

## Chapter V

### Discussion and Conclusion

The objective of this study is to test the effectiveness of AIDS education in male craftsman certificate level students at Samutprakan technical college. The score and change of knowledge, attitude and behaviour in condom use when having sexual contact with females were the measurement outcome after AIDS education.

The benefit from this study is expected to give a recommendation on key issues needed to plan appropriate AIDS education programme in the technical college at Samutprakan province.

This was a field trial design in a total of 413 sampled students. The sampled students were stratified according to shifts (morning and afternoon). The convenience sampling was used. The last unit of sampling was classroom. Six classes in each shift were selected (191 students in morning and 222 students in afternoon shift). During the first six months of this study, time was divided into 2 periods. The first period, the experimental group (afternoon shift students) received AIDS education by the college health teacher who had clear idea



and agreed with objective of education as defined by the researcher while the control group, (morning shift students) were exposed to the standard classroom education. During the second period, the morning shift students did not received any formal education about AIDS while the afternoon shift students discontinued the AIDS education programme. The same self-report questionnaire was used at pretest and both post-tests: i.e. at the end of the first and the second periods. This questionnaire did not have the students' name, classroom, number and was carried in envelopes during distribution to and recover from the students. The time required to fill up the questionnaire was thirty minutes.

The SPSS programme was used to analyse the data. The characterization data and the sexual contact behaviour were summarized frequencies and the percentages. The knowledge and the attitude scores were summarized in the means and standard deviations. The unpaired t-test and the Mann Whitney U test were used for the difference between two groups for the continuous data (mean). For the difference between two groups and the difference between two period within one group for the proportion data, the chi-square and McNemar chi-square were used respectively. The paired t-test was used to analyse the differences between two periods within one group for the continuous data. The correlation and the multiple regression were used to analyse the

relationship between the total knowledge score, the total attitude score and the other independent variables.

### The Summary of the Result:

#### 1. The Demographic Characterization Part

1.1. Age: There was a significant difference in the age of students between shift. The students in afternoon shift had mean of age  $16.74 \pm 0.78$  years old. The mean of age in the morning shifted students was  $16.77 \pm 0.84$  years old.

1.2. Last Term Grade Average: For the students in the afternoon shift, the mean of last term grade average was  $2.61 \pm 0.49$  and for the students in the morning shift, it was  $2.72 \pm 0.54$ . There was a significant difference ( $p < 0.05$ ).

1.3. The Students' Salary: The mean salary of the students in morning shift was  $1,263.8 \pm 702.3$  baht. For the of the students in afternoon shift, it was  $1,141.4 \pm 528.4$  baht. There was a significant difference ( $p < 0.05$ ).

1.4. Living Pattern: Most of the students, both in morning shift (98.9%) and afternoon shift, (94.6%) lived with their parents or relatives.

#### 1.5. Use of Media During the Last Four Week:

1.5.1. Newspaper: Most students in both

shifts read almost everyday.

1.5.2. Radio: Most students in both shifts listen to the radio everyday.

1.5.3. Television: The highest percentage of students in both shifts watched television everyday.

1.6. Sources of AIDS Information: Most students in both shifts received the AIDS information mainly from the teachers, the magazines, the televisions, the radios and the newspaper. They received this information a little from their friends, families. For the health personnel, most of students in the afternoon shift received much information while most students in the morning shift received a little information from health personnel.

1.7. The Entertaining Places Visit: There was no significant difference between both shifts in the visits of gay bar, prostitute, and discotheque. For the night club and massage parlor, the students in morning shift had significantly more visits than the afternoon shift.

2. The Knowledge Part: The total score of this part was 17.

2.1. The Comparison between Shift: For the pretest, there was no significant difference between the scores of students in both shifts. The students in the morning shift had an average knowledge score  $12.6 \pm 1.74$ .

The average score of the same part in the afternoon shift was  $12.4 \pm 1.75$ . In the first and the second post-test, the average score of students in afternoon shift was higher than the morning shift. There was a significant difference between the shifts.

2.2. The Comparison within Shift: For the students in the afternoon shift, the average score of the knowledge part at the first post-test was higher than the score at the pretest. There was a significant difference between tests. The score of the same part at the second post-test was a little bit higher than the score at the first post-test. There was no a significant difference between two tests.

