

## Section 8 : Health Promotion in School

### A Health Promoting School Program on Smoking Control

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#### ABSTRACT

Rates of smoking are showing an increasing trend among youth in Taiwan. The purpose of this study was to develop strategies for community building to initiate a health promoting school program in a selected junior high school in Taipei City. Forty student leaders were invited to attend a series of empowerment activities including communication skills, health assessment, health promotion, and drama performance. Among them, 30 students voluntarily formed a health promotion club, named “ Ha-Dou-Hsia ”, in March 2000. A series of contests focusing on smoking control were promoted at the school by these students during the period from April to May. These contests included dancing, drawing, poetry and song composition, basketball playing, and Chinese comical dialogue. On May 31, World No Tobacco Day, these students organized a school fair involving all school members, students' parents, community residents, city councils, local public representatives, and the owners of private businesses. In order to evaluate program effectiveness, pre and post surveys were conducted among half of the classes from the experimental school and the comparison school chosen randomly. A total of 597 students completed both the pre-test in January and the post-test in June. The students at the experimental school demonstrated significant and positive changes in knowledge about the dangers of smoking, attitudes towards smoking, awareness of the importance of non-smoking and health, and accessibility of anti-smoking information and services. The results suggest that a health promoting school program can successfully adopt the strategies of community building to empower students' capabilities to engage in healthy lifestyles and build a supportive school environment for healthy living.

Keywords: adolescent, empowerment, health promotion, smoking, school health

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## **I. Introduction**

“Health” is an essential resource for human daily living and practicing healthy living can promote an individual’s quality of health. A 1999 study [ 1 ] showed that first year junior high school students in Taipei City had already adopted many behaviors that were negative to health. There were five main types of negative behaviors, which were: self harm, substance abuse, breaking rules, looking for excitement, and bad habits. After these behaviors have become firmly established they are more difficult to remove. Therefore, helping junior high school students to develop healthy lifestyle during their youth is extremely worthwhile.

### **1. Promoting Adolescent Health – Starting with Anti-smoking**

Many behaviors shown during youth are often in their early beginning stages. As these behaviors have not yet been firmly established they are comparatively easier to break. Conducting a youth health promotion program [ 2 ] can help young people to establish healthy habits as well as help them to change unhealthy habits. As a result, such a program should be able to decrease the harm to health caused by unhealthy behaviors. Encouraging junior high school students not to smoke is of vital importance. Since 1950, there have already been several thousand articles published confirming the increased risk of lung cancer associated with smoking [ 3,4 ] . Moreover, the World Health Organization [ 5 ] estimates that in 1998 at least 3.5 million people died of smoking related causes around the globe and they predict that by 2030 the tobacco-related death toll will be as high as 10 million per year.

A Canadian research paper published in 1994 [ 6 ] showed that in males the rates of lung cancer in smokers was 17.2% compared to that of 1.3% in non-smokers. The same figures for females were 11.6% and 1.4% respectively. In Taiwan, the age standardized mortality rate for lung cancer for both males and females has not only been going up at an increasing rate [ 7 ] but lung cancer has also leaped into first place as the leading cause of cancer death [ 8 ] . This clearly demonstrates the great harm to health caused by smoking. In addition, research has shown [ 9 ] that the risk of developing lung cancer in males who begin smoking before age 20 is 2.11 times higher than for those who begin after 20. For females, those who begin smoking before 25 have a 3.86 times higher chance of developing lung cancer than those who begin after age 26. This clearly demonstrates that starting smoking at an early age is associated with higher rates of lung cancer.

The problem of adolescent smoking is hard to ignore. Looking at the data concerning adolescent smoking from the national survey completed in 1999 [ 10 ] , 13.2% of male junior high school students and 8.6% of female junior high school students in Taiwan smoke. For senior high school students these figures are 37.4% of

males and 21.7% of females. Those students who are smokers report that they had their first cigarette between 12 to 14 years of age. The average age when smoking became a daily habit was 14.8 years, with an average of 13.7 cigarettes consumed per day. Therefore, it can be seen that junior high school is the critical period for starting smoking and developing a regular smoking habit. As a result, this same period is the ideal time for promoting an anti-smoking program.

