

**DEVELOPMENT OF HEALTH PROMOTION PROGRAM
BASED ON SOCIAL AND EMOTIONAL LEARNING CONCEPT
FOR REDUCING RISKY SEXUAL BEHAVIORS IN UPPER
SECONDARY SCHOOL STUDENTS***

Pongnatee Sattayathewa¹

Aimutcha Wattanaburanon²

Noy S. Kay³

Abstract: The purposes of this research were 1) to develop the health promotion program based on the social and emotional learning concept for reducing risky sexual behaviors in upper secondary school students in Thailand 2) to study the effects of the health promotion program based on the social and emotional learning concept on risky sexual behaviors in upper secondary school students in Thailand. The health promotion program was developed by using the social and emotional learning concepts. Then, the program was used for studying the effects on risky sexual behaviors in upper secondary school students in Thailand. With the purposive random sampling, a high school in Bangkok was selected and the sample (n = 60) was divided equally into two groups, the experimental group (n = 30) were assigned to participate under the health promotion program and the other students in control group (n = 30). The research findings were as follow; 1) a developed health promotion program based on the social and emotional learning concept for reducing risky sexual behaviors consisted of concept, 6 intervention activities and evaluation. 2) The effects of applying the health promotion program on risky sexual behaviors in experimental group were found lower than before at the .05 level of significance and found lower than students in control group at .05 the level of significance as well.

Keywords: Health Promotion, Social and Emotional Learning, Sex Behaviors.

* This dissertation was funded by the 100th Anniversary Chulalongkorn University Fund, the 90th Anniversary of Chulalongkorn University Fund (Ratchadaphiseksomphot Endowment Fund) and Overseas Research Experience Scholarship for Graduate Student.

1 Ph. D. Candidate in Health Education and Physical Education, Faculty of Education, Chulalongkorn University, Thailand.

saintboyza@hotmail.com

2 Ed. D., Associate Professor, Health Education and Physical Education, Faculty of Education, Chulalongkorn University, Thailand.

aimutchaw@gmail.com

3 H.S.D., Clinical Professor, Applied Health Science, School of Public Health, Indiana University, USA.

noyskay@indiana.edu

Introduction

Advances in technologies, communication, information awareness, and integration of foreign cultures have fostered unhealthy changes in sexual values and behaviors for the Thai youths lately. These values are frequently conflicting with the refined Thai cultures and traditions, for example sexual relations and appearance of sexual behavior in the public places like community or school. Previous studies indicate that freedom and curiosity are the key personalities of the youngsters. These two features often influence their self-confidence, value, and courage, which result in behavior construed as sexual risks. Today, the average age of Thai teenagers having sex for the first time is lowering. In the year 2009, Thai youths who had sex for the first time were reported at the age of 15-16 years. Places for their first-time sex relations were their own home or friend's residence (Control, 2011; Pothisita, 2004).

Social and emotional learning is a learning process that focuses on mental health of the learners. Various techniques and methods are used to promote and rehabilitate many aspects of mental health including social attribute, emotional quality, life skills, and fail proof decision making property. The Collaborative for Academic, Social, and Emotional Learning has identified five social and emotional learning components as: 1) Self-awareness, 2) Self-management, 3) Social awareness, 4) Responsible decision making, and 5) Relationship skills. These components help learners to gain the ability to manage their emotions, to be attentive and considerate to others, to be responsible for their own decisions, to develop positive relationships with others, and to cope with the situations effectively. The previous studies also reveal that social and emotional learning can promote learners' physical and mental health development. Moreover, it can shield them from substance abuse, social isolation, and other risks as well (CASEL, 2010; Doll, 1998; Greenberg, 2003; Kenneth W. M., 2008).

Problems from sexual risk behaviors associated with stresses that directly affect learners' health and their ability to learn arise from their emotional management ability and relationship skills. The Basic Education Core Curriculum B.E. 2551 (A.D. 2008) vitally determines high school graduates' key competencies as to acquire problem solving capability, life skills, along with good physical and mental health. Thus, the researcher is interested in developing a health promotion program based on social and emotional learning concept for reducing risky sexual behaviors as well as guiding teachers in promoting activities on health issues in line with social and emotional learning concept qualified for upper high school students' sexual risk behaviors reduction.