For the students in the morning shift, the score of the knowledge part at the first post-test was a little bit lower than the score at the pretest. There was a significant difference between tests. The score of the same part at the second post-test was a little bit lower than the score at the first post-test. There was no a significant difference between tests.

2.3. The Change of the Score: The change of the average score of the knowledge part of the students in the afternoon shift increased through the three tests. The change of the score of the same part of the students in the morning shift decreased through the three tests. There were significant difference between shifts in the change between

the first post-test and the change between the second post-test and the pretest.

3. The Attitude Part: This part had 6 main items. The total score of this part was 120.

3.1. The Comparison between Shifts: For the pretest, there was no significant difference between the average scores of students in both shifts. The students in the morning shift had an average total attitude score of  $96.3 \pm 7.53$ . The score of the same part in the afternoon shift was  $97.1 \pm 8.28$ . In the first and the second post-test, the score of students in afternoon shift were higher in some items than the morning shift. There was a significant difference between shift.

3.2. The Comparison within Shift: For the students in the afternoon shift, the score of the attitude part at the first post-test was a little bit higher than the score at the pretest. There was no a significant difference between tests. The score of the same part at the second post-test was lower than the score at the first post-test. There was a significant difference between tests.

For the students in the morning shift, the score of the attitude part at the first post-test was same as the score at the pretest. The score of the same part at the second post-test was lower than the score at the first post-test. There was a significant difference between



tests.

3.3. The Change of the Score: Both shifts had decreasing changes of the attitude score, except for the change between the first post-test and the pretest of the students of the afternoon shift which tended to increase slightly. For the change of the attitude score of this part between the second post-test and the pretest, the students in the afternoon shift had this change smaller than the morning shift. There was a significant difference between shifts.

4. The Behaviour Part: This part emphasized the sexual contact behaviour.

4.1. The Comparison between Shift: A few of the students in both shifts had ever had sexual contact with males. There was no significant difference between shifts. The students in the morning shift had ever had sexual contact with female more than the students in the afternoon shift. There was a significant difference between shift.

Both the students in the morning shift and the afternoon shift had the similar average age at the first time that they had sexual contact.

There was no a significant difference in the frequency of sexual contact during the last six months between shifts. For the condom using pattern during the

last six months, there was no significant difference between shifts among the students who did not use condom every time when they had sexual contact with females. The most frequently given reasons of the students in both shifts who did not use condom every time were unpleasure, unavailable, the partners were not the prostitutes and use other contraceptions. The most problems of the condom use of the students who used condom at last six months were the broken condom, unpleasure, less lubrication and waste the time.

For sexual contact behaviours during the last two months, there were no significant difference between shifts in their sexual partners, the frequency of their sexual contact and condom using pattern through three tests. One exception was the use of condom every time when they had sexual contact with their girl friends in the second post-test, the percent students in the morning shift who did not use condom every time was higher than the afternoon shift. There was a significant difference between shifts.

4.2. The Difference in Sexual Contact Behaviour Classified by certain characterization variables: The students who stayed with their parents had ever had sexual contact with the female not difference from the students who stayed alone or with their friends. The students who had ever had visited gay bar had a percentage of ever having sexual contact with female higher than the students who had



never visited the gay bar. The same result as the students who had ever visited the night club, massage parlors, and discotheque.

The students who had ever had sexual contact with female had salaries higher than the students who had never had sexual contact with female. There was a significant difference between groups.

4.3. The Difference Within Shifts: There were no significant difference of sexual behaviours during the last two months between tests with each shift with respect to their sexual partners, the frequency of their sexual contact and their condom use pattern.

5. The Correlation between the Total Score of the Attitude and the Total Score of the Knowledge Part in Each Shift: In every test of both shifts except the first post test of the afternoon shift were the positive correlations, when the total score of the knowledge increase the total score of the attitude also increase. There relationship was significant.

5.1. The Difference in the Slope of the Equation Predicting the Correlation between the Total Knowledge and Attitude Scores between Tests in Each Shift:

For the afternoon shift, there was no difference in this correlation between the pretest and the first post-test. However, there were significant difference in the

correlation between the first post-test and the second post-test and between the pretest and the second post-test, in the afternoon shift. The slope of the correlation equation between the total score of the knowledge part and the total score of the attitude part at the second post-test was steeper than the slope of the same correlation at the pretest and at the first post-test in the afternoon shift. For the morning shift, there were no significant difference in any cases.