Once a smoking habit has developed, it is often accompanied by betel nut chewing and drinking alcohol. This is the so-called behavior clustering phenomenon [ 11-13 ] and makes such habits extremely difficult to break. Moreover, as adolescents are easily influenced by and often follow the smoking behaviors of others [ 12,14,15 ] , discouraging adolescents from smoking cannot rely on traditional health education methods alone. In recent years, the prevention of smoking related harm has become an important public health goal in Taiwan. Moreover, the prevention of adolescent smoking is a major component of this goal. An effective anti-smoking program needs to be tackled from an ecological perspective [ 16,17 ] , using a comprehensive and holistic approach grounded in activities of daily living. As junior high school students spend a lot of time at school, the school environment can be considered a community. Thus, it is possible to arouse the health consciousness of students and teachers through community building [ 18 ] and to establish a healthy school environment and develop healthy lives through collective action.

## **2. Ideals and Methods of the Health Promoting School Program**

The WHO has been actively promoting the Health Promoting School Program since 1995 [ 19 ] . The aim of this program is to provide a healthy school environment that enables students and teachers to live, learn and work happily. A healthy lifestyle must be formed at an early age. In addition, a “healthy environment” is a necessary condition for an individual to practice healthy living. Therefore, achieving the goals of “a healthy school” and “healthy living” depends on the combined participation of all students and teachers in the school.

The following tasks need to be completed for this process to be effective: 1.The acceptance of all the staff and students in the school must be obtained. Everyone must be willing to work together to build a healthy school environment and practice healthy living; 2.Make use of the efforts of a key group or club (one group, either in the student, staff or parent population, takes the lead and forms a club. The influence of this club is then expanded to other groups. An alternative would be to form a club from selected representatives from various other existing clubs) to identify existing health problems in the school; 3.After the group has established common goals and means of cooperating, strategies and activities to improve health problems are

identified and undertaken; 4. Activities should be concretely evaluated to confirm the effectiveness of the health promoting school program.

“Students” make up the majority of the school population. As junior high school students are themselves members of a young age group, they are the very people best able to understand the problems and interests of young people. If health problems are analyzed and the strategies created by the students themselves, participation of their classmates would be easier to achieve. The main goals of this research project are to: 1. understand the feasibility of using a community building approach to assist students to form autonomous club; 2. understand the activities used by the student club to promote health in a school by focusing on anti-smoking; 3. evaluate the effectiveness of Health Promoting School Program by comparing changes in knowledge, attitudes and behavior of students in the experimental school with those in the comparison school.

## **II. Methods**

### **1. Research Design**

Action research combines the knowledge and skills of the social and behavioral sciences and uses them in practical activities or programs to achieve the goal of social change. This program uses the knowledge and skills of organizational development and health promotion in the school environment. It begins by facilitating the formation of autonomous student club and stimulates them to take responsibility for health promotion. Later on, the topic of anti-smoking becomes the focus of a variety of activities. Such an approach strengthens the ability of students and teachers to protect their own health as well as improves the school environment through collective action.

### **2. Subject**

To carry out this program, a junior high school in Taipei City was purposively chosen to be the experimental school and another junior high school in the same area was chosen as a comparison. Before the formal implementation of the Healthy Promoting School Program, half of the classes from years 1 to 3 in the two schools were randomly selected (experimental school – 11 classes; comparison school – 13 classes). This gave a total study population of 597 persons.

### **3. Instruments**

The survey questionnaire was designed based on the research framework (Figure 1) and included background factors (demographics, personal characteristics, family factors, etc.), personal capabilities (knowledge about the harms of smoking, attitude towards non-smoking, awareness of the importance of non-smoking and health), and supportive environment (perceived non-smoking social norms, and accessibility of

anti-smoking information and services). The questionnaire was reviewed by experts and a pilot study was conducted at a school other than the two used in the study. The amended questionnaire was then used for formal data collection.

