P2	P3			
12 Prs	6							P1	P2	P3			
14 Prs	7										P1	P2	P3
14 Prs	8										P1	P2	P3
100 Prs	8												
		2,4 July	9,11 July	16,18 July	23,25 July	30,1 July	6,8 Aug	13,15 Aug	20,22 Aug	27,29 Aug	3,5 Sept	10,12 Sept	17,19 Sept

Remark : W = Week
P = Part of learning
Prs = Persons

3.9 Results

This participatory learning study was designed to increase knowledge, attitude and correct practice about STDs among married couples who came for service at the Family Planning Clinic of Phuwiang Hospital, Khon Kaen Province. The results of data analysis are listed below.

Assessment results, comprised of four components:

Component 1: demographic data of the sample group

Component 2: knowledge about STDs

Component 3: attitudes towards STDs

Component 4: behaviors, awareness, risks and practices about STDs

Demographic data of the samples

The samples in this study were married couples who came for service at the Family Planning Clinic of Phuwiang Hospital, Khon Kaen Province, a total of 100 persons, 50 males and 50 females. Forty percent of them were aged between 36- 45 years, followed by another 35% aged between 26-35 years. Sixty-seven percent (67%) and 28% had elementary and secondary level educational backgrounds, respectively. Seventy percent (70%) were married and lived together, while 19% were married but lived separately. In regard to occupation, 45% were farmers, 25% were general laborers and 12% were vendors. Forty-three percent (43%) had incomes of 10,001-15,000 Baht per year and another 37% had incomes of 5,001-10,000 Baht per year. The majority of the samples (61%) had previously received knowledge on STDs, sources of which were television (40%), government officials (21%) and radio (16%) (Table 6).

Table 6: Demographic Characteristics of the Samples (N and %)

Demography (n=100)		Percentage
Gender	Male	50
	Female	50
Age	15 – 25 years	15
	26 - 35 years	35
	36 – 45 years	25
	46 years and above	10
Education	Elementary	67
	Other	33
Marital status (n=50)	Married and lived together	79
	Married but lived separately	21
Occupation	General laborer	45
	Farmer	25
	Vendor	12
	Other	18
Family income/year (n=50)	0-5,000 Baht	20
	5,001-10,000 Baht	43
	10,001-15,000 Baht	20
	15,001 Baht and above	17
Previously received education about STDs		
	No	39
	Yes	61
Sources of knowledge about infection		
	Television	40
	Government	21
	Radio	16
Total		100

Level of knowledge about STDs before and after the training

A total of 14 questions tested knowledge about STDs; all were multiple choice. Each correct answer would be scored as “1” and wrong answers would be scored as “0”. The data were analyzed statistically to find means and standard deviations of each item with the maximum score = 1. The scores were rated at three levels, low (0-59% of scores on the test results), moderate (60-79%) and good (80-100%).

Table 7: Level of knowledge about STDs before and after the training

Knowledge about STDs	Answered correctly					
	Before training			After training		
	%	\bar{x}	S.D.	%	\bar{x}	S.D.
1. Characteristics of STDs	31.00	0.32	0.47	67.00	0.66	0.48
2. Diseases that are sexually transmitted	37.00	0.34	0.48	68.00	0.68	0.47
3. Candidiasis infection	39.25	0.34	0.47	65.50	0.65	0.48
4. Trichomoniasis infection	33.50	0.34	0.47	64.25	0.67	0.47
5. AIDS/HIV	56.50	0.60	0.49	79.25	0.76	0.43
Average of all topics	39.45	0.39	0.48	68.80	3.49	0.47

The results revealed that the average level of knowledge about all three STDs (candidiasis, trichomoniasis and HIV/AIDS) of the sample population before the training was low. The average score for the correct answers was 39.45%. After the training, the levels of knowledge for all 3 diseases rose to the moderate level, 68.80%. When the statistical differences in the data were compared, the mean of knowledge

scores was 0.39 before the training and 3.49 after the training. When compared using the T-test, the mean of knowledge scores before and after the training were significantly different (level of significance = 0.01) (Table 8).

Table 8: Comparison of Means for Knowledge of STDs Before and After Training.