6. The Relationship between the Independent Variables and the Dependent Variables at Pretest:

6.1. The Knowledge Part: The independent variables (i.e. the last term grade average, the score of the attitude toward condom use, the magazine as the source of the information about AIDS) can weakly predict the total score of the knowledge. The regression equation was significant.

6.2. The Attitude Part: The independent variables (i.e. the last term grade average, the total score of the knowledge part, the teacher at the college as the source of the information about AIDS) can jointly but weakly predict the total score of the attitude. The regression equation was significant.

7. The Difference in the Rate of Risky Behaviour of HIV Infection During the Last Two Months Within and between Shifts: This item was corresponded to the primary question. For the students in the both shifts, the rate of the risky sexual behaviour of HIV infection at the pretest was not significantly difference from the rate of this behaviour at the first post-test. For the comparison between shift at the pretest and the first post-test, there were no significant differences in the rate of risky behaviour between shifts.

#### The Discussion of the Result of the Study

The data analysis and the summary suggest the following discussions.

1. The Sources of AIDS Infection: Most of the students in both shifts received much AIDS information from the radio and the television. This corresponded with the frequency of media use during the last four weeks. Most of the students in both shifts listened to the radio and watched television everyday.

#### 2. The Knowledge Score

##### 2.1. The Comparison between Shifts at Each Test:

2.1.1. The total knowledge score at the pretest was not significant different between shifts. Because the students in both shifts were similar in the

personal characteristics such as similar age, graduation from the junior high school, staying in the same province, receiving the similar news, etc.

2.1.2. The total score of the knowledge part at the first post-test of the students in the afternoon shift was higher than the score of the students in the morning shift. This suggest that AIDS education that the students in the afternoon shift received might be effective in increasing the knowledge about AIDS among in these students.

2.1.3. The total score of the knowledge part at the second post-test of the students in the afternoon shift was higher than the score of the students in the morning shift. It is possible that after the students in the afternoon shift received the AIDS education programme, they become interested and alert about AIDS news. The another reason was, there were a lot of mass medias that promoted about AIDS in nowadays, so it was convenient for the students to seek the new information about AIDS.

## 2.2. The Comparison Within Shift:

2.2.1. The score of the knowledge part of the students in the afternoon shift at the first post-test was higher than the pretest. This result suggested that the AIDS education can help to increase the knowledge about AIDS in these students.

2.2.2. The score of the knowledge part of the students in the morning shift at the first post-test was a little lower than the score at the pretest. The result suggested that there was no the formal teaching about AIDS in these students and they were not interested in acquiring more the knowledge about AIDS (this item was summarized in the attitude toward self-prevention in the HIV infection part).

2.2.3. The score of the knowledge part of the students in both shifts at the first post-test were not significantly different from the scores at the second post-test. This result suggested that first, there were a lot of medias giving information about AIDS; and second, the time between tests might be too short for any real change to occur.

### 3. The Attitude Part

#### 3.1. The Comparison between Shifts at Each Test:

3.1.1. The total score of the attitude part at the pretest was not significant different between shifts. Again, the students in both shifts might similar in their characteristics such as similar age, graduation from the junior high school, staying in the same province, receiving the similar news, etc.

3.1.2. The attitude score towards the sexuality in the teenager of the students in the afternoon shift was higher than in the morning shift. The other attitude parts were not different between shift. This result suggested that the students in the afternoon shift started to recognize that the sexual contact might be one of mode transmission of HIV infection. The time duration was too short to form the other attitude.

3.1.3. The attitude score towards self-prevention of HIV infection, the attitude toward AIDS patients, the attitude toward the condom use and the total attitude at the second post-test of the students in the afternoon shift were higher than the score of the students in the morning shift. This result suggested that because of the AIDS education that the students in the afternoon shift had received, they had more positive with attitude about AIDS. The programme with longer duration of education might support them to have more interest, recognition and being alert about AIDS news to form better attitude.