#### **4. Data Collection and Management**

University students who had been specially trained were responsible for the task of interviewing. Every class member was requested to fill out the questionnaire anonymously. The pre-test was completed in both schools by February 2000 and the post-test was completed in mid June. The pre and post questionnaires of each student were matched according to class, seat number, birthday, and handwriting. After examination and correction for errors, statistical analysis of quantitative data was performed using SPSS software. More detailed interviews of club members, school principals, and teachers were conducted for collection and analysis of qualitative data. This paper will only report the quantitative results. Qualitative results will be discussed in another paper.

### **III. Promotion Process**

#### **1. Initial Phase**

The researchers explained the concept of “school as a community” to the heads of the experimental school and persuaded them to discard longstanding top-down approaches to thinking and administration. After gaining an adequate understanding of the Health Promoting School Program, the school became willing to empower students in a bottom-up approach to lead the whole school in the pursuit of health. To obtain the support of teachers and parents, the school principal invited the researchers to attend school meetings where they gave informative talks.

Although the experimental school had quite a number of student clubs already in existence, they had all been organized by the school rather than the students themselves. To stimulate students’ desire and ability to form their own autonomous club, it was decided that it was necessary to train a small group of students to act as a catalyst. After recommendations from teachers and after receiving parental approval, 40 students with leadership qualities from years 1 to 3 were willing to participate in the program.

Discussion with this group of students revealed that they were interested in drama. Three students were then invited, along with a drama teacher and three of his students, and three university students to jointly participate in activity design. Community building, group dynamics, behavior modification and other such related concepts were used in the development of group activities (Table 1). The first group activity, “Alma-Ata Became a Legend”, was held at the school on the afternoon of January 7, 2000. The second activity, a 2-day Winter camp: Group Development on

Health Promotion, was held at a small theater from February 10-11. A gathering to announce the results and achievements of the activities was held at the school on the morning of the 14<sup>th</sup>.

After the students had attended the first 2 activities, they had not only established close friendships with each other but had also developed confidence in their ability to improve health (especially in relation to smoking issues), learned skills on how to “say no”, and developed an understanding of how to write and perform drama, and how to plan and coordinate activities.

After the final presentation on the 14<sup>th</sup>, the students voluntarily approached the principal about the possibility of establishing a club. The principal agreed and advised them to proceed through the usual channel by applying to the office of student affairs. After enthusiastic discussion, the students decided to take one character from each of the names of the three teams in the winter camp (Haha, Doudou, Hsiayi) to make a name for their club of “Ha-Dou-Hsia”. This club, the first to be organized by students, was formally established on March 1, 2000. As some students were unable to continue to participate due to time commitments or other factors, the final number of students involved was 30.

## **2. Consolidation Phase**

The He-Dou-Hsia club, under the support of the school, took advantage of every second Saturday when classes were held (at that time in Taiwan schools had a policy of holding classes on every second Saturday) to hold a morning meeting. During the first meeting, club members drew up a set of club rules and chose club leaders. Following this, club members designed a series of classes and invited teachers from within the school or outside experts to provide instruction about a variety of skills including expression, interviewing methods, debating rules, and how to promote group health. Some time was set aside after the end of each class for discussion where they planned the contents of the Health Promoting School Program together. This process helped to increase both the confidence and abilities of club members and helped to firmly establish the club organization.

## **3. Action Phase**

The club members had already developed a deep understanding of the harm caused to health by smoking and had discussed the planning of an anti-smoking campaign in the school during the winter camp. Therefore, it was decided that “anti-smoking” would be the first target of the Health Promoting School Program. The club conducted interviews to assess the smoking habits and experiences of their classmates, teachers, parents, and neighbors. The club also collected a wide range of information about smoking related harm from the library, internet, and media. The aim of these exercises was to develop an understanding of the seriousness of the smoking problem, reasons for smoking, and difficulties encountered when quitting.

Following this, club members separated to conduct on the spot investigations of school grounds to locate areas where people smoked or where cigarette butts were dropped. Photographs were then taken of such areas and the locations of the areas were indicated on the school campus map. The information collected by the club was organized and displayed on campus to focus the attention of students and teachers on smoking issues. After discussion with school authorities, the club then held a series of contests with anti-smoking as the theme from April to May. Contests included drama, poetry and song composition, poster design, calligraphy, essay writing, dancing, comical dialogue, and basketball. Teachers were invited to act as adjudicators for the competitions.

