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THESIS

THE EFFECT OF SELF-EFFICACY FOR REFUSAL SMOKING  
PROGRAM AMONG MALE JUNIOR HIGH SCHOOL IN  
BENGKULU, INDONESIA

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Tita Septi Handayani 2015: The Effect of Self-Efficacy for Refusal Smoking Program among Male Junior High School in Bengkulu, Indonesia. Master of Nursing Science (Family and Community Health Nursing), Major Field: Family and Community Health Nursing, Boromarajonani College of Nursing Nopparat Vajira. Thesis Advisor: Mrs. Susheewa Wichaikull, R.N., Ph.D. 172 pages

Adolescence was susceptible phase, including a high risk of smoking habit. According to Global Adult Tobacco Survey (2011) 12.5% of smokers started smoking since the age below 15 years old and the percentage gradually increased as their age approaching 20 years old. The main purpose of this study was to evaluate the effect of self-efficacy for refusal smoking program among the male students from 13–14 years old who attend 7<sup>th</sup> grades junior high school in Bengkulu, Indonesia. A quasi experiment two groups, pre-post test design, was employed in this study. 50 participants in intervention group received the intervention for 8 sessions. The instrument used consists of 2 parts, self-efficacy for refusal smoking program and self-report questionnaire. The activities in the program including brainstorming, knowledge about smoking, stress management, refusal skill, inspiring seminar, decision making skill, project group, and appreciation from the school. Paired t-test and independent t-test was used for data analysis.

The results showed that there is significant difference of self-efficacy for refusal smoking within intervention ( $p < .001$ ) and there is significant difference of self-efficacy for refusal smoking between the intervention group and comparison group ( $p < .001$ ). In conclusion, the self-efficacy for refusal smoking program has positive effect to improve students' self-efficacy to refuse smoking. The Self-Efficacy for Refusal Smoking Program may be recommended to prevent smoking in adolescent in early age.

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Student's signature

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Thesis Advisor's signature

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Tita Septi Handayani

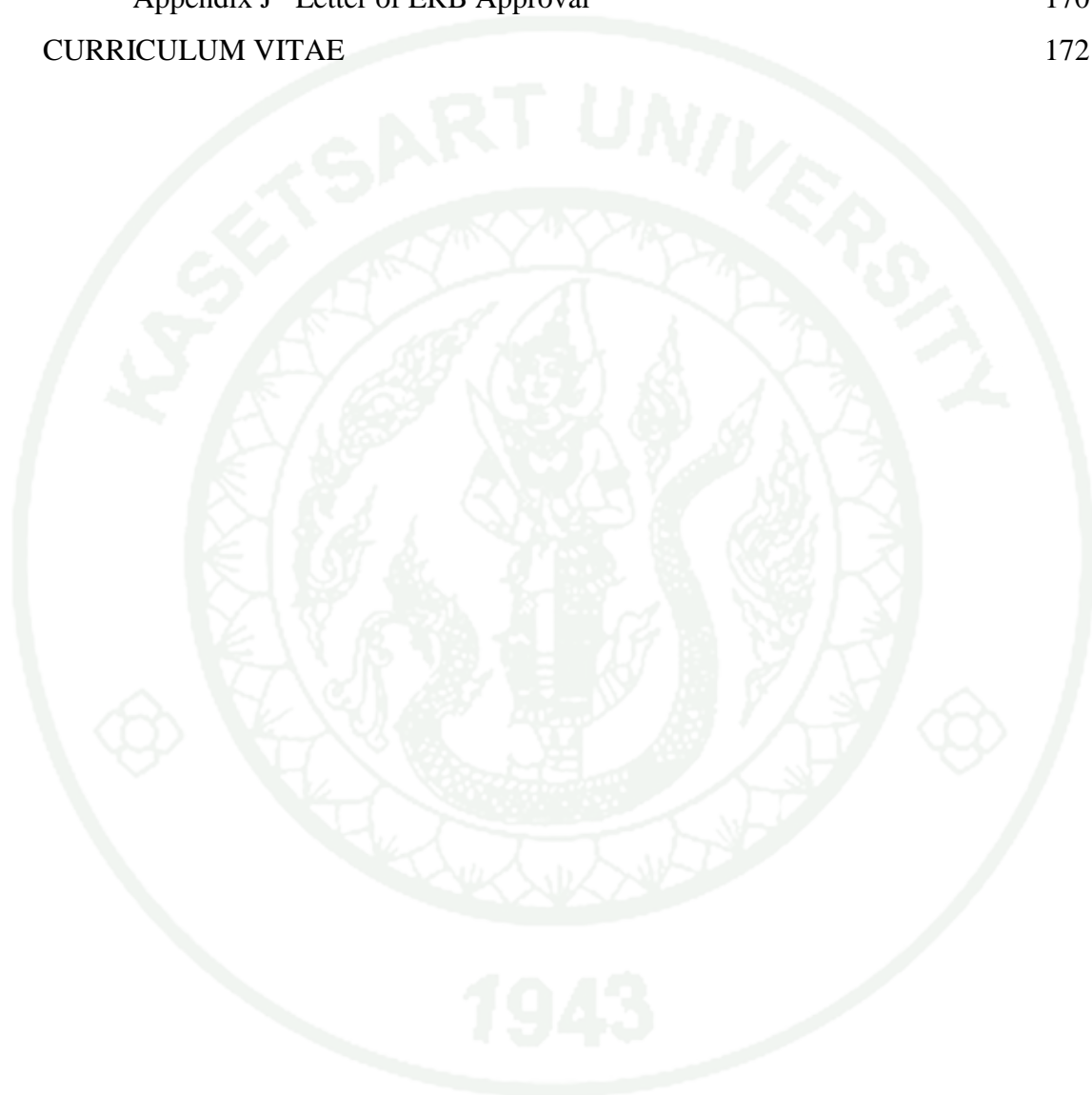
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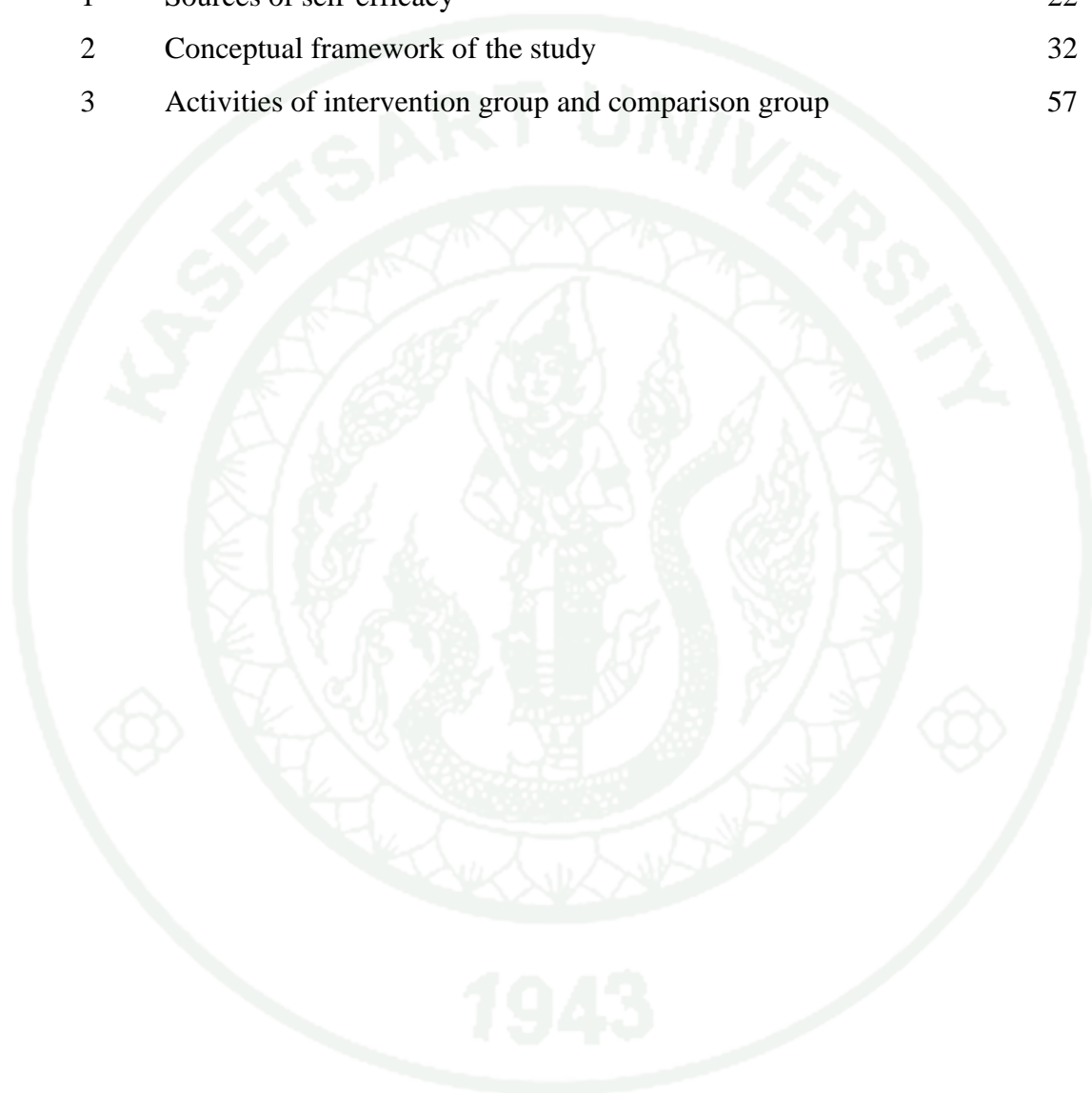
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## LIST OF ABBREVIATIONS

ASE	=	Attitude social influence-self efficacy
BDI	=	Beck Depression Inventory
ENET	=	Elementary Nation Exam Test
HBM	=	Health belief model
HPM	=	Health Promotion Model
MoE	=	Ministry of Education
MoH	=	Ministry of Health
SCT	=	Social Cognitive Theory
SE	=	Self-efficacy
SSE	=	Smoking self-efficacy
TPB	=	Theory of Planned Behavior
TRB	=	Theory of Reason Behavior
UNICEF	=	United Nations International Children Fund
WHO	=	World Health Organization

# **THE EFFECT OF SELF-EFFICACY FOR REFUSAL SMOKING PROGRAM AMONG MALE JUNIOR HIGH SCHOOL IN BENGKULU, INDONESIA**

## **INTRODUCTION**

Adolescence is a vulnerable period to comply smoking. Many countries worldwide are facing with smoking behavior in adolescent. Adolescent faced serious problems due to smoking behavior. Although smoking was not cause a high number of mortality in young people, serious effects have been found when someone have highly smoke cigarette in adolescence. In Indonesia, the high percentage of smoker was dominated by adolescent and young people. Global Adult Tobacco Survey in 2011 reported that in Indonesia about 75% of smoker started smoking before 20 years old. Moreover, 12.5% of these even started the age below 15 years old with the percentage gradually increased as their age approaching 20 years old. The age could be the factor influencing smoking among adolescent (Grenard *et al.*, 2006) which could be implied that the more a person getting older the more she/he is likely to smoke and becoming permanent cigarette consumer. However, other studies found the number of smoking initiation tended to be higher among people at younger age (O'Loughlin *et al.*, 2009; Johnston *et al.*, 2012). It would appear then smoking has become a common issue among adolescents and young people today.

The Data of the Basic Health Research (MoH of Indonesia, 2013) showed that daily regular smokers started smoking since the age of 10-14 years old representing 0.5% of that age-group. This percentage sharply increased to 11.2 % among the 15-19 years old and still increasing further in adult who 20-24 years old are reaching a high percentage as 27.2%, while the age group of 30-34 years old was the highest daily regular smoker with the percentage of 33.4%. This could be implied that if an adolescent starts smoking before 15 years old and continues with the habit on regular basis, he / she would be more likely becoming a regular smoker and as a result, and he / she could become nicotine-dependent eventually.