### 3.2. The Comparison Within Shift

3.2.1. There was no significant difference in the attitude score between the pretest and the first post-test in students both in the morning shift and the afternoon shift. This result suggested that for the students in the afternoon shift, it was possible that the



time for observation between the first post-test and the pretest was too short or the measurement might not be sensitive enough. So, the differentiation of the attitude scores between tests did not show.

For the students in the morning shift, they did not receive the new AIDS education programme and also the duration between test was too short to see a difference of the attitude scores.

3.2.2. The attitude score of the second post-test was lower than the score of the first post-test in both shifts. The change in the attitude score between tests in each shift decreased and much more so in the morning shift. This result suggested that after the students in the afternoon shift received the AIDS education programme, their knowledge increased. They knew more of the detail that HIV infection was very dangerous. Nowadays there was no treatment and AIDS patients will die through the severe symptoms, so they might be afraid of the AIDS patients and believed that they should be distant from this syndrome. For the students in the morning shift, they might think that AIDS was not new any more. The government and news media had too much propaganda about the AIDS information from everywhere. They might feel bored about the repeated promotion of AIDS information. They might feel that they hardly had a chance to contact the HIV infection. Because of the support from the attitude towards self-prevention of

HIV infection, that the students in the morning shift had a decreasing score of this attitude part.

Looking from another angle, we might also suggest that the coverage of information about AIDS by the parties involved including the government and the media tended to have a negative impact on the attitude about AIDS in the general population. Therefore, a smaller decrease in the attitude scores among students in the afternoon shift may imply that the education programme introduced had a certain protective effect against the negative impact of the news media.

#### 4. The Behaviour Part

4.1. The students in the morning shift had ever had sexual contact with female more than the students in the afternoon shift. The factor which might contribute to this result were the students in the morning shift had more salary than the afternoon shift. They also had ever visited the night club and the massage parlor more than the students in the afternoon shift.

4.2. The students who had ever visited gay bar, night club, massage parlor, discotheque had a percentage of ever having sexual contact with female higher than the students who had never visited these places. Because these entertainment places had many kind of people and many of them are teenagers. It is natural for the teenagers to do

the exciting and challenging thing. Teenagers also had the sexuality drive by nature. So, they had more chance to come into contact with the pornographic activities, films and objects more than the students who had never visited there.

4.3. The students who had ever had sexual contact had more salary than the students who had never had sexual contact. One reason might be because they have more money to spend for their girlfriends or to visit the entertainment places.

4.4. The frequency of the sexual contact with the female was not significant difference both between and within shift. Because the students was in the teenager that has predisposing biological, increasing sexual hormones. Most of them had sexual contact with their girl friends, and they though that their girl friends did not have HIV infection.

4.5. The rate of the risky sexual behaviour of HIV infection (these discussion were the answer of the primary question) was not significantly different both between and within shifts at each test. Their behaviour of "did not use condom" did not change during this study. This may be partly explained by the fact that the behaviour change was very difficult to occur. People are used to their old behavioral pattern. They believed in their

partners; i.e. girls who they contact did not have HIV positive. They believed more in such things as the lack of pleasure when they used condom. Confidence in the "cleanliness" of their girl friends plus the inconveniences associated with the use of condom might be jointly responsible for the continuation of "unhealthy" behaviour.

5. The Correlation between the Total Score of the Attitude Part and the Total Score of the Knowledge Part:  
Both the morning shift and the afternoon shift had the positive correlation between the total score of attitude and the total score of the knowledge at every test. Because when the knowledge increased the students thought more and had more idea. So, the knowledge increase resulted in the increase of attitude towards AIDS and HIV infection.

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6. The Relationship between the Independent Variables and the Dependent Variables at the Pretest:

6.1. The last term grade average, the score of the attitude toward condom use and the magazine as the source of information about AIDS could jointly predict the total score of the knowledge in regression analysis. For the last term grade average, the students who had the high grade average were usually interested in the news, new knowledge and new information. The AIDS information was still promoted by a lot of the medias, so they can get more knowledge about AIDS from the media. For the attitude score towards condom use, the students who recognized the value of the condom use, they were aware of HIV infection, so they tried to add more the AIDS knowledge about the appropriate ways to use condom to prevent themselves. For the magazine as the source of information about AIDS, the students who were interested in AIDS information could get much information about AIDS, so they increased the AIDS knowledge from the magazine.