Methods

Participants

The health promotion program was conducted in a secondary school in Thailand which was selected by purposive random sampling. The student from 10th -12th grade was taken stress test and risky sexual behaviors tests (knowledge, attitude and behaviors test) then only 60 students who have moderate stress and moderate or high risky sexual behaviors were chosen for this experiment. Then, the students were divided randomly into two groups; experimental group (n = 30) and control group (n = 30). There was no significant difference in stress score and risky sexual behaviors score in the pretest

between experimental group and control group ($p > 0.05$). Only the experimental group joined the health promotion program.

Tests

The first test, the stress test was Suanprung Stress Test-20 which had good content validity, concurrent validity and reliability (Suwat, 1997). Built from related research and literatures, the risky sexual behaviors tests were consisted of knowledge, attitude and behaviors tests. Also, the tests had great validity and reliability, the IOC were rate by 7 experts as 0.95, 0.98 and 0.97 and the reliability were analyzed as 0.83, 0.82 and 0.81 respectively in the three tests.

Ethics

The development of health promotion program based on social and emotional concept for reducing risky sexual behaviors in upper secondary school students was approved by the Ethics Committee of Chulalongkorn University. All the written consent forms were collected from every participants.

Health Promotion Program based on Social and Emotional Concept

The development of health promotion program based on social and emotional concept for reducing risky sexual behaviors in upper secondary school students was divided into 4 phases. In first phase, the theories, frameworks and researches related to Social and Emotional Learning concepts were studied for developing the health promotion program. Second phase, all the theories and literatures collected from the first phase were analyzed into a concept, activity and evaluation then the health promotion program was sent to 7 experts to check for the content validity. After the index of congruence met its standard, the health promotion program was used for the experimental phase.

Data Analyses

All the data from the tests were stored before and after the experiment and were analyzed by the Statistical Package for the Social Science for Window (SPSS). All data were double checked to abstain errors. The results of applying the health promotion program were evaluated at pre-intervention and post-intervention. Evaluation before and after participating in the health promotion program in experimental group in score of risky sexual knowledge, attitude and behaviors were performed by a t-test for dependent sample. The score of risky sexual knowledge, attitude and behaviors between the control group and the experimental group were performed by a t-test for independent sample. All the statistics were agreed as p -value < 0.05 for statistical significance.

Results

The Development of Health Promotion Program Based on Social and Emotional Learning Concept

The health promotion program based on social and emotional learning concept for reducing risky sexual behaviors in upper secondary school students is composed of

the five elements of social and emotional learning concepts, which are 1) Self-awareness 2) Self-management 3) Social awareness 4) Responsible decision making 5) Relationship skills, together with the six learning activities including 1) Introduction to stress 2) Love in teenagers 3) Self-realization 4) Health promotion counselling 5) Go and emotional management 6) Camping and evaluation. This health promotion program meets the standard of the quality control by the experts as its index of congruence (IOC) is 0.87. The duration of the health promotion program was eight weeks. The objectives of six activities is shown in Table 1.

Table 1: The Objectives of Six Activities in The Health Promotion Program Based on Social and Emotional Learning Concept

Activity	Objective of activity	Social and emotional objective
1. Introduction to stress	To provide the students with the knowledge about stress and how to manage stress properly	1) Self-awareness, 2) Self-management and 3) Social awareness
2. Love in teenagers	To promote the students to perceive the nature of problems and impacts of inappropriate sexual behaviors	1) Self-awareness, 2) Social awareness and 3) Relationship skills
3. Self-realization	To induced the students to see the value in themselves	1) Self-awareness, 2) Self-management and 3) Responsible decision making
4. Health promotion counselling	To provide the students with the guidance on the health promotion according to their age	1) Self-awareness, 2) Self-management and 3) Social awareness
5. Go and emotional management	To promote the thinking process, planning strategy, systematic thoughts.	1) Self-management, 2) Responsible decision making and 3) Relationship skills
6. Camping	Comprised of various sub-activities such as sexual knowledge guidance, adventure and recreational activities. These activities help establish the self-learning process and promote all essential skills such as thinking, knowledge and practice skills.	1) Self-awareness 2) Self-management 3) Social awareness 4) Responsible decision making and 5) Relationship skills

The Results of Applying the Developed Health Promotion Program Based on Social and Emotional Learning Concepts in Experimental Group

A comparison of pretest and posttest average scores on stress, sexual behavior knowledge, sexual behavior attitudes, and risky sexual behaviors from an experimental group of students is shown in Table 2.