Bengkulu is a province where has the increasing number of adolescent smokers every year. In 2007, the percentage of daily regular smokers among 15 to 24 year-old-group rose to 31.3%, and it was the highest percentage compared to other age-groups of smokers (MoH of Indonesia, 2007) while data of 2010 (MoH of Indonesia), showed that the prevalence of adolescents smoking in Bengkulu increased to 22.4% among groups of 10 -14 years old, compared to the previous percentage in 2007 which was only 10.9%. Besides that, the percentage of the age-group 15-24 year daily smokers also increased to 40.5% in 2010. It reflects that the high number of smokers among the adolescent would transform into higher number of smokers among the older age-group. Therefore, it is important to prevent the initiation of smoking as early as possible among the younger-age group.

Cigarette smoking may cause serious effects on the daily lives of adolescent. The effects of smoking cigarette on adolescent's health include both long-term and short-term, health effects. The short-term effects are bad skin, yellow teeth, poor athletic performance, bad breath, respiratory disorders, and nicotine addiction (Bajde and Vida, 2008). Meanwhile, the long-term effects include serious damage to lung such as declining lung function and impaired lung efficiency. Smoker who fail to quit before reaching the age 35 have a 50% chance of dying caused by smoking-related diseases (Doll in Mc. Veal, 2006) while smoking could also lead adolescents to other high risk behaviors like temptation to using drugs or other dangerous substances such as alcohol and marijuana (Fleming *et al.*, in Taylor, 2006; WHO, 2008). Overall, the illness possibly will bring the adolescent to consequence of cigarettes smoking behavior.

The mental health disorder can be affected by cigarette smoking behavior. Some mental disorder such as depression also could affect the smoker due to their addiction to cigarettes (Minnix *et al.*, 2011). Besides, the physical and mental consequences to the smoker themselves, smoking behavior also bears bad influence on the community (Reimondos *et al.*, 2012). A study from Andrews and colleagues (2004) found that community may be exposed to higher risk with unnecessary deaths due to diseases caused by passive smoking, decline in quality of life, increased public

health spending, and significant decline in productivity. Therefore smoking carries negative impact on personal health as well as negative repercussions on community economy. Health expenditure directly associated with tobacco-related diseases was estimated at 11 trillion Indonesian Rupiah each year, or 1.2 billion USD (Barber *et al.*, 2008). Households with smoker diverted roughly 11.5 % of their total household monthly expenditure for purchase of cigarettes and /or tobacco (Barber *et al.*, 2008) leading the households to become poorer because of allocated budget for purchase of cigarettes and / or tobacco. In a wider aspect, the adverse effects of cigarette are threatening and harmful when being viewed from various aspects of life.

Smoking among adolescents is possibly caused by various factors making them to be a high-risk group compared to other age-group. Smoking habit among adolescents could also be related to the smoking models such as parent, sibling, or friend (Vitoria *et al.*, 2009; Hiemstra *et al.*, 2012; Gao *et al.*, 2013). The cigarette advertisement appearing on the road-side billboards and on television could encourage adolescent to experience with smoking (Kumalawati, 2006). Moreover, adolescent being unaware of the danger of smoking would have positive attitude toward smoking which easily lead them to accept cigarette smoking (Shashidhar *et al.*, 2011). Cigarette smoking was perceived as something special to some adolescents and according to Ng, Weinehall, and Ohman (2007) it was found that Indonesian adolescent considered smoking consistent with a man's identity. In addition, adolescent also considered that the legislation about smoking ban at school was something challenging to them to conquer which made adolescents less aware of the negative effects of smoking cigarettes. Another study found that the adolescent with less self-efficacy to refuse cigarette smoking would be more likely to smoke (Pennanen *et al.*, 2011; Hiemstra *et al.*, 2012). They might grow up to become smokers if they were unable to resist the temptation of experiencing cigarette smoking or they were less self-confident to refuse cigarettes offered by others. Therefore, self-efficacy in refusing the offering of cigarettes would become one of the important indicators influencing on adolescent whether or not to accept the offering of the initial smoking experience.



Adolescent at school-age, especially at junior high school in grade 7<sup>th</sup> are vulnerable to initiate smoking. In Indonesia education system, adolescent 7<sup>th</sup> grades was first year student in junior high school, while the 8<sup>th</sup> and 9<sup>th</sup> more likely to smoke already. They might be easily contaminated by their senior in smoke. In addition, be friends with new student in new school becomes very valuable to them. The new friend from different neighborhood and different school environment probably has bad behavior such as smoking. This also can influence the adolescent if they being close friend. At the beginning, adolescent might just want to try out the experience of smoking cigarette, moreover they might be easily influenced by seeing older people within their surrounding environment smoked (Chen *et al.*, 2009).

Adolescents in their formative years face strong influence from their society, including adults, relatives, and friends. It is generally related to emotional instability, immature cognitive development and unfavorable surroundings. Adolescents are easily influenced by peer and follow the norm of peers. This is may make difficulties for them to make decisions by themselves for appropriate behavior. Adolescents tend to catch up in the negative high-risk behaviors, and cigarette smoking is one of these behaviors which commonly occur among adolescents. Early adolescence is a period that has not been consistent with regular smoking. The data of the MoH of Indonesia (2013) revealed that percentage of regular smoker among teenagers under 15 years old was lower than those aged 15 years old and above. Data from the MoH of Indonesia for the last 5 years (2013) also revealed that the percentage of regular smoker was more likely to be at its highest in the late adolescence at the age of 15 to 24 year old. However, this was consistent with the increasing percentage among adolescents started smoking early at age under 15 years old as well. Therefore, early adolescence is the most appropriate period of to prevent adolescents from smoking before they become regular smokers and nicotine dependent as they grow up.

Self-efficacy to refuse smoking is one of the important factors which indicate whether adolescents are likely to make and adolescents with low self-efficacy in refusing would easily start smoking cigarettes. Self-efficacy was considered as one of the important factor in controlling the behavior of a person in action (Bandura, 1997).



The lack of self-efficacy in refusing smoking was related to the lack of knowledge about the danger of smoking coupled with the positive attitude towards smoking. Self-efficacy in refusing cigarettes is also one of the self-protective factors against adolescent by accepting an offer and invitation to smoke. Finding a way to promote self-efficacy to refuse smoking among adolescents in order to prevent their smoking behavior is helpful.

Previous research has found that several factors could promote self-efficacy to refuse smoking among adolescents, and knowledge related to cigarettes including its harmful ingredients, the negative health effects of smoking to the smokers and passive smokers would enhance the understanding among adolescents (Pobocik *et al.*, 2009). It may give them reason for themselves to garner confidence to refuse smoking. Another study deployed discussion sessions, decision making skill and refusal skill to develop skill in refusing smoking (Atabila and Castillo, 2013). Some studies also tried to involve the factors relating to the surrounding environment to help adolescents to boost their efficacy, including social support, success experience, the role of peers, interaction in the sharing session, promoting peers involvement and reflection (Kadden and Litt, 2011; Lee and Loke Yuen, 2013). Generally, active learning activity in class and outdoor class activity could be effective in promoting self-efficacy among adolescents, but still further research study is required in order to find other effective methods which could be applied.

School is one of the best places to develop better understanding about high-risk behavior especially smoking. Lessons about the way to promote self-efficacy in refusing smoking have not been adopted in the curriculum. Although the school curriculum in Indonesia has not included lessons on smoking as its standardized part, every school has incorporated materials about cigarettes in some subjects taught at school, such as islam education subject, sport and physical activity, Biology, Moral, and Economics (Tobacco Control Support Centre of Indonesia, 2012) but there are still some weaknesses of the program : one - the learning frequency is relatively short and two - the program only provides very little information about cigarette smoking. The education system carries insufficient activity to stimulate cognitive and to

provide skills among adolescents. The learning activities have to be appealing to and catching attention of the students, and stimulating for adolescents in order to make them aware of the danger of cigarettes smoking.

There were several previous studies on smoking prevention among adolescents. According to Zeidi and Agha (2013) who conducted an effective program on adolescents delivering effective result represented that the program consisted of knowledge about smoking and its effects to adolescents' social life, life-skill training and strategy to deal with cigarette influence by surrounding environment and motivational interview. Another study conducted in Iran by Nazari *et al.*, (2013) implemented a program which aimed to motivate students to resist the effects of smoking deploying some methods including lecturing, role play and video play. In Romania, Lotrean *et al.*, (2010) conducted smoking prevention programs on 13-year old students and found that self-efficacy increased significantly after participants followed a series of video-peer-led program strategy. Short-duration program of less than one month could also be effective. This was consistent with study by Atabila and Castillo (2013) who tested the effects of smoking prevention program in adolescents in the Philippines focused on the effects of smoking-related knowledge, refusal self-efficacy, attitudes and intentions of non-smoking adolescents. A most recent study in Germany by Isensee *et al.* (2014) on adolescent tried to apply a complex material in the program which included problem-solving, critical thinking, effective communication skills, decision-making, interpersonal relationship skills, self-awareness building skills, empathy, coping with psychological problems and abilities, and teamwork. All in all, the numerous programs conducted in various countries, one differed from the other specifically because of the characteristics of the environments and cultures which were different and unique and under which these studies were conducted. Therefore, interventions with specific approach are needed in Indonesia to evoke feelings and confidence in refuse smoking temptation among adolescents.

Generally, the majority of researchers have agreed that in principle of smoking prevention programs are effective programs when applying to adolescents. However, some education and smoking prevention programs generally applied in Indonesia only

emphasized on knowledge without teaching any appropriate skills of refusing the offering cigarette. From fellow, adolescents only provided with knowledge that cigarettes are harmful and are told smoking by adolescents is not allowed, but they are not provided with the appropriate skills and strategies to protect themselves against influences from environment and society. Therefore, any appropriate interventions can reduce adolescents' smoking temptation in the future.

Self-efficacy theory explains how a person has confidence in performing a specific task. Self-efficacy becomes one of the components that support the overall larger theory or model, such as the theory of Health Belief Model (HBM), Health Promotion Model (HPM), Theory of Planned Behavior (TPB), Social cognitive theory, social influence and Attitude -Self-efficacy Model (ASE). Self-efficacy was singled out in a complete theory described by Albert Bandura (1997) which explained that the theory of self-efficacy consisting of four components, enactive mastery experience, vicarious experience, verbal persuasion, and physiological and affective states. Self-efficacy theory as a framework could be used in promoting health behaviors among adolescents. The theory of self-efficacy is considered appropriate to provide guidance in a series of activities that are expected to promote self-efficacy in refusing smoking among adolescent.

This study was focused on self-efficacy to refuse smoking because self-efficacy is one of an important factor that can protect adolescent to initiate smoking behavior. Moreover, previous study stated that the early adolescence is the phase being vulnerable to perform a high risk behavior such as smoking. Some studies tried to involve some factors to develop and applied some programs in order to protect adolescent from smoking behavior, including improving self-efficacy in refusal smoking. However, there are few studies of smoking prevention which relatively focus on self-efficacy. In Indonesia, the smoking prevention programs were not highly effective to promote the self-efficacy to refuse smoking in adolescent. This is because the programs mostly focus on general knowledge and warning bans, but it was not focused on how to develop skill to refuse smoking on adolescent when they faced smoking offering situation. A pilot study conducted by researchers found that

follow up for students who caught smoke at school was a punishment and warn. In addition, if the warning had been given frequently, parents will be invited to the school to be informed directly by the teacher. This method did not provide education directly to students. School only provides punishment and warnings without providing a solution how to refuse smoking for students. This is due to peers' support and peers' motivation. For example, the majority of student in junior high school age is in a phase of vulnerability in accordance with their friends and social involvement, so they might usually comply with smoking because of friend pressure, smoking cues from the environment, or just challenging themselves with new behaviors. The punishment may make adolescent be afraid to school and teachers, but it is not raise awareness and fear on the smoking itself. Thus, when they are out of the school environment where strictly promote the legislation of smoking ban; they would easily be motivated to smoke again. Therefore, the prevention programs in schools which can improve and strengthen students' ability to refuse smoking are needed. Thus, the purpose of this research was to examine the effectiveness of the self-efficacy for refusal smoking program among adolescents of school-age especially in 7<sup>th</sup> grades junior high school. The result of this study could provide knowledge, skills and guidelines for improving program to decrease smoking rates among the 7<sup>th</sup> grades junior high school students in Bengkulu, Indonesia.