6.2. The last term grade average, the total knowledge score about AIDS and the teacher as a source of information about AIDS could jointly predict the total attitude score. For the last term grade average, the students who had high grade average usually know much information, including AIDS information, so they recognize that AIDS was a very severe syndrome, they had many ideas

about AIDS. For the total knowledge score about AIDS, as the predictor of attitude score the reasons might be the same as the reasons for last term grade average as a predictor. For the teacher at the college as a source of AIDS information as a predictor, the reason might be the same as the reasons why the last term grade average was a predictor. They had more information about AIDS that made them think more about it. The teacher could talk with the students in the class or out of the class. The students could ask the teacher about the AIDS questions about which they were confused, so they could become clearer and more alert about AIDS.

The Summary of the Students' Opinions From the Open End Questions

1. The Measures to be Taken for Prevention

include :

- An increased promotion about AIDS in the television and the radio (5%).

- A strategy to approach the HIV infected person and communicate to them the strategies for prevention of the spread of HIV (2%).

- An increased promotion about AIDS information to the public (13%).



- An emphasis on the teenager group, ie Increased promotion of AIDS information in this group (10%).

- An strategy to ensure the adequacy of AIDS information (33%).

- A plan to close or reduce the prostitute workplaces (13%).

2. Public Promotion to Prevent AIDS Infection:

- An increased the promotion about AIDS prevention strategies in television and radio (20%).

- A strategy to increase the promotion about AIDS prevention coverage all over the country (49%).

- An expansion of the AIDS education prevention from the primary schools to the universities (16%).

3. The Feeling about the Adequacy of AIDS Information in Their College:

- Enough (17%).

- Not enough (60%).

- The need for exhibitions and seminars about AIDS for teachers (2%).

This study dealt with the adaptation of the MOPH AIDS education programme which should result in a decrease in the rate of the risky sexual behaviour of HIV infection. The emphasis was put on the pattern of condom using behaviour during last two months among the students. The main reason for this emphasis was that using condom every time of sexual contact can prevent HIV infection. That meant the rate of the risky sexual behaviour of HIV infection should be decreased.

This study has shown a statistical significant increase in the level of knowledge of the students who were in the experimental group. In addition when the education was withdrawn after the experimental period, there was a sustainability of knowledge of the students. However, it was not possible to show a statistical significant reduction in the rate of the risky sexual behaviour leading to HIV infection. This did not mean there was no need for adaptation of AIDS education programme. Being unable to show a significant decrease of the rate of the risky sexual behaviour of HIV infection in this study may result from many factors. To change the behaviour of condom use, it was not up to the teacher and education programme only, but it was also up to the students themselves, the environment, their friends, the medias and time. In addition, the event rate (condom use) observed in the study was so low that the available sample size was not able to detect a significant

difference even if there is one.

### The Limitation of This Study

In the real situation, everything did not go along according to the plan. Many factors were operating such as time, man, the environment of the study area. These following items were the limitation of this study.

1. The convenience sampling was used. Because of the lack of health teachers to participate in this study, only one health teacher was recruited. A formal time schedule of the college, this health teacher and the researcher had to be adapted to get the sample. A change of some class schedules or a request for some class time from other teachers had to be made to be able to teach this AIDS education programme. So, a random sampling could not be used in this study. A convenience sampling is a non-probability sampling, and therefore limits its generalization.

2. The limited amount of time available was another limitation of this study. This study started in October 1991 and finished in March 1992. During this period, the college and students had a lot of activities such as boy scout activity, college's game, New Year party and when the examination's season came, a lot of the students did not come to the college, they stayed at home to read the books. So, the time schedule of this study had to be postponed on

some occasions to fit the changing circumstances.

3. The lack of the health teacher was also another limitation of this study. He had to teach the AIDS education programme to the six classes (about 200 students) of the students in each shift. And he also had other special duty to join with the college activities, so many times, this study was postponed. The study added extra load on his direct duty.

4. The same self-reported questionnaire was used in all three tests (one pretest and other two post-test) of this study. The students was the teenagers and they encountered the repeated questionnaire. They became bored to complete it, eventhough it was cut some parts. This resulted in a loss of the statistical power because of the loss in the numbers of respondents and an increase in the incomplete questionnaires.