#### **4. Integration Phase**

The Ha-Dou-Hsia club wanted to expand their school health promoting activities into the community and requested school authorities to assist in planning. It was decided to organize a big activity for world no tobacco day, held on May 31, with a slogan of "Say Hi to health, Say No to smoking". Group members were in charge of logo design, with the final logo being chosen by student ballot. A fair was organized with various stalls of anti-smoking activities to attract students to visit each stall and learn how to protect themselves. The school invited any interested organizations to provide stalls or prizes. Information was distributed in the school through teacher meetings, administrative meetings, class meetings, and electronic bulletin boards. The activities were advertised outside the school campus through news articles, cable TV, posters in local offices and by handing out pamphlets or invitation cards.

On the day of the activities, May 31, a total of 16 different organizations came to support the activities. These organizations consisted of 5 different types: government organizations, academic organizations, non-governmental organizations, local public representatives, and private enterprises. All of the activities were related to the theme of anti-smoking including the speeches, performances, press conference, fair, art exhibition, film, souvenirs, handbook, and prizes. Through these activities a tobacco-free school and community environment were successfully established.

#### **5. Maintenance Phase**

After the completion of the activities on May 31, the Ha-Dou-Hsia club, school authorities and supporting organizations collected and organized relevant information and conducted a review of the activities. The club members, after a semester of self-development and practical experience, not only had greatly improved confidence but also had greatly strengthened capabilities. The various anti-smoking activities that they had carried out, established the foundation of the Health Promoting School Program. As during this phase, the end of semester was drawing near, club members spent much effort in the detailed organization of information and records and the creation of computer files. They also discussed possible health issues to promote in

the upcoming year to facilitate preparations. In addition, to ensure the club's continued existence, criteria for accepting new members and methods of staying in contact with old members were drawn up.

#### **IV. Results**

Of the 597 students in the study population chosen from the experimental and comparison schools, 51.1% were males and 48.9% were females. The proportion of first, second, and third year students was 30.0%, 31.9%, and 38.1% respectively. In addition, a total of 5.63% of students had a daily smoking habit. As this program involved anti-smoking activities based on a whole school based movement and was not focused on encouraging smokers to quit, the number of smokers quitting would not be a suitable method of measuring results. Instead it was decided that measuring the variables of personal capabilities and supportive environment would be more appropriate.

In order to test the effect of the program on changing personal capabilities and creating a supportive environment, multiple regression analysis was employed. The results are shown in Table 2 and Table 3. Within these two tables, model 1 indicates the significant background variables selected by stepwise regression analysis. Model 2 indicates any significant difference between the experimental and comparison groups when the effect of background variables and the pre-test score were controlled for.

According to Table 2 and Table 3, the experimental school students' post scores of knowledge about the harms of smoking, attitude towards non-smoking, awareness of the importance of non-smoking and health, and accessibility of anti-smoking information and services were significantly higher than that of the students in the comparison school. Only the variable of "perceived non-smoking social norms" did not demonstrate a significant change.

The abovementioned quantitative results confirm that the Health Promoting School Program had a positive as well as a wide-ranging impact. At the individual level, the students at the experimental school showed marked increases in awareness of the harms of smoking, anti-smoking attitudes, and awareness of the importance of non-smoking and health after the program. At the school level, the Health Promoting School Program, enabled the experimental school to successfully create a tobacco free environment. Students at the experimental school indicated that numerous channels were available to obtain anti-smoking information and services. The variable of "perceived non-smoking social norms", however, showed no obvious change. The main reason for this is that current anti-smoking legislation already clearly prohibits smoking on junior high school grounds, so students were already clearly aware of behavioral norms.



## V. Discussion

This is a so-called “autonomous” or “grass roots” school health promotion program. It enables students who have long lacked adequate active learning opportunities to develop their potential and increase their personal development and experience. Teachers used to traditional teaching methods, are able to learn how to move away from purely classroom based teaching through participating in the health promotion activities organized by students. Such activities are lively and interesting, and are closely connected to life experience. This program, by utilizing community building concepts in the school environment, isn’t just a research project but is also a means of helping the Taiwanese education system embrace new methods and ways of thinking.