## OBJECTIVES

This section explains the objectives of the study. The objectives of the study are divided into two parts; general objective and specific objectives.

### 1. General objective

The general objective of this study is to evaluate the effectiveness of the self-efficacy for refusal smoking program among male junior high school.

### 2. Specific objectives

2.1 To compare the self-efficacy to refuse smoking between pre test and post test intervention of self-efficacy for refusal smoking program in the intervention group.

2.2 To compare the self-efficacy to refuse smoking between pre test and post test intervention of self-efficacy for refusal smoking program in the comparison group.

2.3 To compare self-efficacy to refuse smoking between the intervention and comparison groups after intervention of self-efficacy for refusal smoking program.

## LITERATURE REVIEW

This section was divided into six main parts. First, the adolescent in junior high school was described. Second, it was discussed about smoking behavior among adolescent and its related factor. Third, the definition about self-efficacy, self-efficacy theory, process affecting the self-efficacy, role of self-efficacy, factor influencing smoking refusal self-efficacy on school age particularly on adolescents and previous studies related to the effect of self-efficacy to prevent smoking on adolescents. Fourth, the research framework of the study was explained. Fifth, the self-efficacy for refusal smoking program was explained. Last, it included the definition of terms which applied in this study.

### 1. Adolescent in Junior High School

This section provides the details of junior high school students including the developmental stage as a crucial stage to starting healthy behavior.

#### 1.1 Definition of adolescent

Adolescence is a period when adolescent experience major changes and adaptations. The changes include the cognitive, physical, and psychological. In addition, adolescents also experience changes in socialization and personal relationship with the social environment (Gestsdottir and Lerner, 2008). Martin et al. (2010) identified adolescence as a period in which a person experiences a change or transition from childhood to adulthood when adolescent often consider themselves have rights and responsibilities as adult.

In conclusion, the adolescence is the period when someone grows from childhood to adulthood and experience many changes in the life including physics, mentality, emotion and environment while adolescent is a person who at age between 10-19 year.



## 1.2 Stage of adolescent and its development

According to UNICEF (2011), adolescence is divided into two phases, early adolescence (10-14 years), and later adolescence (15-19 years). Based on the development stage, adolescent can be divided into three periods, early adolescence (11-14 years), middle adolescents (15-17 years), and late adolescent (18-21 years). According to Stang and Story (2005), psychosocial and cognitive development affect adolescent's emotional skills, cognition and socialization.

**Table 1** The development of adolescence's stage

Stage	Emotionally Related	Cognitively Related	Socially Related
Early adolescence	Adaptation to the new body image in accordance with the gender	Concrete thinking; moral concept begins to form	Friends affect significantly
Middle adolescence	Emotional distance with parent is forming	Thinking abstract, elaboration of verbal skill and traditional morality, increasing adjustment to the school's requirement	Improvement behaviors that cause risk to health, sexual attraction to friends, beginning planning to lead to specific majors
Late adolescence	The formation of personal identity; expansion distance relationship with parent	Abstract thinking develops further, complexity of thought; advent of post-conventional morality	Improvement encouragement of control; appearance of social autonomy; formation of vocational skills

**Source:** Stang and Story (2005)

### 1.3 Early adolescence in junior high school

In Indonesia, early adolescence begins in the sixth year of elementary school to junior high school. In Indonesia, the basic education program generally provide for 9 years, starting from elementary school (6 years) to junior high school (3 years) (MoE of Indonesia, 2010). Ministry of Education (MoE) of Indonesia defines junior high school student as a student who starts from 13 to 15 year old and studying from grade 7<sup>th</sup> to 9<sup>th</sup> at school.

The seventh grade student generally is the first year of junior high school that has some specific characteristics. According to cognitive theory by Erikson (1950) children in this stage are easy to learn something by active learning process or when it related to the real life (Huitt and Dawson, 2011). They are also lack of understanding of cause and effect after doing risky behavior, including smoking, using illegal drugs or free sex. In social aspect, the role of peers becomes very important. The existence of a great desire to be recognized and accepted by the peer groups makes adolescent easily to perform some risky behavior. Occasionally, the adolescent usually behave without thinking about the consequences in the future. In emotional aspect, adolescent can start to make important decisions for them. However, they are more likely to face difficulties for make the right decision.

In conclusion, based on the characteristics of adolescent in the seventh grade, they are vulnerable to comply with a high risk behavior such as smoking initiation period which is highly influenced by peer. Insufficient knowledge about cigarettes also affect adolescent to start smoking. In other words, the independence to start making decisions indicated that adolescent are able to avoid risky behaviors, including smoking, if they have support from their environment.

### 1.4 Developmental stage of early adolescence in junior high school

The 7<sup>th</sup> grade students are students who attend junior high school in the 1st year (MoH of Indonesia, 2013). In early adolescence, children in this period could

develop the cognitive skill and also be able to think concretely (ReCAPP, 2003 in UNICEF, 2006). However, even they can think as adulthood, they are less likely to be concerned about the consequence of their decision making as good as adult are (AlBuhairan *et al.*, 2012). With regard to emotional development, friends in the same gender have higher influence in providing supports than different gender during early adolescence. Moreover, adolescents also have a need for privacy of interest, physical and image appearance (AlBuhairan *et al.*, 2012). Apparently, the adolescent's decision was closely related to the friend's influence (ReCAPP, 2003 in UNICEF, 2006).

In summary, adolescents in junior high school are liable on friends in the same sex. They begin to learn and copy everything with less concern of the final consequences. However, even they are easily to contaminated with peers, they also has ability to make decision by themselves. However, they may need to learn more regarding knowledge and skills to make decision. Thus, the right knowledge and skills can be trained since early adolescence period. In addition, by having knowledge and skill could promote high confidence in rejecting the influences from other in various situations.

### 1.5 The common problem of early adolescence

Risky behavior that can effectively form in adolescent, such as sexual risk (Coyle *et al.*, 2004; Thomas and Dimitrov, 2007), drugs abuse (Huang *et al.*, 2012), alcohol consumption (Faggiano *et al.*, 2010), bullying, violence and smoking (Stathopoulos and Sourtzi, 2013). However, the health promotion in junior high school also can enhance self-efficacy to refuse risky behaviors (Lotrean *et al.*, 2010), prevent disease (Mahat *et al.*, 2011) and promote healthy behavior (Long and Stevens, 2004). In order to protect adolescent to start smoking, not only need legislation or policy from school or government, but the adolescent also need the high self-efficacy to refuse various temptations. Thus, the role of junior high school is very important for adolescents in eliciting good behavior and attitudes towards risky behavior. The knowledge and skill which given at junior high school may help adolescent to have

high self-efficacy to refuse smoking. This kind of attitude can be replicated by their peers. Then, other adolescents can participate against the influence of smoking and reduce the desire to smoker.

## **2. Smoking behavior in junior high school**

This section explains the definition of smoking and factor related smoking on early adolescent in junior high school.

### **2.1 Definition of smoking**

According to Hammond *et al.* (2006) and WHO (2008), smoking is a sucking activity including any tobacco products produced by factory or handmade. The main ingredient is leaves of tobacco. In fact, the tobacco leave is one of herbs. In the past, Indonesian people used it as herbal medicine when suffering from respiratory irritation. Then, tobacco leaves was manufactured into cigarettes mixed with some other chemicals inside. These chemicals are toxic and harmful to health. According to Geiss and Kotzias (2007), among the chemicals in cigarettes made from chemical additive that can cause addicted in smoker. The cigarette addicted or nicotine dependence is the cause of several problems both acute and chronic illness and also death.

### **2.2 Factors related to smoking on adolescents at school age**

Based on literature review about factors affecting adolescents to smoke at school age, two factors are received. It can be grouped into two main factors: intrinsic factor, including gender, school achievement, self-efficacy to refuse smoking, knowledge and attitude toward smoking and smoking habit and extrinsic factor, including parents' education, type of family, parents' smoking status, sibling's smoking status, peer influencing, tobacco free policy and advertisement. This will be reviewed respectively as follows

### 2.2.1 Intrinsic factor

#### a) Gender

Smoking in male is relatively higher than in female (Grenard *et al.*, 2006). Further, Hock *et al.* (2013) finds that men are more susceptible to smoke than women. Men also tend to start smoking at younger than women (Lin *et al.*, 2008; Qing *et al.*, 2011; Odukoya *et al.*, 2013). It can conclude that a boy is more likely to be high risk group for smoking behavior.

#### b) School achievement

Achievement and recognition from others is one of desire of adolescent at school age. School atmosphere is filled with competitive achievements among students spurring them to get good academic achievement. However, lacking of mastery of the subject matter in schools and dimensions of the work load in the classroom can make an adolescent stressed, feel bad and depressed (Safitri, 2013). Adolescents are more likely to undertake risky behavior as self-compensation of depression. A research in Malaysia and Taiwan finds that poor academic achievement is one of the factor that make adolescent start smoking (Naing *et al.*, 2004; Lim *et al.*, 2006; Lin *et al.*, 2008; Lim *et al.*, 2010). Furthermore, Hock *et al.* (2013) shows that adolescents who have poor learning achievement are more susceptible to smoking compared to those who meet the achievement standards. In summary, male student who has poor academic achievement was in high risk to start smoking.

#### c) Self-efficacy to refuse smoking

Research from Chang *et al.* (2006) states that self-efficacy was factor that can suppress smoking intention when adolescent get the temptation to smoke from the social environment. Self-efficacy in refusing cigarette is a protective factor that can avoid adolescent from smoking (Islam and Johnson, 2005). Low self-efficacy to refuse smoking might lead adolescent more likely to smoke in the future



compared to adolescents who have high self-efficacy in refusing smoking (Pennanen *et al.*, 2011). Having high self-efficacy in refusal cigarette may protect adolescent to smoke.

#### d) Knowledge related smoking

Adolescents generally receive wrong information about smoking from friends who usually smoke. A study done by Muchtar *et al.* (2012) in Indonesia shows that student who have good knowledge and the right attitude in smoking prevention are more receptive to the efforts of smoking prevention than those who have less knowledge. In contrast, even someone knows the truth regarding the impact of smoking but they still smoke (Chotidjah, 2012). Rice and Dolgin (2008) stated that the decision related to health behavior in adolescent is a result of the involvement of complex factors including their knowledge of the health consequences and their ability to assess risk and rational decision making. Thus, having knowledge of smoking related to their cognitive development and social environment are strong influences in determining health behaviors in adolescent. It can be implied that, having knowledge is not only protect the adolescent from smoking, but the knowledge still also influence adolescent in make decision related to refusal smoking.

#### e) Attitude toward smoking

The behavior of other people who smoke can affect the attitude toward smoking in adolescent (Chen *et al.*, 2006). A study conducted by Shaluhayah *et al.* (2006) in Indonesian adolescents found that friends are more likely to stay away from those who do not smoke. They assume that smoking is a form of maturity of male, smoking can be done anywhere, smoking can be done in public places, including on public transport. So, the environment and social factor such as adult who can smoke anywhere and advertisements can influence adolescent to have positive attitude toward smoking and easily to start smoking.