5. This study focused on the sexual behaviour and condom use. This item was very sensitive, especially in the teenagers who loved to try the new things and they might have to keep some secrets to themselves. So, the self-reported questionnaire was not a good instrument to measure the fact about these behaviour.

6. This study could not detect the difference of condom use between two groups of the students. An important defect was an inadequate sample size. The data of the pilot

study was used in sample size calculation. It was possible that the students who were involved in the pilot study had higher event rate of condom use than the other students. So, when this actual study was done, the sample size was inadequate to answer the primary question because the event rate was too low with respect to the available sample.

### The Suggestion

These suggestions were summarized from the data of the close and open end questionnaires and from the discussion with the teacher and the students after educational sessions using the materials prepared for the study.

### The Health Personnel

1. They should frequently provide seminars and the activities about AIDS and should make a good relationship with the teacher and the students in the college.

2. They should cooperate with the college to discuss about how to motivate the students to be alert about the update of AIDS news and to recognize the needs and methods of self prevention from HIV infection. The adolescents tend not to seek medical care. When in contact with the health clinics, they were resistant to services unless there was an assurance of confidentiality,

understanding, and a non-judgmental attitude toward them. Studies of how to improve the motivation of the students to seek the AIDS information and how to increase compliance of these students are greatly needed.

- The Technical College Teachers

1. They should promote and motivate the students to express themselves such as provision of opportunities to help and make the exhibition or the activities related to the self-prevention from HIV infection such as role play or AIDS assistant clubs.

2. They should always provide seminars, promotion activities and good medias about AIDS which are motivative, interesting or can produce good fun such as the videos from abroad. These will help students to establish a firm knowledge base on AIDS.

3. They should frequently invite the experts or the health personnel including local and outside consultants to give more information or join with the other sectors to produce the exhibition about AIDS as an education in the college.

4. They should make a good relationship with the students and be a good example to the students, so that they will be effective in suggesting to them about self-prevention from HIV infection. There was still a great deal



to be learned about linking adolescent cognitive level, motivational structures, and active learning techniques with informational content in the way that can catch and hold the students' attention and teach them what they need to know to avoid harmful behaviours. The teacher should talk to the students and listen to their problems and search for the reasons for the students' behaviour. Then, the teachers should help the students to see the reasons for their behaviours and ask the students to give their own idea for solving the problems. The teachers help the students to look at their ideas so that they could see which were the most useful and the simplest to put into action. Then, the teachers can encourage them to choose the idea that best suited to their circumstances.

5. The teacher should teach the students about sex education. From an educator's perspective, because of the unavoidable discussion of sex, school AIDS education may not be given a very strong support. It is potentially too controversial and, hence, easy to dismiss. At issue was not the teaching about AIDS, but teaching about sex, and the familiar excuses are heard: "it is culturally unacceptable", "it is too sensitive/controversial", etc. At least, it can desensitize a sensitive issue for the teacher to talk about condoms and more so, to demonstrate its use. One of the most important outcomes of the teaching activity is that teachers become more at ease with using other words

to represent the words like penis, intercourse, etc. words they would normally use with embarrassment. This type of activity, along with discussions during the workshop, will help the teachers to teach sensitive topics without embarrassment, because as they use the terms and hear them used by others, the terms become gradually less "sensitive".

6. The teachers should keep abreast with the AIDS update information and motivate students to be interested in the update AIDS information as well.

- The Students:

1. The students should always be alert about the update of AIDS information.

2. They should develop and maintain a good relationship with the teachers and the health personnel to be familiar with them and to acquire more information and recognition about AIDS.

It is important that AIDS education should become "institutionalized", and not treated as a "crash" programme or "campaign" to be done for a brief period and then allowed to fade into oblivion.

This study suggested that more and maybe different kinds of AIDS education is necessary. The knowledge alone was not enough in developing responsible behaviours, the students must be presented with real-life situations,

explore their own values and feelings, understanding the consequences of alternative actions, make decisions, and even practice communicating these decisions; especially in Memorandum relation to the sexuality issues.

#### The Recommendation for the Future Study

1. Factors influencing a change in the self-prevention behaviour from HIV infection in these vocational students should be studied.

2. Appropriate medias, activities and the modules that can motivate these students to change of their behaviours leading to self-prevention from HIV infection need to be developed, tested and disseminated to appropriate target group.

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