Factors essential for health promotion are “strengthening the ability to practice a healthy lifestyle” and “establishing an environment that supports healthy living”. Through the process of student club formation at the experimental school, the independence, team spirit, and health consciousness of all club members dramatically increased. By promoting school-wide anti-smoking activities in the school, not only were club members given the opportunity for continual growth and development but all the students and teachers in the school as well as community residents all benefited from participation in the activities. Comparison of the pre and post questionnaires of the two populations from the experimental and comparison schools demonstrated that the implementation of our Health Promoting School Program was effective in both strengthening the ability to lead a healthy life (strengthening of knowledge about the harms of smoking, creation of firm anti-smoking attitudes, awareness of the importance of non-smoking and health) and in creating an environment supportive to healthy living (the school was able to provide anti-smoking information and services).

After the completion of the program, the experimental school made the student club into an official school organization with a defined budget to support its continued development. Health promoting activities have been incorporated into the school calendar, indicating the support that the school heads and teachers have for the club. As the research project has been finished for almost two years, the researchers are no longer playing the role of facilitator and have now taken the role of information provider, still remaining in contact with the school and the health promoting club. The themes of the Health Promoting School Programs, “True Love Can Wait” in 2001 and “Litter Free School Campus” in 2002, once again demonstrated the vitality and influence of autonomous student club. In 2002, Ha-Dou-Hsia extended their work into the community and became actively involved in health promotion related activities in Taipei City. This project has confirmed the feasibility of using school community building to promote health and is a worthwhile experience for other schools to learn from.

This research project had a challenging design of applying the concepts of community health building in a school. In the initial stages of the project, the researchers provided only a direction for the Health Promotion School Program. They did not plan the details of the project, which were instead developed by the teachers and students of the experimental school according to their own special circumstances and needs. Although difficulties were encountered during program implementation, as the club had strong organization and a clear vision, these difficulties were overcome one by one. This project was full of the unknown and had many challenges and surprises. We were able to have a deep appreciation of the vast potential in young people that need to be given opportunities to develop. We also became aware of the overwhelming enthusiasm of teachers and parents that needs to be given opportunities to display itself. Other schools can draw from the framework and experience of this project to choose a health problem of interest to their students and implement the Health Promoting School Program.

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Table 1. Group Development Activities in the Initial Phase of the Health Promoting School Program