#### f) Smoking habits before junior high school

According to Shaluhiah *et al.* (2006), one factor that causes adolescents tend to smoke at junior high school is because they have experienced smoking before this period. They generally take their parents' cigarettes and experience smoking as they have seen from parent. This may linked with the extrinsic factor described later.

#### 2.2.2 Extrinsic factor

##### a) Parents' education level

The parent education level can affect to adolescent smoking practice. Studies in Brazil (Silva *et al.*, 2008) discovered that adolescents in grades 7<sup>th</sup> to 10<sup>th</sup> who have a mother with a low educational level are easier to experience smoking cigarettes. Another research on adolescents in Northern Greece shows that the low level of parents' education became one of the risk factors for adolescents to smoke (Spyratos *et al.*, 2012). Parent with low education background have less ability to communicate the right way about the hazard of smoking and have less concern to their role as model to their family member, especially when the parent have smoking behavior habit at home. In contrast, other study in Germany disclosed that parents' education level has no effect when compared to the teen's own level of education in the risks of smoking in adolescents (Kuntz and Lampert, 2013).

##### b) Type of family

Family is the primary place that provides support for the development of adolescent psychology. Disharmony in family or divorced parents can make adolescents become stressed out and depressed. Silva *et al.* (2008) conducted a study on adolescents in Brazil and found that the condition of divorced parents can be a trigger factor for adolescents to experiment with cigarettes and smoking. Parent with personal problem will have less attention to their children. The high control of parent

to the adolescent could protect them from smoking behavior (Grenard *et al.*, 2006). When the parents pay attention to their children in adolescence period, the children will recognize that they would have problem with their parents (Huang *et al.*, 2012).

#### c) Parents' smoking status

Parent is the best person known as a role model or hero for children before a child knows the other models, such as a friend, teacher or idol. The behavior of the parent can be replicated by children. Therefore, unhealthy lifestyle or risky behaviors, such as smoking that parent do at home, can be imitated by children and adolescent. Study of Shaluhayah *et al.* (2006) in Indonesia stated that parent who smokes are more likely to influence their children to smoke. In secondary student, having parents who smoke are one factor leading adolescent to start smoking (Naing *et al.*, 2004; Lim *et al.*, 2010; Qing *et al.*, 2011; Odukoya *et al.*, 2013).

#### d) Siblings' smoking status

Beside parent, other family members can influence on adolescents smoking. Siblings who smoke can give encouragement to teenagers to start smoking and also give a strong influence on the younger brother (Hock *et al.*, 2008; Hock *et al.*, 2010). Another study in Turkey discovered that the level of smoking in adolescent who have brother smoking is higher than the adolescent who have non-smoking brother (Talay and Altin, 2008). Therefore, having brother who smokes could lead adolescent to start smoking consequently.

#### e) Peer Smoking

Adolescents are easily influenced by the environment in where they live; and they are also influenced by the people around them. Adolescent tend to start smoking with his friend who smoke (Lim *et al.*, 2006). Having friend who smoke becomes one factor that could lead adolescent to start smoking (Islam and Jhonson, 2005; Qing *et al.*, 2011; Odukoya *et al.*, 2013). Adolescent who smoke tend to has

friend who support smoking behavior. The samples of the supports to stay smoking are smoking together at the shop outside school, buying cigarettes around the school, giving cigarettes to other friends and sucking cigarettes together at the Poskamling (neighborhood security post) (Shaluhiah *et al.*, 2006). In addition, a friend who offers free cigarettes makes adolescents easily tempted to smoke (Lin *et al.*, 2008). Hock *et al.* (2013) finds that adolescents who have close friends smoking are more susceptible to smoke. This statement supports the study from Huang *et al.* (2012) showing that having friend or classmate who did not smoke will protect the adolescents from smoking behavior. As an important social support in adolescent age, friend can be a determining factor in developing behavior of adolescent.

#### f) Influence of cigarette advertisement

With regard to publish advertisement, cigarettes were promoted and marketed to the public. It has been widely known in various countries that cigarette advertisement could significantly affect adolescents. Research from Ginting (2011) found that visual advertising through video or television is the most significant factor among forms of tobacco advertising in providing knowledge about smoking among adolescents in junior high school. A study in China discovered that one of the factors causing adolescents experiment and attempting to smoke is continuous strong media exposure (Cai *et al.*, 2012). Adolescent were interested and easy to approve the voiced propaganda to represent tobacco products, such as cigarettes image that represents maturity, macho, masculinity, freedom, and others (Kin and Lim, 2003).

Advertising cigarettes in Indonesia becomes a major problem. A qualitative study in Aceh stated that the incessant advertising of cigarettes is one obstacle in the success of adolescent smoking prevention programs at school age (Tahlil *et al.*, 2013). The cigarette advertisement provides interesting reason and slogan to attract adolescent tried their cigarette (Purwaningwulan, 2007). So, the adolescent considerably have a good response to smoke by cigarette advertisement.

### g) Tobacco-Free School Policy (TFSP)

School is the most effective place to embed good habits in adolescents. A study from Huang *et al.*, (2012) reveals that adolescent were less likely to smoke if they do not see teacher smoke at school. The school environment rules can form the habit of discipline patterns in adolescents. Strict regulation about smoking ban becomes one of protective factors, so students are not susceptible to start smoking (Hock *et al.*, 2013). According to Paek *et al.* (2013), the availability of smoke-free zone in schools can prevent student from smoking in school. Therefore, the punishment of violations of smoke free zone could protect adolescents from the risk of smoking.

## 3. Self-efficacy

Self-efficacy was first introduced by Albert Bandura in 1977. In 1986, self-efficacy was firstly integrated with the social cognitive theory. Self-efficacy widely used by many researchers as one of component in the theory which developed that evolved later. Furthermore, in 1997, Bandura completed self-efficacy independently in his theory which was named the theory of self-efficacy.

### 3.1 Definition of self-efficacy

Perceived self-efficacy is the belief that one has the ability to perform a specific task (Bandura, 1997). Self-efficacy can be expressed as a belief that one has to be able to control him self in order to do a task with its ability (Artino, 2012). If someone did not have confidence in his own abilities, then he cannot realize that actions to achieve success (Bandura, 1997).

According to Bandura (1997), perceived self-efficacy is one component of social cognitive theory that is very important. It relates to the role of self-efficacy that can affect other factors in order to achieve significant results. To be able to learn a skill, a person needs a driving factor that can motivate to be able to learn the

knowledge and skills. Perceived self-efficacy can be a powerful component that affects the learning process. Creating a strong perceived self-efficacy can be applied by creating specific activities that support the learning environment. In addition, the things that keep strong motivation also contribute significantly to self-efficacy. If the person not sure about her / his self-ability, a good skill may not useful to achieve success. In facing difficulty of the tasks, one strategy that can be used is the confident in self-ability to be able to complete that specific task.

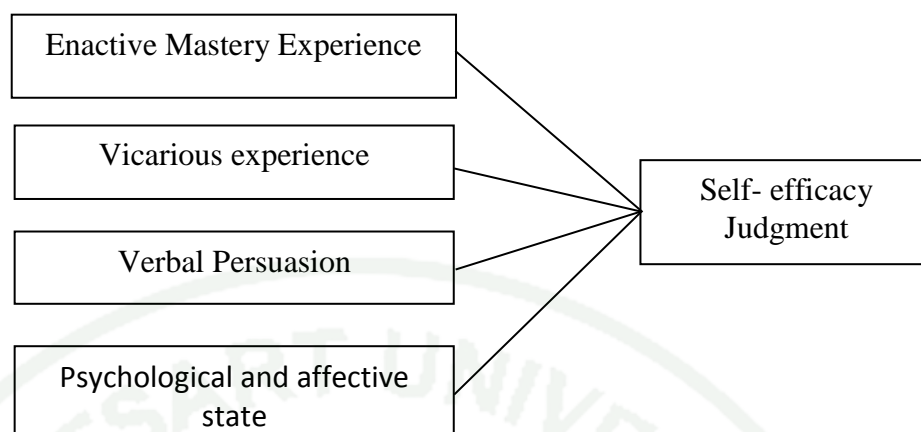
### 3.2 Measure self-efficacy

It is not easy to measure self-efficacy. This is because self-efficacy is a belief that is not visible to others nor observed in practice. Self-efficacy is the thing that measured by self-report questionnaire. Some studies were measured self-efficacy by its own construction in accordance with the specifications and conditions of the target object of research. Questions on self-repost questionnaire must be tailored to the particular domain of functioning that is the object of interest. These include generic skills for diagnosing task demands, constructing and evaluating alternative courses of action, setting proximal goals to guide one's efforts, and creating self-incentives to sustain engagement in taxing activities and to manage stress and debilitating intrusive thoughts (Bandura, 2006 in Pajares and Urban, 2006).

### 3.3 Source of self-efficacy

According to Bandura (1997), self-efficacy has four sources. As cited in the book of self-efficacy entitled *The Exercise of Control* (1997), sources of self-efficacy include enactive mastery experience, vicarious experiences, verbal persuasion, physiological and affective state.





**Figure 1** Sources of self-efficacy

**Source:** Bandura (1997)

### 3.3.1 Enactive mastery experience

Enactive mastery experience is the most influential factors on self-efficacy. This is expressed as the experience of success or failure in the past affecting someone in the future. Someone who can face difficulties in the past, and keep trying to deal with it and succeed, then successful can be a great experience that will enhance his self-efficacy in the future. If the problems faced are the same, the same success can be achieved even though it happens at different times and different settings (Bandura, 1997).

Knowledge and skills cannot make someone perform a task successfully without self-confidence. Application and practice are important things that can make the knowledge and skills useful. Applications that continue to be sustainable and continue to survive with skills possessed will improve the appearance of success and self-efficacy (Bandura, 1997).

Although the failure of past actions can affect the low self-efficacy and action in the future, self-efficacy may improve if the person moves forward and



tries to practice and improve his ability. Thus, it can make a success of the action in the future with the same problem in different settings (Bandura, 1997).

### 3.3.2 Vicarious experiences

Another factor that can make a person acquire self-efficacy is the success of others. In daily life, a person always compares himself to others that are considered similar to himself or herself, such as the same conditions, circumstances, environment or characteristics. When a person sees someone with the same condition is success, and this could influence confidence him/her in order to be able to achieve the same things as the same condition. However, if the model shows different condition of success, the difference will be a strong reason that he could not achieve such success. Therefore, the successful models must have the same situation and conditions as the observer has, so it can affect self-efficacy to achieve the same thing (Bandura, 1997). People are trying to learn the success of the model through a process of observational learning. People will think how to apply the same strategy for their life. The model of success could increase self-efficacy of the observer in two ways: by providing true information and a clear picture of how best to take action, and improve a person's beliefs about the capacity in the same circumstances.

### 3.3.3 Verbal persuasion

Verbal persuasion is one further way to respond and provide feedback to someone who is trying with his own capabilities. Verbal persuasion is the words, valuation, support and reinforcement from others towards a person's ability to perform certain capabilities. This can provide a tremendous effect on a person's who believes that they are doing efforts currently which can provide specific effect later (Chamblis and Murrai, 1979 in Bandura, 1997). Feedback will evaluate the appearance and also build capabilities over time. At the same time, self-efficacy will also be formed along with the growing process of capability. Self-appraisal of knowledge, skills and abilities possessed by someone can make the person get to know and understand himself with all the capabilities to perform the action.

### 3.3.4 Physiological and affective state.

Physiological and affective state is a condition of physiology and emotional stressful situations. Emotions, deep anxiety, and poor physiological state experienced by individuals will be perceived as a clue that undesirable events would occur. Anxiety and stress that occur in a person when doing a task is often interpreted as a failure. In general, person would tend to expect success in a condition that is not colored by tension and does not feel any complaint or other somatic disorders. Therefore, self-efficacy is usually characterized by low levels of stress and anxiety. In contrast, low self-efficacy is characterized by stress and anxiety levels which are high as well (Bandura, 1997). Stress, anxiety or depression are not only experienced by adults with a variety of complex issues, but also by adolescent likely to be stuck in a situation which makes them feel psychologically and emotionally disturbed (Hammen, 2009). Proper stress management can avoid a person from the onset of depression associated with low self-efficacy and high risk of smoking.