Table 2: The Results of Applying the Developed Health Promotion Program Based on Social and Emotional Learning Concepts on Experimental Group

	Max Score	n	Pre-test		Post-test		t	p
			\bar{X}	S.D.	\bar{X}	S.D.		
Knowledge	20	30	13.77	2.40	16.50	1.83	-4.83	0.00*
Attitude	75	30	40.23	5.56	53.83	6.25	-8.99	0.00*
Risky Sexual Behaviors	60	30	35.47	4.59	29.00	4.29	5.60	0.00*

* The difference of mean scores between pre-test and post-test was statistically significant ($p < 0.05$).

Table 2 indicates that the average scores of sexual behaviors knowledge and sexual behavior attitudes of the experimental group of students are at statistical significance level of .05 higher after receiving the health promotion program. The pretest average score on sexual behavior knowledge is 13.77 whereas the posttest is 16.50. The pretest average score on sexual behavior attitudes is 40.23 while the posttest is 53.83.

The average scores of risky sexual behaviors of the experimental group of students are at statistical significance level of .05 lower after receiving the health promotion program. The pretest average score on risky sexual behaviors is 35.47 while the posttest is 29.00.

The Comparison of Applying the Developed Health Promotion Program Based on Social and Emotional Learning Concepts Between Experimental Group and Control Group

A comparison of pretest and posttest average scores on sexual behavior knowledge, sexual behavior attitudes, and risky sexual behaviors between the experimental group and the control group that did not receive the health promotion program is shown in Table 3.

Table 3: The Comparison of Average Scores after Applying the Developed Health Promotion Program Based on Social and Emotional Learning Concepts between Experimental Group and Control Group

	Experimental Group (n=30)		Control Group (n=30)		t	p
	\bar{X}	S.D.	\bar{X}	S.D.		
Knowledge	16.50	1.83	14.43	1.54	-4.71	0.00*
Attitude	53.83	6.25	38.70	4.99	-10.36	0.00*
Risky Sexual Behaviors	29.00	4.29	42.57	6.12	9.93	0.00*

* The difference of mean scores between experimental group and control group was statistically significant ($p < 0.05$).

Table 3 reveals that the posttest average scores of risky sexual behaviors of the experimental group of students who received the health promotion program are at statistical significance level of .05 lower than those of the control group that did not

receive the health promotion program. The posttest average score on risky sexual behaviors for the experimental group is 29.00 compared to 42.57 of the control group.

The posttest average scores of sexual behaviors knowledge and sexual behavior attitudes of the experimental group of students who received the health promotion program are at the statistical significance level of .05 higher than those of the control group that did not receive the health promotion program. The posttest average score on sexual behavior knowledge of the experimental group is 16.50 compared to 14.43 for the control group. The posttest average score on risky sexual behaviors of the experimental group is 53.83 compared to 38.70 of the control group.

Discussion

The Development of Health Promotion Program Based on Social and Emotional Learning Concepts

The health promotion program based on Social and Emotional Learning concept for reducing risky sexual behaviors in upper secondary school students is composed of the five elements of social and emotional learning concepts, which are 1) Self-awareness 2) Self-management 3) Social awareness 4) Responsible decision making 5) Relationship skills, together with the six learning activities including 1) Introduction to stress 2) Love in teenagers 3) Self-realization 4) Health promotion counselling 5) Go and emotional management 6) Camping and evaluation. This health promotion program meets the standard of the quality control by the experts as its index of congruence (IOC) is 0.87. Hence, the five elements of social and emotional learning concepts positively affected the students engaging in the health promotion program. The students positively changed their knowledge and attitude and reduce their risky sexual behaviors. The result is in accordance with the research conducted by Marrell et al., (2008), concerning the evaluation on the students' knowledge of society, emotion and emotional disorders. The findings suggest that the score of the students' social and emotional knowledge was significantly higher. Their social and emotional disorders was significantly reduced ($p < 0.5$). Furthermore, Caldarella et al., (2009) studied the development of the students in grade 2 regarding their social and emotional learning. There are two independent variants which was the social and emotional learning, as well as four dependent variants which was desired covert behaviors, desired overt behaviors, demonstration of desired behaviors to others, and emotions. The scores of the students' desired covert behaviors, desired overt behaviors, and demonstration of desired behaviors to others are significantly higher than their own score before the experiment and was also significantly higher than the score of those in the controlled group ($p < 0.5$).