Activity 1	Activity 2		
<b>Alma-Ata Became A Legend</b>	<b>Winter Camp: Group Development on Health Promotion</b>		
2000/01/07 (13:00-16:00)	2000/02/10 (9:00-16:00)	2000/02/11 (9:00-16:00)	2000/02/14 (9:00-11:30)
<p>1. <u>Registration</u> (15'): Shout out the password; pull out name badge and write name on; form small groups based on different symbols on name badge.</p> <p>2. <u>Warm-up</u> (15'): Group members introduce themselves with the help of the group leader.</p> <p>3. <u>Story telling</u> (20'): Take the spirit of the WHO's Alma-Ata declaration (health protection needs to start from the basics), and turn it into the tradition of the world's most healthy Alma-Ata tribe.</p> <p>4. <u>Break</u> (10')</p> <p>5. <u>Group activities</u> (50'): Snail (tests reaction time); The three kingdoms (tests team spirit and team work); Talking dolls (tests courage).</p> <p>6. <u>Break</u> (10')</p> <p>7. <u>Explain theme</u> (10'): Our development (pass on the mission of promoting health).</p> <p>8. <u>Strengthening motivation</u> (20'): What is the price (willing to devote yourself to everyone's health).</p> <p>9. <u>Ceremony</u> (10'): Enter the Alma-Ata tribe (aboriginal ceremony to inaugurate classmates as health ambassadors).</p> <p>10. <u>Next activity</u> (10'): Winter Camp: Group Development on Health Promotion.</p> <p>11. <u>Group photo</u> (10')</p>	<p>1. <u>Registration</u> (20'): Welcome students with bamboo dance; divide into groups by drawing sticks; fill out questionnaires after seated.</p> <p>2. <u>We are a family</u> (30'): After introducing group leaders, students in the three groups greet each other and then learn the camp song together.</p> <p>3. <u>The story of the seeds</u> (50'): The group leaders use mime to act out the different experiences of 3 seeds, then one person from each group tells the story while another group member performs it.</p> <p>4. <u>Break</u> (10')</p> <p>5. <u>Our school</u> (50'): After the group leaders use a short skit to act out students' complaints and expectations of their school, every group makes a poster of their ideal school which is then introduced to the other groups by one representative.</p> <p>6. <u>Lunch</u> (50')</p> <p>7. <u>Our bodies</u> (50'): Every group makes a poster of the bodily imperfections of group members. Another poster is made of healthy bodies and a student representative is asked to explain the posters.</p> <p>8. <u>How smoking harms health</u> (50'): After reading information about the dangers of smoking, each group conducts a question and answer session, then they look at a poster of a body damaged by smoking. The group leader then uses a model to illustrate how lungs turn black after smoking.</p> <p>9. <u>Break</u> (10')</p> <p>10. <u>Darkness</u> (50'): Each group is given a script and uses mime to perform a play about the dangers of smoking and the benefits of quitting.</p> <p>11. <u>Creativity competition</u> (50'): Each group designs posters and comic verse around the theme of anti-smoking.</p>	<p>1. <u>Very smart</u> (50'): The group leaders act out the part of the movie "LA Law" where the tobacco industry is accused. After this a discussion is held.</p> <p>2. <u>Say no to smoking</u> (50'): Use role playing to practice saying no.</p> <p>3. <u>Break</u> (10')</p> <p>4. <u>Big strategy</u> (50'): Every group comes up with plans for school anti-smoking activities. After the activities are explained, votes are passed to determine an order of preference for activities.</p> <p>5. <u>Lunch</u> (50')</p> <p>6. <u>Drama</u> (50'): Each group writes a script and rehearses a play about saying no to smoking.</p> <p>8. <u>Exchange of feelings</u> (30'): Group members and group leader exchange feelings and knowledge gained.</p> <p>9. <u>Break</u> (10')</p> <p>10. <u>Performance Comments</u> (120'): Drama teacher provides professional instruction about the scripts and performances of each group.</p>	<p>1. <u>Display</u>: Materials made during the camp are put on display.</p> <p>2. <u>Performance</u> (60'): Each group performs it's short play in front of teachers, parents and classmates.</p> <p>3. <u>Sharing of experiences</u> (30'): Group leaders and a tutor representative talk about the experiences and gains of the development camp.</p> <p>4. <u>Short film</u> (30'): Show the video recording of the camp activities.</p> <p>5. <u>Group photo</u> (15')</p> <p>6. <u>Set sail</u> (15'): Teachers and classmates give support and encouragement to the school's team of health promoting students.</p>