## 3.4 The theories related self-efficacy

### 3.3.1 Health Belief Model

Self-efficacy is the last aspect supplementary by Rosenstock, Strecher, and Becker (1988) to complete HBM variable model (Pender *et al.*, 2006). Self-efficacy complement the HBM concept models when this model is applied to the prevention intervention (Boroumandfar, *et al.*, 2012; Zhang *et al.*, 2013). Confidence in one's ability to affect changes in the results (self-efficacy) is a key component of health behavior change. Self-efficacy will lead to the conviction of belief into action. This belief then fitted with "cues to action" giving rise to the use of these new behaviors. A person must feel competent (having self-efficacy) to execute and maintain the new behavior.

### 3.3.2 Health Promotion Model

Health Promotion Model (HPM) notes that each person has unique personal characteristics and experiences affecting subsequent actions. At HPM models, perception of competence or self-efficacy to carry out a particular behavior increases following the commitment to action and actual performance of the behavior. The greater self-efficacy is perceived by someone, the fewer barriers are perceived to perform certain health behaviors. Higher positive subjective feeling will lead to the greater opportunities to achieve success. In turn, an increasing sense of efficacy may result in more positive influence (Pender *et al.*, 2004).

### 3.3.3 Theory of Planned Behavior

Theory of Planned Behavior (TPB) is useful for predicting intentions and behavior. TPB has three components that complement Theory of Reason Behavior (TRB) earlier, including attitude, subjective norms and perceived behavioral control (Pender *et al.*, 2002). Self-efficacy has a similar structure to perceived behavioral control. Self-efficacy increases a person's intention and personal motivation to do a task. A study conducted by Tolma *et al.* (2006) finds that by adding the factor of self-efficacy on the TPB, makes self-efficacy to be the strongest factor in predict intention.

### 3.3.4 Social Cognitive Theory

Essentially, self-efficacy theory was founded on the basis of Bandura's Social Cognitive Theory (SCT). SCT emphasizes on how cognitive, behavioral, personal, and environmental factors interact to determine the motivation and behavior (Crothers *et al.*, 2008). In SCT, self-efficacy theory is part of the self-belief with self-attribution and self-evaluation. People with high self-efficacy are more likely to set more challenging goals for themselves and are more committed to the goal. This will increase self-efficacy (Bandura, 1997). Self-efficacy beliefs in the

positive will affect the effort, perseverance, goal setting, and performance (Pajares, 2009).

### 3.3.5 Attitude Social Influence-Self Efficacy Model (ASE)

ASE model states that a person is required to bring the behavior of three main components including attitude towards the behavior, social influence or existing norms and self-efficacy or confidence to perform the behavior. Self-efficacy to resist pressure of smoking is defined as the expectations of the individual's ability to focus on social rejection and self-efficacy, which, in the context of smoking, is expected as the ability to refrain from smoking in social situations. For both smokers and non-smokers, the size of self-efficacy is expected to enter the confidence in one's ability to resist peer's pressure and also the intention to smoke. People who have not tried smoking and do not intend to try smoke may still doubt their ability to resist. People who have not tried smoking may still intend to try it. This theory has been used by some countries as a framework to study about smoking in adolescents, such as Danish, Spain, and UK (Bidstrup *et al.*, 2008; Markham *et al.*, 2009).

Self-efficacy becomes an important component in predicting a person's ability to implement a behavior in the future. In other words, the promotion of self-efficacy is one effective way to encourage one's ability to apply good health behaviors, including avoiding smoking habits in school age adolescents.

In conclusion, self-efficacy employed in this study is based upon Bandura's model because it is more appropriate with the researcher objectives of the study

## 3.4 Processes affecting self-efficacy

According to Bandura (1997), the psychological processes of self-efficacy playing a role in human beings include cognitive, motivational, affective and selective processes.

### 3.4.1 Cognitive Processes

Cognitive thinking processes are a process that includes the acquisition, organization, and use of information. Most human actions stems from something contemplated beforehand. Individuals who have high self-efficacy prefer to imagine the success. In contrast, individuals with low self-efficacy imagine failures and the things which can hinder the achievement of the success (Bandura, 1997).

### 3.4.2 The process of motivation

Most human motivation is generated through cognition. Individuals give motivation or encouragement for themselves and direct action through the thoughts happening in the earlier stage. The ability of self-confidence can affect motivation in several ways, such as determining predetermined individuals' goals, how much work is done, how they hold up in the face of difficulties and their resilience in the face of failure (Bandura , 1997).

### 3.4.3 The affective process

Affective process is a process of emotional regulation and emotional reaction towards conditions. According to Bandura (1997), the belief about coping also influences the level of stress and depression when people are facing difficult situations. Self-efficacy perceptions about the ability to control sources of stress have an important role in the onset of anxiety. People who believe in the ability to control the situation tend not to think about negative things (Bandura, 1997).

### 3.4.4 The selective process

The ability of individual to choose specific activities and situation is also influenced by the effects of an event. People tend to avoid activities and situations beyond their limits. When people feel confident that they are able to handle a situation, they are less likely to avoid such situations. With the choice made,



the individual may improve the ability, interest, and their social relationships (Bandura, 1997).

In summary, process affecting self-efficacy is useful to create activities to enhance self-efficacy within this study

### 3.5 Role of self-efficacy

#### 3.5.1 Role self-efficacy in achieving health behavior change

Self-efficacy is a determinant due to influencing health behavior, both direct and indirect by influencing other determinants (Bandura, 2004). There is a strong relationship between self-efficacy and health behavior change and maintenance of health behaviors. Experimental manipulations on self-efficacy showed that when self-efficacy has successfully been scaled, this may increase further health behavior change (Strecher, 1986). A study of overweight women displayed that self-efficacy beliefs prospectively predict weight control behaviors. Weight control behaviors would mediate the effects of self-efficacy on weight change (Linde *et al.*, 2006).

#### 3.5.2 Role of self-efficacy in adolescent

A cohort study on adolescents in Southeastern Michigan indicated that self-efficacy becomes stronger as the behavior of a child who grows increasingly matures (Davis-Kean *et al.*, 2008). Self-efficacy is expressed as a predictor of student's motivation and learning. Self-efficacy has been shown to be responsive to the improvement of students learning and prediction method resulting achievement (Zimmerman, 2010).

Self-efficacy plays an important role in the behavior of adolescents, especially on adolescents' self-efficacy in refusing risky behaviors, such as cigarette smoking. However, self-efficacy can change over time due to individual changes in the adolescent and the environment around them. A study of Caprara *et al.*

(2005), reported that as a child, self-efficacy directly and indirectly is related to satisfaction with family life. Adolescents of the joint family showed higher self-efficacy than adolescents belonging to nuclear families (Singh and Udainiya, 2009). A Longitudinal Study on adolescents and their families in the Netherlands found that a decrease in self-efficacy in refusing cigarettes can happen when friends or relatives who smoke around adolescents increase in number (Hiemstra *et al.*, 2011). This is due to the communication of children with a variety of other family members, such as grandparents or cousins, formed even if the child does not have good communication with their parent.

### 3.5.3 Role of self-efficacy in smoking prevention

Self-efficacy and decisional balance can predict 77.4% of whether adolescents are in the pre-contemplation stages, decision-making stages in the initiation or maintenance stages cigarettes. Research on adolescents in Taiwan showed that students at a stage before contemplating have high self-efficacy to refuse smoking initiation compared with those in decision-making or maintenance stage (Chen *et al.*, 2006). The research of Atabila and Castillo (2013) on adolescents in the Philippines found that interfering skills of smoking refusal with the provision of education has proven increasing adolescents' self-efficacy to resist smoking and pressing intentions to smoke in the future.

### 3.6 Factors influencing self-efficacy to refuse smoking

Adolescents in vulnerable phase will easily be affected even when they have high self-efficacy to refuse smoking, it may change for several factors. The following factors can affect self-efficacy of school-age adolescent.

#### 3.6.1 Depression

Depression is a psychological problem that can decrease someone's confidence (Bandura, 1997). Problem and miscommunication with family

member, unfriendly environment, school pressure or problem with friend can cause the stress and depression in adolescent (Cutrona *et al.*, 2006; Konishi and Hymel, 2009; Sun *et al.*, 2012; Kamtsios and Karagiannopoulou, 2012). This condition can be caused by psychological problems experienced by the physical presence of a person, such as fear or threat that will give permanent disability or illness to a person or a physical melting in the face of a difficult situation. A longitudinal study on youth in the US found that young people with relatively high self-efficacy had lower levels of depressive symptoms than other youths (Scott and Dearing, 2012). Self-efficacy partially mediates the positive relationship between early depression symptoms and susceptibility to smoking (Minnix *et al.*, 2011). Furthermore, Mee (2014) also found that by using the concept of mediation models, the possibility of depression associated with lower smoking resistance self-efficacy. Smoking resistance self-efficacy becomes a surrogate or predictor of smoking behavior and depression strongly associated with smoking behavior.

### 3.6.2 Friend smoking

Self-efficacy can change in accordance with fluctuating environmental conditions of adolescents' friendship. Research by Hiemstra *et al.* (2011) finds that a decrease in self-efficacy for refusing cigarettes is greatly influenced by friends. Some situations that may occur, such as peer pressure, the increasing number of friends who smoke, or the perception of linking cigarettes with the popularity, give effect to adolescents' self-distrust in rejecting cigarettes.

### 3.6.3 Sibling smoking

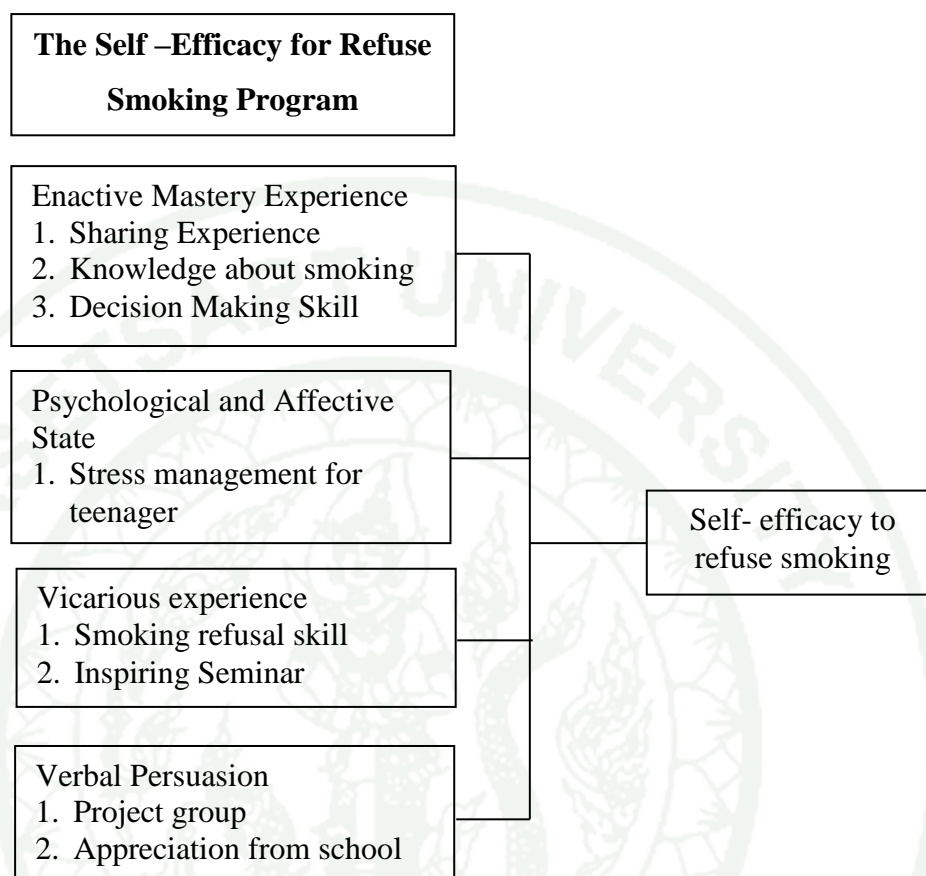
The role of sibling smoking may affect adolescents' self-efficacy to refuse smoking. Siblings who smoke maybe a closest sample in terms of the behavior of the age level that is not too far from adolescents. A research by Hiemstra *et al.* (2011) shows that the role of the family in the adolescents' self-efficacy to refuse smoking is no longer dominated by parents who smoke, but more dominantly influenced by siblings who smoke.