The Mean Score of Risky Sexual Behaviors of The Students Who Were Participated in The Health Promotion Program Based on The Social and Behavior Learning

According to the researcher's experience with the first activity – “Introduction to stress”, this activity is suitable for students since most of them suffered from the stress concerning the physical, mental and emotional changed, as well as external factors which were socio-economic factors, academic competitions and expectations from parents. The experiment showed that stress truly relates to the risky sexual behaviors

(Beth, 2001). When the students were less stressful, their risky sexual behaviors decreased accordingly.

The second activity, "Love in Teenagers" promoted the students to perceive the nature of problems and impacts of inappropriate sexual behaviors, for example, sexual intercourse during school age, inappropriate sexual behaviors to the opposite gender, and unprotected sex. This activity deployed the media which raised the students' awareness resulting in the change in their attitude and, ultimately, the change in their sexual behaviors in accordance with the regime against risky sexual behaviors which aim to promote the proper knowledge about sex in teenagers. This proper knowledge is the main factor which helps lower the potentially risky sexual behaviors in teenagers (Cartagena, 2006; Magnani, 2005; Roberts, 2005; Zamora, 2006).

The third activity, "Self-realization", induced the students to see the value in themselves. Several studies indicate that when ones realize the value and abilities in themselves, they tend to have less potentially risky sexual behaviors (Magnani, 2005; Nopparat, 2000; Samul, 2002). Therefore, the realization of value and abilities in one's self could help lower the potential of risky sexual behaviors accordingly.

The fourth activity, "Health promotion counseling", provided the students with the guidance on the health promotion according to their age, as well as suggestions for their sexual wellness, which help lower the risky sexual behavior. This activity relates to the concept of the environmental development for promoting appropriate sexual behaviors by giving them sexual knowledge based on appropriate communication and guidance (Gallegos, 2007; Mbugua, 2007).

The fifth activity is "Go and emotional management". Go is a board game sport which promotes the thinking process, planning strategy, systematic thoughts, as well as the reflection for daily life concerns. Since of the preventive way to reduce risky sexual behaviors in teenagers is to promote their analytical thinking (Cartagena, 2006; Magnani, 2005; Roberts, 2005; Zamora, 2006) the students could enhance their analytical thinking skills when attending the "Go and emotional management" activity.

The sixth activity, "Camping", comprised of various sub-activities such as sexual knowledge guidance, adventure and recreational activities. These activities help establish the self-learning process and promote all essential skills such as thinking, knowledge and practice skills. The six activities of the health promotion program are in accordance with the Social and Emotional Learning concepts resulting in promotion of the students' Self-awareness, Self-management, Social awareness, Responsible decision making and Relationship Skills. This could help lower risky sexual behaviors as stated in the research which focused on the evaluation of social, emotion and emotional disorders of the students (Merrell, 2008). It was found that the score of Social and Emotional Learning was higher than before the experiment in terms of statistical significance, and could significantly lower the social and emotional disorders ($p < 0.05$) Furthermore, the research involved with the development of social and emotional learning of students in grade 2 regarding their social and emotional learning (Caldarella, 2009). There was two independent variants which was the social and emotional learning and four dependent variants which are desired covert behaviors, desired overt behaviors, demonstration of desired behaviors to others, and emotions. The scores of the students' desired covert behaviors, desired

overt behaviors, and demonstration of desired behaviors to others are significantly higher than before the experiment ($p < 0.05$).