	Number	\bar{x}	SD	t	P_Value
After the training	100	8.98	0.35		
Before the training	100	5.15	0.20	10.5	0.09

The result of data analysis showed that, before the training, a grade of 16 agreed that the causative agents of candidiasis and trichomoniasis can reside at the distal part of the penis without manifesting any symptom. After the training, the grade of agreement was 87. For the statement STD means AIDS only, before the training the grade of agreement was 87, while after the training it was 24. For those who believed candidiasis and trichomoniasis were not sexually transmitted diseases before the training the grade of agreement was 76, while after the training the grade of agreement was 25. For the statement “you think that your wife/husband could not transmit STD agents to you”, before the training the grade of agreement was 81, while after the training, the grade of agreement was 26. For “having sex with bar or karaoke girls could not make you catch candidiasis or trichomoniasis, before the training the grade of agreement was 79, while after the training it was 25.

The result of data analysis attitude about treatment for STD illustrated that group sampling to believe STDs could be completely cured except AIDS before the

training grade of agreed 27 After the training grade of agreed 82 candidiasis and Trichomoniasis could be completely cured by taking medicines only before the training grade of agreed 78 candidiasis and Trichomoniasis should be treated in women only. There is no need to treat men, as they do not have symptoms before the training grade of agreed 79 after the training grade of agreed 15 The sickness of uterus is the concern of women only. Men don't have to worry about before the training grade of agreed 74 after the training grade of agreed 27 (Table 9).

Table 9: Attitudes towards STDs before and after the training

Attitudes towards STDs (N=100)	Before training		After training	
	Agree	Disagree	Agree	Disagree
Attitudes for knowledge of STDs				
1. Causative agents of candidiasis and trichomoniasis can reside at the distal part of the penis without manifesting any symptoms.	16	75	87	10
2. STD means only AIDS.	87	10	24	74
3. Candidiasis and trichomoniasis are not sexually transmitted diseases.	76	11	25	72
4. You think that your wife/husband could not transmit STD agents to you.	81	12	26	70
5. Having sex with bar or karaoke girls could not make you get candidiasis or trichomoniasis.	79	6	25	72
Attitudes about STD treatment				
1. STDs could be completely cured, except for AIDS.	27	49	82	13
2. Candidiasis and trichomoniasis could be completely cured by taking medicines only.	78	13	17	79
3. Candidiasis and trichomoniasis in women should only be treated. There is no need to treat men, as they do not have symptoms.	79	12	15	82
4. Disease of the uterus is only a concern of women. Men do not have to worry about it.	78	18	10	27
Attitudes for Prevention STDs				
1. Wearing a condom could help prevent transmission of STDs, such as HIV/AIDS, candidiasis and trichomoniasis by over 90%.	22	64	86	9
2. Cleaning both the male & female genital organs before and after sex could help decrease the risk of candidiasis, trichomoniasis and HIV/AIDS transmission.	21	50	79	13
3. The husband & wife should not talk about sexual intercourse, because it is shameful.	77	13	12	85

The result of data analysis for attitudes about prevention of STDs showed that, for the group sampled before the training who believed that wearing a condom could help prevent the transmission of STDs (HIV/AIDS, candidiasis and trichomoniasis) by over 90% the grade of agreement was 22, while after the training it was 86. For those who believed that cleaning both male and female genital organs before and after having sex could help decrease the risk of candidiasis, trichomoniasis and HIV/AIDS transmission, before the training the grade of agreement was 21, while after the training it was 79.

When compared using the T-test, the attitudes towards STDs before and after the training were significantly different ($p = 0.01$) (Table 10).

Table 10: Comparison of means of attitudes towards STDs before and after the training

	Number	\bar{x}	SD	t	P_value
After the training	100	9.64	4.25		
Before the training	100	7.43	2.97	5.48	0.000

Table 11: Numbers and percentages for awareness about STDs before and after the training

Awareness	No	Before Training (%)	After Training (%)
Awareness among females (n=50)			
1. Were aware of being transmitted with STDs at this time	22	44	100
2. Were aware of the types of infections at this time	16	38	100
3. Were aware of the sources of STD transmission	16	38	92
Average for all		40	97.33
Awareness among males (n=50)			
4. Were aware that their wives were sick with STDs	11	18	92
5. Were aware that they were part of the cause for their wives having infections and recurrences.	5	8	72
6. Were aware of how to help wives who suffered STDs	24	48	92
Average for all		24.67	85.33