#### 3.6.4 Poor academic achievement

Adolescent who have poor academic achievement will be regarded as unsuccessful adolescent; this could bring pressure and stress in adolescent. According to Yusoff (2010), the major stressors for the secondary school students are associated with academic achievement. Research of Carroll *et al.* (2013) studied on adolescents in Australia showed that academic self-efficacy has a negative effect on juvenile delinquency. The lower adolescents have self-efficacy, the higher risk adolescents do mischief. Research of Pennanen (2011) in a longitudinal study found that adolescents who have poor achievement are more likely to have low self-efficacy in refusing cigarettes when compared to adolescents who have a good achievement.

In summary, self-efficacy does not appear on its own, but it can be shaped from the confidence that comes from own self, the strengthening which comes from others and also the experience and the learning process. Furthermore, self-efficacy in a person can be changed and it is not consistent within a certain time period. Therefore, there are several ways to be considered in monitoring self-efficacy, including considering factors that can give a negative effect on self-efficacy, controlling of the factors that can weaken self-efficacy and strengthening the sources of self-efficacy. This may help someone to have a better self-efficacy than before.

#### 4. Research framework



**Figure 2** Conceptual framework of the study

#### 5. The Self –Efficacy for Refusal Smoking Program

The intervention of this study represents four sources compiled on the basis of Bandura's self-efficacy theory and processes affecting self-efficacy. The program aimed to increase the self-efficacy of participants in refusal smoking. Activities should be performed in order, starting from the awareness about problems being faced and the knowledge supporting awareness while they are facing the problems. Then it should be followed with adequate skills and motivation which could strengthen participant's confidence to perform the task properly. The next necessary thing is self-motivation and the supports from various parties. This will strengthen their



determination to refuse smoking properly. The details of each activity and literatures related to the activities were described as follows.

### 5.1 Sharing experience

Sharing experience was a group activity discussion and brainstorm in order to share self-knowledge and self- experience about smoking and developing the same perception about smoking. The participant also summarizes and made the conclusion in same perception about the harmful of smoking.

Past experience can affect a person's perception and confidence in the future. Bandura (1997) stated that the experience of success in the past will bring confidence to do the same task in the future. In contrast, the experience of failure can make a person less confident to perform the same task in the future (Maddux, 2002). Failure stemming from past experience makes a person think that he does not have the ability or the task is too difficult to do. Sharing some stories with people who have similar experiences will increase the knowledge and insight about failure and success in performing the same task (Hussain, Lucas, and Ali, 2004). By listening to the stories and experiences of success and failure in refuse cigarettes in brainstorming group will provide indirect experience in the group members (United Nation, 2011).

### 5.2 Knowledge about smoking

Knowledge about smoking is a lecture about cigarette, smoking and its effect to the health, myth and fact related smoking behavior.

According to mastery experience, a person tends to measure the success or failure of its ability based on past experience (Bandura, 1997). One factor contributing to failure in refusing cigarettes in the past is the lack of knowledge about the dangers of smoking and the myth of the pseudo effects of smoking (Bidstrup *et al.*, 2008). The same thing is demonstrated in a study by Mahat and Scoloveno (2010), that the provision of knowledge about behavior in the school setting might increase the risk

and prevention of adolescents' self-efficacy. In this study, knowledge about the ingredients contained in cigarettes and its impact were provided. The impacts described include short-term effect, long-term effect, and effect of cigarette to second-hand smoker. In addition, the materials about the secret behind tobacco advertising and myths developed among male adolescents about smoking were involved. An illustration of video media advertising of cigarettes is added to the lecture. In addition, an explanation of the myths that have been believed among male adolescents should also be clarified. Methods used are the lecturer and open discussion.

### 5.3 Decision making skill

Decision making skill is the lecture about how to make decision regarding to the smoking offers situation. The decision making process is very important in influencing decisions. Bonnie (2009) stated that the adolescents tend to make decisions in a broad perspective, such as in terms of friendship, academics, or extracurricular involvement. However, adolescents do not yet have the maturity to think critically when compared with adult. According to Bonnie (2009), decision making should be included everything regarding adolescents, such as psychosocial, contextual, emotional, and experience chance. Based on normative models of decision making, there are five processes to be followed in decision making: 1) Identifying possible existing decisions, 2) Identifying possible consequences that could result from that decision, including the risks and benefits, 3) Evaluating the preferred consequence, 4) Identifying other possible things that might happen if such a decision must be made and 5) Incorporating all information using decision rules, thus identifying the best choice or action.

### 5.4 Stress management for teenager

Stress management for teenager is the activity which explains to the student about stress, some strategies to cope the stress situation and also how to promote good mood in daily live.

Adolescent can experience stress due to various reasons (Casey *et al.*, 2010). Therefore, the ability to control stress with stress management is important in maintaining self-efficacy well in refusing cigarettes (Ayo-Yusuf and Rantao, 2013). In addition, the mood can also affect self-efficacy (Ugwu and Onyishi, 2013). In smoking, psychological condition such as stress can easily cause a person influenced by negative thing and difficult to refuse when someone offered a cigarette (Pampel, Krueger and Denney, 2010). Some strategies can be applied in order to create positive daily mood (Sheldon and Lyubomirsky, 2006). Stress management is expected to promoting a positive mood and help adolescents cope with the conditions of the stress in daily life (DeMaso and Gold, 2006). Related to affective process, the stress management is divided into two purposes; first is to control stress when the adolescents are in offering situation and second is to enhance positive mood in daily activity. Relaxation is useful to appease the mind and control stress situation. One sample is by encouraging participant to inhale oxygen through the respiratory cavity. Activity distraction is useful to divert the mind and refresh from the complexity of the situation. To enhance positive mood the strategies include the healthier life style, stress management technique and social support. Some activities are can create positive mood and increase the self-efficacy, such us positive self-talk, exercise and peer sharing. In addition, applying healthy life style can also reduce stress, such as eating a healthy diet, learn assertive techniques, having adequate rest, praying and worship, be confidence, positive thinking, doing hobby, and building friendship network (Salmon, 2001; ElGawad *et al.*, 2007; Carleton *et al.*, 2008; Perin, 2009; Yusoff, 2010; Van Dyke, 2010; Smith and Pergola, 2011; Talbott, 2013).

### 5.5 Assertive communication and smoking refusal skill

Assertive communication and smoking refusal skill is the lecture about how to make good communication when face the smoking offers situation and how to practice smoking refusal skill in appropriate way.

In vicarious experience, a person can learn how others success to perform the task appropriately (Bandura, 1997). Vicarious experience provides learning

through observation process (Britner and Pajares, 2006). Practice the smoking refusal skills is an application of vicarious experience that has been learned through observation (Braungart *et al.*, 2011; Wamunyima, 2013). By practicing appropriate method of refusal skills, will increase self-confidence in the ability to refusing a smoking cigarette in the future (Black, 2012). Refusal skills are useful for guiding adolescents to say "no" when facing various offers and try to do risky behaviors. By having refusal skills adolescents will be more responsive in choosing the things which should be avoided and risky for them. In practice, the refusal technique must be accompanied by the appropriate communication techniques in both verbal and non-verbal.

The following are the techniques of refusal skills in risky behaviors (National Cannabis prevention and intervention center): 1) Before practicing refusal skills, provide text describing the situation of cigarette offers, 2) Say "no" explicitly, simply and confidently, 3) Give a polished answer and not exaggerating, 4) Stay showing firm conviction to resist when the offer is stated repeatedly, 5) State feelings toward the suppression situation. Stress yourself with the word "I" when expressing feelings, 6) Emphasize the good relations of friendship and the importance of friendship more than anything, 7) If negotiations are not successful, ask questions about the reason for the forced behavior, 8) Do other techniques, such as humor to divert the stressful situation, 9) Provide rational reasons about true friendship are not linked smoking, 10) Provide the right reasons and the real evidence of the bad effects of smoking.

## 5.6 Inspiring seminar

Inspiring seminar is the activity which invites guest speaker to share experience related smoking, the effect of smoking to their live and strategy to avoid smoking.

According to Bandura (1997), vicarious experience as one of self-efficacy's source, another factor that can make a person acquire self-efficacy is the



success of others. Success stories from other people's experiences will bring self-confidence and self-efficacy in adolescent that they can do the same thing and achieve success (Karlsson *et al.*, 2014). The existence of similarities with role model will improve adolescent's self-efficacy in its ability, that they can achieve similar success in refusing smoking cigarettes (Aryal, 2014). Former smokers who realize and eventually quit smoking certainly have their own experience to cigarettes. There are certain things which give them great strength and motivation to quit smoking. It also occurs to people who never smoke in lifetime. To survive or stay free from smoking is certainly not an easy thing in the environment with a lot of exposure to cigarettes. The secret of success and inspiring stories of these people will be shared to adolescents who are struggling against cigarettes. These inspiring stories are given by people who have direct experience of life events related to cigarettes, such as patients with chronic disease as a result of ever becoming heavy smoking, or young people who can perform successfully without cigarettes.

#### 5.7 Project group

Project group is the teamwork activity in small group which the students make a project in group that related to the smoking refusal strategy.

Verbal persuasion is one further way to respond and provide feedback to someone who is trying with his own capabilities (Bandura, 1997). Group project will demonstrate the personal abilities in promoting efforts to refused smoking in the school environment (Atabila and Castillo, 2013). Regarding to Bandura (1997), in order to promote verbal persuasion, feedback can be provided as words, encouragement, consulting, and support from the people around and the environment. Project results of this group will be the means of evidence evaluation of the capacity of youth that will bring a positive feedback in their attempt in refusing smoking cigarettes.



### 5.8 Appreciation from school

The final result of the project group is the support and appreciation of the social and environment on adolescent that they efforts to resist cigarettes.

Appreciation is a form of support, appreciation, and respect for an accomplishment or a proud thing. The existence of appreciation will provide a pride and encourage self-efficacy of adolescents to refuse smoking efforts better in the future (CDC and Prevention (US), 2012). With the award from school, adolescent will feel that the efforts to refuse cigarettes are an acceptable from their society. A research from Steinberg (2008) has shown that social support on adolescent actions will motivate and increase the confidence of adolescent to perform a task. The appreciation is able to bring a sense of excitement and pride in him as an adolescent. The appreciation from school is received as an endorsement from the adolescent's social environment.