The Mean Score of Risky Sexual Behaviors of The Students in The Experimental Group Who Participated in The Health Promotion Program Based on Social and Emotional Learning Concepts, Comparing to Those Who Did Not Participate in The Health Promotion Program

According to the health promotion program based on social and emotional learning concepts, the students participated in the six activities including 1) Introduction to stress 2) Love in teenagers 3) Self-realization 4) Health promotion counselling 5) Go and emotional management 6) Camping and evaluation. These activities promote the students' Self-management, Self-awareness, Social awareness, Responsible decision making and Relationship skills which are the elements of Social and Emotional Learning. These activities lower the students' risky sexual behaviors comparing to those who did not participated in the health promotion program based on social and emotional learning concepts. The result of this experiment corresponded with the research which studied the result of the Social and Emotional Learning Program towards the perception of sickness problems and information among teenagers in the residential treatment center, the United States of America. After the experiment, it was found that the score of the dependent variants, including emotional, social and behavioral manifestation skills, in the treatment group has significantly increased in terms of statistic ($p < 0.05$), comparing to the score of the untreated group which hasn't significantly changed ($p > 0.05$) (Isava, 2006).

References

- Beth, A., Kotchick., Anne Shaffer., Rex Forehand. (2001). Adolescent Sexual Risk Behavior: A Multisystem Perspective.. *Clinical Psychology Review*, 21(4), 493-519.
- Caldarella, P., et al. (2009). Promoting social and emotional learning in second grade students: A study of the strong start curriculum. *Early Childhood Educational*, 37, 51-56.
- Cartagena, R. G., Veugelers, P. J., Kipp, W., Magigav, K., & Laing, L. M. (2006). Effectiveness of an HIV prevention program for secondary school students in Mongolia. *Journal of Adolescent Health*, 39, 925e929-925e916.
- CASEL. (2010). The benefits of school-based social and emotional learning programs: Highlights from a major new report. Chicago, IL: Collaborative for Academic, Social and Emotional Learning. Retrieved November 13 2014
- Control, D. o. D. (2011). The percentage of Condom use. *Fact Sheet*(1).
- Doll, B., Lyon, M.A. (1998). Risk and Resilience: Implications for the delivery of educational and mental health services in schools. *School Psychology Review*, 27(3), 163-170.
- Gallegos, E. C., et al. (2007). Sexual communication and knowledge among Mexican parents and their adolescent children. *Journal of the Association of Nursing in AIDS care*, 18(2), 28-34.

- Greenberg, M. T., et al. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. *American Psychologist*, 58(6-7), 466-474.
- Isava, D. M. (2006). *An investigating the impact of social and emotional learning curriculum on problem symptoms and knowledge gains among adolescents in a residential treatment center*. (Doctor of Philosophy), Oregon.
- Kenneth W. M., e. a. (2008). Social and Emotional Learning in the Classroom: Evaluation of Strong Kids and Strong Teens on Students' social-Emotional Knowledge and Symptoms. *Journal of Applied School Psychology*, 24(2), 209-224.
- Magnani, R., et, al. (2005). The impact of life skills education on adolescent sexual risk behaviors in KwaZulu-Natal, South Africa. *Journal of Adolescent Health*, 36, 289-304.
- Mbugua, N. (2007). Factors inhibiting educated mothers in Kenya from giving meaningful sex-education to their daughters. *Social Science & Medicine*, 64, 1079-1089.
- Merrell, K. W., et al. (2008). Social and emotional learning in the classroom: Evaluation of strong kids and strong teens on students social-emotional knowledge and symptoms. *Journal of Applied School Psychology*, 24(2), 209-224.
- Nopparat, P. (2000). *Factors Related of Sexual Risk Behaviors among High School and Vocational Students*. (M.N.S. Medical and Surgical Nursing), Chiangmai University.
- Pothisita, C. (2004). The risk of pre-married sexual intercourse in Thai adolescents : the influence of personal factor and family factor. *Population and Social Science Research*.
- Roberts, A. B., Oyun, C., Batnasan, E., and Laing, L. (2005). Exploring the social and cultural context of sexual health for young people in Mongolia: Implications for health promotion. *Social Science & Medicine*, 60, 1487-1498.
- Samul, S. (2002). *A study of sexual value and risk behaviors among students in private universities, Bangkok Metropolis*. (Master of Education in Health Education), Chulalongkorn University.
- Zamora, A., Romo, L. F., and Au, T. K. (2006). Using biology to teach adolescents about STD transmission and self-protective behaviors. *Applied Developmental Psychology*, 27, 109-124.