Regarding the awareness of *females* of STD transmission *before the training*, 56% of knew that they had STD transmitted infections, 44% knew about the types of infections and 38% knew about the sources of STD transmission. For awareness among *males*, 18% were aware that their wives were sick with STDs, 8% were aware that they were part of the cause for their wives having infections and recurrences; 48% knew how to help their wives who suffered from STDs (i.e. that they had to wash the body and genitalia well before and after having sex and wear a condom on every occasion of sexual intercourse).

After the training, 100% of the *females* knew that they had become infected by STD transmission, 100% knew about the types of infections (candidiasis and trichomoniasis), 92% knew about the sources of STD transmission (inadequate self-cleaning and from the husband). Among *males*, 100% were aware that their wives were sick with STDs, 96% were aware that they were part of the cause for their wives having infections and recurrences; 92% knew how to help their wives who suffered from STDs (that they had to wash the body and genitalia well before and after having sex and wear a condom on every occasion of sexual intercourse).

Table 12: Numbers and percentages for risks of STDs before and after the training

Risks	Before Training		After Training	
	No.	%	No.	%
Risks (Male)				
1. Having sexual intercourse in the past 12 months (n=50)				
Commercial sex workers (CSWs)	1	2	3	6
Bar girls	3	6	5	10
Wives	50	100	42	84
2. Wearing condoms when having intercourse				
CSWs (n=1)	1	100	0	0
Bar girls (n=3)	3	100	0	0
Wives (n=50)	2	4	39	78

The results of data analysis reveal that the risks of *males* before and after the training were *unchanged*. Two percent (2%) and 6% had risks of acquiring STD transmission from having sex with commercial sex workers and bar girls, respectively, 100% of whom wore a condom for each intercourse. Four percent (4%) used a condom

when having sex with their own spouses, which increased to 78% after the training. However, reliable results require a longer time to assess risky behaviors, to obtain precise data and to specify whether there are changes in behaviors and if so, to what extent.

Table 13: Numbers and percentages for STD practices before and after the training

STD practices	Before Training		After Training	
	No.	%	No.	%
Practice (Females)				
1. Self-care before and after having sex (n=50)				
▪ Cleaned genital area before and after intercourse <i>every time</i>	16	32	33	66
▪ Cleaned genital area before and after intercourse <i>only sometimes</i>	32	64	17	34
2. Have requested spouse to use condom (n=50)				
▪ Yes	12	24	42	84
3. Frequency of using condom (n=12) , (n=29)				
▪ For every intercourse	5	41.7	29	69
Males and females				
4. There were discussions about sexual intercourse between spouses (n=100)				
4. There were discussions among spouses about risks of getting STDs transmitted from each other (n=100)	11	11	84	84

According to the results of data analysis regarding the practices of females before the training, 32% of them cleaned the genital area before and after intercourse *every time*, while 64% cleaned *only sometimes*. Twenty-four percent (24%) had

requested their spouse use a condom when having sex. For those who used a condom, 41.7 % used them every time, while 58.3% used them only sometimes. twenty-three percent (23%) of married couples had discussions about sexual intercourse and 11% of them discussed the risks of getting STDs transmitted from each other. After the training, 66% of females cleaned their genital area before and after intercourse every time, and 34% cleaned only sometimes. The percentage requesting their spouses use a condom was 84%. The percentage using a condom every time was 31%. The percentage having discussions among spouses about sexual intercourse increased to 88% and so did the percentage of discussions about the risks of STD transmission to each other, which increased to 92%.

When compared using the T-test, the mean for awareness of STD risk and practices before and after the training, it was found that the mean before the training was 1.48 (SD = 0.37). The mean after the training was 1.4 (SD = 0.73), so that when comparing the summary mean for awareness, risk and practices were not different (P=0.861), as shown in Table 14.

Table 14: Comparison of the mean for STD awareness, risk and practices before and after the training

	\bar{x}	SD	t	p-value
Before the training	1.48	0.37	0.178	0.861
After the training	1.45	0.73		