### 6. Self- efficacy in smoking refusal measurement

Self-efficacy (SE) scale is developed based on the theory of self-efficacy by Bandura (Lawrance, 1989). Smoking self-efficacy (SSE) scale for adolescent was developed based on the conceptualization of the SE as a predictor of health behaviors (Conditte and Lichtenstein, 1981; Lawrance and McLeroy, 1986). The scale can be used to assess the effects of intervention in order to increase self-efficacy associated with smoking (Lawrence, 1989). The scale was first tested on a 7th grade student. This SSE scale originally consists of 36 items with 3 subscales; include the social opportunity scale which involves 11 questions, 9 questions of emotion scale, and friend's influence scale including 9 questions. Smoking self-report measurement is a 6-point Likert scale, where it is already commonly used to assess self-efficacy (Hiemstra *et al.*, 2012). Internal consistency (Cronbach's alpha) includes the social opportunity scale .94, emotion scale .96, and friends influence scale .94. The higher score indicates a greater likelihood of resisting smoking. SSE scale by Lawrance has been frequently modified and used in some researches after its construction to the present with Cronbach's alpha coefficient .87 to .99. (Huver *et al.*, 2007; Patten *et al.*, 2008; Mee, 2014; Zourbanos *et al.*, 2014). By the way, SSE scale for adolescent by

Lawrance was used and modified in this study. In the scope of cultural differences, habitual differences and character differences of participants were modified according to the requirements for this study.

## **7. Operational definition**

### **7.1 Demographic Characteristic**

7.1.1 Age is the range age of 7<sup>th</sup> grade junior high school between 13 to 14 years old.

7.1.2 Elementary National Evaluation Test (ENET) score is national evaluation test scores obtained by students after finishing primary school. This score based on grades 0 to 4 (4 highest; and lowest 0) with group average value recoded as follows: 1) satisfying (10 to 9.10); 2) Good (9.00 to 8.10); 3) Moderate (8.00 to 7.10); 4) Deficient (7.00 to 6.10) and 5) failed (under 6.00).

7.1.3 Highest education attainment of father is the highest formal education of the student's father.

7.1.4 Highest education attainment of mother is the highest formal education of the student's mother.

7.1.5 Living status is whom students live at home with.

7.1.6 Father smoking status is whether or not the students' father has smoking behavior.

7.1.7 Mother smoking status is whether or not the students' mother has smoking behavior.

7.1.8 Sibling smoking status is whether or not the students' brother or sister has smoking behavior.

7.1.9 Best friend smoking status is whether or not the students' close friend has smoking behavior.

7.2 Seventh grade student is the adolescent who are attend 7<sup>th</sup> grades class and enrolling and studying in public junior high school in Bengkulu City, Indonesia.

7.3 The self-efficacy for refusal smoking program is a series of educational programs on promoting self-efficacy to refuse smoking cigarette for smoking prevention on the seventh grades student of junior high school. This program modified from self-efficacy theory (Bandura, 1997). This program consists of eight activities:

7.3.1 Sharing Experience is sharing activities related smoking experience among participant. This activity evaluated by observation the students' participation in group discussion.

7.3.2 Knowledge about smoking is a lecture about cigarette, smoking and its effect to the health, myth and fact related smoking behavior. This activity evaluated the students' knowledge before and after lecture by multiple choice questions.

7.3.3 Stress management for teenager is the activity which explains to the student about stress, some strategies to cope the stress situation and also how to promote good mood in daily life. This activity evaluated by direct question and open question related strategy to manage stress.

7.3.4 Assertive communication and smoking refusal skill is the lecture about how to make good communication when face the smoking offers situation and how to practice smoking refusal skill in appropriate way. This activity evaluated by observation and refusal skill check list activity.

7.3.5 Inspiring seminar is the activity which invites guest speaker to share experience related smoking, the effect of smoking to their live and strategy to avoid smoking. This activity evaluated by direct question and observation during activity.

7.3.6 Decision making skill is the lecture about how to make decision regarding to the smoking offers situation. This activity evaluated by check list of decision making steps.

7.3.7 Project group is the teamwork activity in small group which the students make a project in group that related to the smoking refusal strategy. This activity evaluated by observation of teamwork and the project.

7.3.8 Appreciation from school is an award from school to the participant as the appreciation and support to the students' effort in the program. This activity evaluated by students' self-reflection.

7.4 Self-efficacy to refuse smoking is the 7<sup>th</sup> grade student Junior High school ability to refuse smoking confidently in various situations including social opportunity, emotional, and friends influence. The self-efficacy to refuse smoking is measured by a modification of self-efficacy scale for adolescent smoking by Lawrance (1989).

## MATERIALS AND METHODS

### Materials

Materials employed in this study were presented into two parts: 1) the instrument for data collection, and 2) the description of the self-efficacy for smoking refusal program

#### 1. The instrument for data collection

The instruments for data collection consisted of 64 questions which included 3 parts: 1) Demographic data questionnaire (DDQ), 2) The Beck Depression Inventory-II (BDI-II) Indonesian version (2013), and 3) Self-efficacy scale for adolescent smoking by Lawrence (1989).

##### Part 1: Demographic data questionnaire (DDQ).

The Demographic Data Questionnaire was developed by researcher, which used to determine the characteristics of participants in intervention and comparison groups. The DDQ consisted of 9 questions used to collect participant's demographic data including age, Elementary Nation Exam Test score (ENET score), highest education attainment of father, highest education attainment of mother, marital status of parents, father smoking status, mother smoking status, sibling smoking status, and friend smoking status.

##### Part 2: The Beck Depression Inventory-II (BDI-II) Indonesia version

The Beck Depression Inventory-II (BDI-II) was used as tool for the depression screening test. This questionnaire has adapted to appropriated use in the general population, including adolescents (Ginting, 2013). The 21- item questionnaire used the 4 point Likert scales rating from 0-3. The highest score was 63. The sensitivity of the questionnaire was 73% with specification of 73%, and the accuracy of 99.1%



(Ginting, 2013). The Cronbach's alpha of BDI-II Indonesia version in healthy participants was 0.90. The cutoff point of this questionnaire was 17. Scores equal to or more than the cutoff point meant depression, and the lower score than the cutoff point meant no depression. According to the screening test, all the participants had the score of BDI-II Indonesia version questionnaire less than 17. This indicated that all the participants had no depression symptom and they were able to include in the study.

The BDI-II Indonesia version showed the good Cronbach's alpha in healthy participants (Ginting, 2013). The Cronbach's alpha of BDI-II Indonesia version was .90 in healthy participants.

### Part 3: Self-efficacy scale for adolescent smoking by Lawrence (1989)

Self-efficacy scale for adolescent smoking described social and emotional situations in which people were likely to smoke. This questionnaire developed by Lawrence (1989). The 34-item questionnaire consisted of 3 subscales including the social opportunities, the emotion, and the friends' influence. The emotional scale included self-report of feelings of anxiety, restless, sad, anger, anxiety, and frustrate. Friends' influence scales included social situations that individuals would accept cigarette when it was offered. Opportunity scales include daily activates that could triggered a desire for cigarettes, such as studying, watching TV, or waiting someone. The questionnaire was rated using the 6 point Likert scales as follow: "1" = I am very sure I would smoke, "2" = I would smoke most Likely, "3" = I would probably smoke, "4" = I probably would not smoke, most Likely "5" = I would not smoke, and "6" = I am very sure I would not smoke. The total score of self efficacy to refuse smoking varied from 34 to 204. A higher score indicated a greater likelihood to refuse smoking. Self-efficacy divided into two categories, low self-efficacy and high self-efficacy (Bandura, 2006). By using mean score as the cut point, the cut point for self-efficacy in this study was 102. The scores less than 102 meant that the participants had a low self-efficacy and the score more than 102 meant the participants had high self-efficacy.

The self-efficacy scale for adolescent smoking was shown by good internal consistency (Cronbach's alpha) in each subscale, includes the social opportunity scale .94, emotion scale .96, and friends influence scale .94 (Lawrence, 1989). The validity obtained significant association with smoking behavior group (non-smoker, and smoker experiment) was  $p < .001$ . The test re-tests correlation for three subscales ( $r > .89$ ). The assessment of the overall score had ranges from 36 to 216 (Mee, 2014). Mee (2014) modified this scale and applies to research involving college student and reported Cronbach's alpha coefficient of .99. Zourbanos, Dimitriou, Goudas, Theodorakis (2014) reported the SSE scale modification in the Greek version for Adolescent and Cronbach's coefficient alpha get social opportunity .87, emotion .95, and .87 influence friends. Huver, Engels, Vermulst, de Vries (2007) also use the same scale for examine the relationship of parenting style on children's smoking behavior ( $\alpha = 0.97$ ). The same scale has been used to test the adolescent self-efficacy related to smoking cessation (Patten et al., 2008).

## **2. The description of the self-efficacy for smoking refusal program**

The self-efficacy for smoking refusal program was developed by researcher to increase self-efficacy to refuse smoking in adolescents. This program consisted of 8 activities undertaken during 5 weeks. The description of the program was following.

### **2.1 Activity 1: Sharing Experience**

Brainstorming was adopted to achieve the goal of promoting the enactive mastery experience. Brainstorming was used to explore various experiences of participants in the past related to cigarettes such as the perception of smoking, knowledge about smoking, cigarette smoking experience and experience when cigarettes were offered. Participants were able to express and share self-knowledge and self-experience about smoking. In this brainstorming activity, the participants were divided into small groups of 6-7 participants. The assistant researcher walked around to observe the activity and helped participants who had difficulties in discussing. Brainstorming in small groups began with reviewed and shared the

participants' knowledge related to smoking. All opinions and experiences were collected and summarized by the group.

## 2.2 Activity 2: Knowledge about smoking cigarette

Knowledge was one part of a person's underlying enactive mastery experience. Knowledge of smoking related to smoking cigarette was given to provide the knowledge and experience of the self-knowledge to the participants in favor of self-efficacy. Knowledge related smoking was divided into three parts, including knowledge on harmful ingredients of cigarettes, knowledge about short-term effects of smoking on body and health, knowledge about long-term effects of smoking on body and health, consequence of smoking to passive smokers or second-hand smokers, and understanding the myth and fact about smoking. In this activity, the information delivered to the participants in class room setting. After researcher gave the lecture, the participants asked question and discussion in class.

## 2.3 Activity 3: Stress management for teenager

The individuals would be able to control self-ability to perform self-efficacy in coping problems when they could control the psychological condition. In refusing smoking, stress condition was also related to the self-efficacy performance in adolescents. Stress management for teenagers provided some strategies for adolescents to face with daily stressor. In this activity, the participants were able to understand stress, emotion experience and psychological stressor. They could understand the strategy to handle stress situation and strategy to create positive mood and reduce stress in daily activities. After explanation the topic, the participants practiced relaxation techniques to handle stress situations

## 2.4 Activity 4: Assertive communication and smoking refusal skills

This activity provided skill in promoting vicarious experience. In this activity, participants learned from classroom lecture and from video about how to use

the appropriate communication and the strategy to refuse smoking in various situations. The video was cast by the students in their school. The setting of drama in video was very close to the participants' life reality. The video provided the description of refusal techniques from other people who were at the same age and stayed in the same area with participants. The video was performed in local language so the participants could imitate in appropriate way.

In this activity, the participants were able to handle the situation of social pressure related to smoking, developed assertive communication and smoking refusal skill from the model, and performed similar skills with the model. At the beginning, participants shared experiences related to cigarette offering situation. Then, the participants watched the video about social pressure situations and how to handle the situations. After that, the participants were divided into 3-4 students per group. Each group received the case scenario and they made a role play to practice the communication and refusal technique in various situations. After that, every group presented the role play in front of the class.

### 2.5 Activity 5: Inspiring seminar

Inspiring seminar aimed to give participants the experience from others who faced the same problems in rejecting cigarettes. Inspiring seminar was one part of vicarious experience which participants learn through the success of others in order to perform a similar task. In this activity, the participants received the knowledge from the model's experience. They learned coping strategies, increased awareness to refuse smoking, and increased the motivation to refuse cigarettes. The first speaker was a patient who had diseases related to smoking habits since adolescent age. The second speaker was a junior high school student in Bengkulu, which was also an international athlete. On this occasion, the speakers shared their stories and experiences when they faced with a situation of offering cigarette by others. In addition, they also shared their refusal smoking strategies. At the end of the seminar, participants were allowed to ask further questions to both speakers.