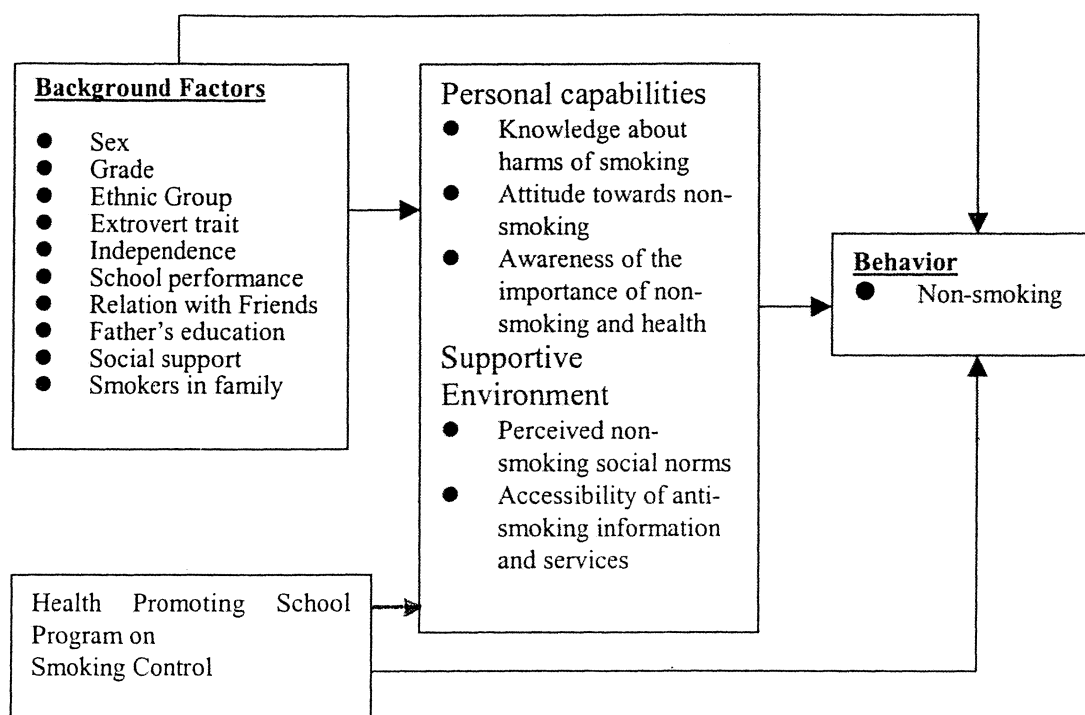


Figure 1: Study framework for the health promoting school program on smoking control

Table 2. Program Effect on Changing Personal Capabilities by Multiple Regression Analysis

Variables	Post Scores					
	Knowledge about harms of smoking (0-10)		Attitude towards non-smoking (12-36)		Awareness importance of non-smoking health (0-5)	
	Model 1 (stepwise)	Model 2 (enter)	Model 1 (stepwise)	Model 2 (enter)	Model 1 (stepwise)	Model 2 (enter)
Constant	12.72	9.72	16.13	6.39	3.83	4.39
Sex ( male / female )	~		- 0.96**	- 0.45	- 0.29**	- 0.15
Grade:						
Grade 2 / Grade 1	~		~		~	
Grade 3 / Grade 1	~		~		~	
Ethnicity (Fukien / others)	~		~		0.23*	- 0.01
Extrovert (1-3)	~		~	0.12	~	
Independent (yes / no)	- 0.39*	- 0.32	~		~	
School performance ( 2-10 )	0.18**	<0.01	0.24*		~	
Relations with friends ( 1-3 )	~		~		~	
Father's education (yrs):						
7-12 / 6 & less	~	-0.13	~		~	0.13
13 & more / 6 & less	- 0.37*	-0.01	~		- 0.73***	- 0.01
Social support (0-12)			0.16*	0.13*	~	
Smokers in family (no.):						
1 / 0	~		~		~	
2 & more / 0	~		~		~	
Pre-Score		0.33***		0.61***		0.34***
Group (c / t)		- 0.62**		- 0.64*		-1.21***

~: not entered \* p<0.05 \*\* p<0.01 \*\*\* p<0.001 c: comparison t: treatment

Table 3. Program Effectiveness on Building A Supportive Environment by Multiple Regression Analysis

Variables	Post Scores			
	Perceived non-smoking social norms (0-5)		Accessibility of anti-smoking information and services (0-5)	
	Model 1 (stepwise)	Model 2 (enter)	Model 1 (stepwise)	Model 2 (enter)
<b>Constant</b>	9.75	7.30	7.36	7.90
Sex ( male / female )	~		~	
Grade:				
G2 / G1	~		~	
G3 / G1	~		~	
Ethnicity (Fukien / Others)	~		0.37*	0.12
Extrovert (1-3)	~		~	
Independent (yes / no)	- 0.61**	- 0.55**	~	
School performance ( 2-10 )	0.13*	0.11	~	
Relations with friends ( 1-3 )	~		~	
Father's education (yrs):				
7-12 / 6 & less	~		~	<0.01
13 & more / 6 & less	~		- 0.83***	- 0.16
Social support (0-12)	~		<0.01**	<0.01*
Smokers in family (no.):				
1 / 0	~		~	
2 & more / 0	~		~	
Pre-Score		0.25***		0.23***
Group (c/ t)		<0.01		- 1.45***

~: not entered \* p<0.05 \*\* p<0.01 \*\*\* p<0.001 c: comparison t: treatment