## 2.6 Activity 6: Decision Making Skill

The decision making skill provided skill that can be mastery experience for participants in the future. This skill helped the participants to make appropriate decision when facing the condition whether or not to received a cigarette. In this activity, participants were able to develop knowledge and ability of decision making skill in refusing cigarette, and they were able to make decision in difficult situation of offering cigarette smoking. The researcher provided information in step by step to make decision. The decision making step was based on normative models of decision making consisting of 5 steps including: 1) identifying possible existing decisions, 2) identifying possible consequences resulted from that decision including the risks, benefits and the evaluation of the preferred consequences, 3) identifying other possible situations that might be happen, and 4) incorporating all information by using decision rules. After the researcher explained about decision making step, the participants were divided into small group consisted of 5-6 students. Each group was received the different case scenario describing various cigarette offering situations including social situation, opportunity situation, friend pressure and self-attempt. The participants in each group discussed the problem according to the case scenario. They tried to solve the problems and made an appropriate decision by using the decision making steps. At the end of the class, each group presented the result of their group discussion in front of the class that provided opportunity for participants learning from each other.

## 2.7 Activity 7: Group Project

Group project was the activity where the participants could support each other to make an activity that related to smoking prevention. The purpose of this activity was to develop ability to perform refusal cigarette offering, increasing the participants' confidence to perform refusal cigarette message to the social environment, and increasing motivation to promote self-efficacy in refusal smoking in group. The project was to draw a poster contained a simple caricature which showed the message on how someone refused cigarette and communicated in a right way. The



participants were divided into small group which consists of 2-3 participants. This activity became a competition among participants. The group who had the best poster received the award in the next activity.

### 2.8 Activity 8: Appreciation from school

A support and appreciation from environment was very important to improve self-efficacy to refuse smoking. The last activity of this program was to provide positive feedback to the participant's project activity, developed social persuasion on participant's project activity, and strengthened the self-efficacy to refuse smoking. The head master gave the certificate for appreciation to participants. After that, the head master gave the speech of pride to the students' effort in completion the self-efficacy program on smoking prevention.

## 3. Validity and Reliability of the instrument

### 3.1 Validity of Instrument

There are two instruments used in this study, including questionnaires and self-efficacy for refusal smoking program. The validation will be described separately as follows:

#### 3.1.1 Validity of the questionnaires

Data collection used the self-efficacy smoking for adolescent developed by Lawrence (1989) and The Beck Depression Inventory-II (BDI-II) Indonesia version (Ginting, 2013). The self-efficacy scale for adolescent smoking and The Beck Depression Inventory-II (BDI-II) Indonesia version was reviewed and validated by the following processes.

First, content validity was checked by three experts, including a psychologist from University of Bengkulu, Indonesia (psychologist specializing in

development), a lecturer in nursing science discipline (Nurse specializing in pediatric nursing), and a health promotion practitioner on adolescent and school environment from Health Department of Bengkulu Province, Indonesia. The three experts were requested to evaluate in every item of instrument by using the Content Validity Index (CVI) with scale of 1 to 4. According to (Burn and Grove, 2009), contains validity criteria acceptable if 80% of the expert assess on a scale of 3-4. Details of the questionnaire were examined in terms of relevance to the conceptual definition of the self-efficacy theory construct and the clarify of each and every item was ensured, the clarify of instrument was ranged 83 % - 100% and the relevance of the instrument was ranged from 83 % - 100% and finally the researcher had to pay attention to some of the details of the experts' recommendation and suggestions. In The Beck Depression Inventory-II (BDI-II) Indonesia version, the two experts give score 1 in the items number 21, which was the question related to sexual interest. The two experts gave an advice to delete item number 21. However, one expert gave score 4 for item number 21, because she state that the question on item 21 was related to the developmental stage of male adolescent in 7<sup>th</sup> grade. Moreover, after discussion with other two experts, they gave score 3 to item number 21. They also advised to the researcher to directly explain to the student with simple question in item number 21. Finally, the researcher changed the instrument regarding the experts' recommendation.

Second, the questionnaire was translated into Indonesia language by three translators who are competent in both English and Indonesian language and preferably with good knowledge and well-versed with basic terminology in health-related profession. The questionnaires were translated from English into Indonesian by first translator first. Then, the questionnaire in Indonesian language was translated back into English by translator with no prior knowledge of the questionnaire itself. The reversed version into English was reviewed by the third translator and the researcher with the original instrument to identify and resolve any misinterpreted concept on the translator's part, as well as any discrepancies between the original English questionnaires. This procedure is undertaken to verify a correct understanding and correct translation of all questionnaires used within this study. According to the

content validity procedure, details in the questionnaire were examined for the relevance to the concept of self-efficacy, specifically on smoking behavior among adolescent. Final questionnaire was checked by two teachers who taught Indonesia language subject in 7th grade Junior High school to make sure the phrases used in the questionnaire understood by participants and suitable for the students.

### 3.1.2 Validity of the self-efficacy for refusal smoking program

The self-efficacy for refusal smoking program was modified by researcher. The program also checked by 3 experts as a consultant on the construct and content validity. All the experts gave the score in 3. The three experts were requested to evaluate in every item of instrument by using the Content Validity Index (CVI) with scale of 1 to 4. According to (Burn and Grove, 2009), contains validity criteria acceptable if 80% of the expert assess on a scale of 3-4. Details of the questionnaire were examined in terms of relevance to the conceptual definition of the self-efficacy theory construct and the clarify of each and every item was ensured, the clarify of instrument was ranged 83 % - 100% and the relevance of the instrument was ranged from 83 % - 100% and finally the researcher had to pay attention to some of the details of the experts' recommendation and suggestions. The program was required to revise in some parts. The experts had advised to use a simpler method in accordance by cognitive abilities of adolescents aged 13-14 years old. In addition, the advice from experts in project group activities should be simpler into a competition as well, such as activities that stimulate the adolescents' motoric.

## 3.2 The reliability of the instrument

### 3.2.1 Reliability of the self-efficacy scale for adolescent smoking

In this study the questionnaire was trialed out to 30 students with the similar characteristic to the target sampling group of this study at a Junior High School in Bengkulu. The internal consistency of self-efficacy smoking for adolescent

was evaluated and resulted with Cronbach's alpha coefficient of .89, this was considered acceptable as tools fit for use (Burns and Grove, 2009).

### 3.3.2 BDI-II Indonesia version

In this study the questionnaire was trialed out to 30 students with the similar characteristic to the target sampling group of subject at a junior high school in Bengkulu. The internal consistency of self-efficacy smoking for adolescent was evaluated and resulted with Cronbach's alpha coefficient of .918, it was showed that the BDI-II Indonesia version was acceptable as tools in this study (Burns and Grove, 2009).

### 3.3.3 The self-efficacy for refusal smoking program

The program was test as a pilot study before using. The pilot study was conducted in the same school but different group of participants. For pilot study, it was tried out in the two sessions of the self-efficacy for refusal smoking program. The selected sessions were the important part of program in promoting self-efficacy; the knowledge related smoking and smoking refusal skill technique. After the pilot study, the researcher changed some steps based on feedback from participants and teachers. For example, they recommended making a role play which could be more effective in the class setting rather than usual presentation. Researcher also modified some ways to teach about cigarette and smoking in order to make participant greater enjoyable and more interested to the topic. This pilot study was improved when being applied into the real intervention afterward.

## Methods

This part describes research methodology which consisted of hypothesis, study design, population and sample, data collection and data analysis, and ethical consideration.

### 1. Hypothesis

The hypotheses were set based on the specific adjectives of the study. The hypotheses were following:

1.1 Hypothesis 1: There is a significant difference of self-efficacy to refuse smoking before and after intervention in the intervention group.

1.2 Hypothesis 2: There is a significant difference of self-efficacy to refuse smoking between the intervention group and the comparison group.

### 2. Study design

A quasi-experiment with two groups, pre –posttest design, was used in this study aimed to evaluate the effect of self-efficacy for refusal smoking program among male junior high school students.

### 3. Population, sample, and sampling technique

The population of this research was the student aged 13 - 14 years old were studying in 7<sup>th</sup> grades in public junior high school academic year 2014-2015, Bengkulu City, Indonesia. The number of public junior high school in particular city is 30 schools. The inclusion criteria for school were: 1) not the best or the lowest rank in the particular area, and 2) implement smoke free-zone regulation in school. Six schools were selected as inclusion criteria requirement. From the six schools, two schools were selected to include in the study. To avoid contamination of intervention,



researcher randomly selected two schools that were geographic distance in location. The two schools have similar characteristic of environment such as they has small shop near the school which can sell cigarette freely to student and the location of each junior high school were close to a senior high school.

Two schools have been determined respectively as the intervention and the comparison groups. Researcher conducted depression screening test using BDI-II Indonesia version to the prospective participants. After that, researcher selected the participants in both groups by using match paired technique. The criteria difference in the two groups was checked by using chi-square to match the demographic characteristics. The result showed that there was no significant difference between group ( $p > .05$ ) including age, Elementary Nation Exam Test score (ENET score), father education level, mother education level, live with who, father smoking status, mother smoking status, and sibling smoking status. Meanwhile, the friend smoking status showed slightly significant difference ( $p < .05$ ) between the two groups.

The sample size was calculated by using the G-power analysis for two independent t-tests. To calculate the required number of participants, the test was set at  $\alpha = .05$  to achieve power of .80 and the effect size was 0.5. The amount of sample was 51 participants for each groups, intervention group and comparison group. To anticipate the participant's withdrawal, the number of samples was added 10 % of the calculation. The final participants for each group were 54. The participants in the comparison group only received the standard smoking prevention programs from their school. However, the participants in the intervention group were received the Self-Efficacy for Refusal Smoking Program.

The selection process began in the first week of school. The inclusion criteria for samples selection were: 1) male student, 2) aged 13 – 14 years old, 3) had willingness to participate in the research for all sessions, 4) able to properly read and write as well as understand Indonesian language in order to shared idea and experience during the activities, and 5) had permission from the parents or guardians

to join in the program. Researcher selected two groups of samples and matched pair of participants across two groups; participants were screened for depression symptom.

During the study, four students in intervention group dropped out because they needed to join in sport training program for sport competition. Therefore, only 50 students remained in the intervention group and 54 participants were in the comparison group. The data collection was carried out from first week of August to second week of September 2014.

#### **4. Data Collection**

The intervention was separated in two phases, the preparation phase and the intervention phase.

##### **4.1 Preparation phase**

1. The official letter from Boromarajonani College of Nursing NopparatVajira and graduate school, Kasetsart University was obtained, and was submitted to the Board for Nation Unity and People's Protection (BNUPP) of Bengkulu Province to secure permission to implement the study, and Director of Nation Education Department City of Bengkulu as permission to conduct study in selected school.

2. In every selected junior high school, researcher met the headmaster and the counseling teacher who had responsibility to teach about health promotion behaviors and explained the objective of the study and study plan. Then, researcher also got the permission approval to conduct the research.

3. Counselor teacher and researcher met the seventh grade male students to explain about the objective of the study. Then, the researcher gave the information sheet and informed consent form for parents to the students. They had three days to

read and make sure they understand the details of the program and data collection before signing. After three days, the researcher collected and checked form to determine the eligible participants.

4. After the parents or guardians gave the permission, researcher gave the information sheet and assent form to the adolescents. When they decided to take part in the study; researcher asked them to fill demographic data and depression screening test. The students who had moderate or high level of depression were excluded from the study.

5. Researcher was recruited three research assistants to help in the program. The research assistants came from outside school and did not have relationship to the school or had a power to influence the participants in this study.

6. Researcher provided one day workshop about the self-efficacy for refusal smoking program to the research assistants and selected teacher from the school who was responsible in health promotion. Researcher also explained the responsibility of them in this program. The responsibilities of the research assistants were to help the researcher during the intervention for collecting questionnaire, and they were facilitators for the students in group discussion activity, and prepared the equipment for the activity.

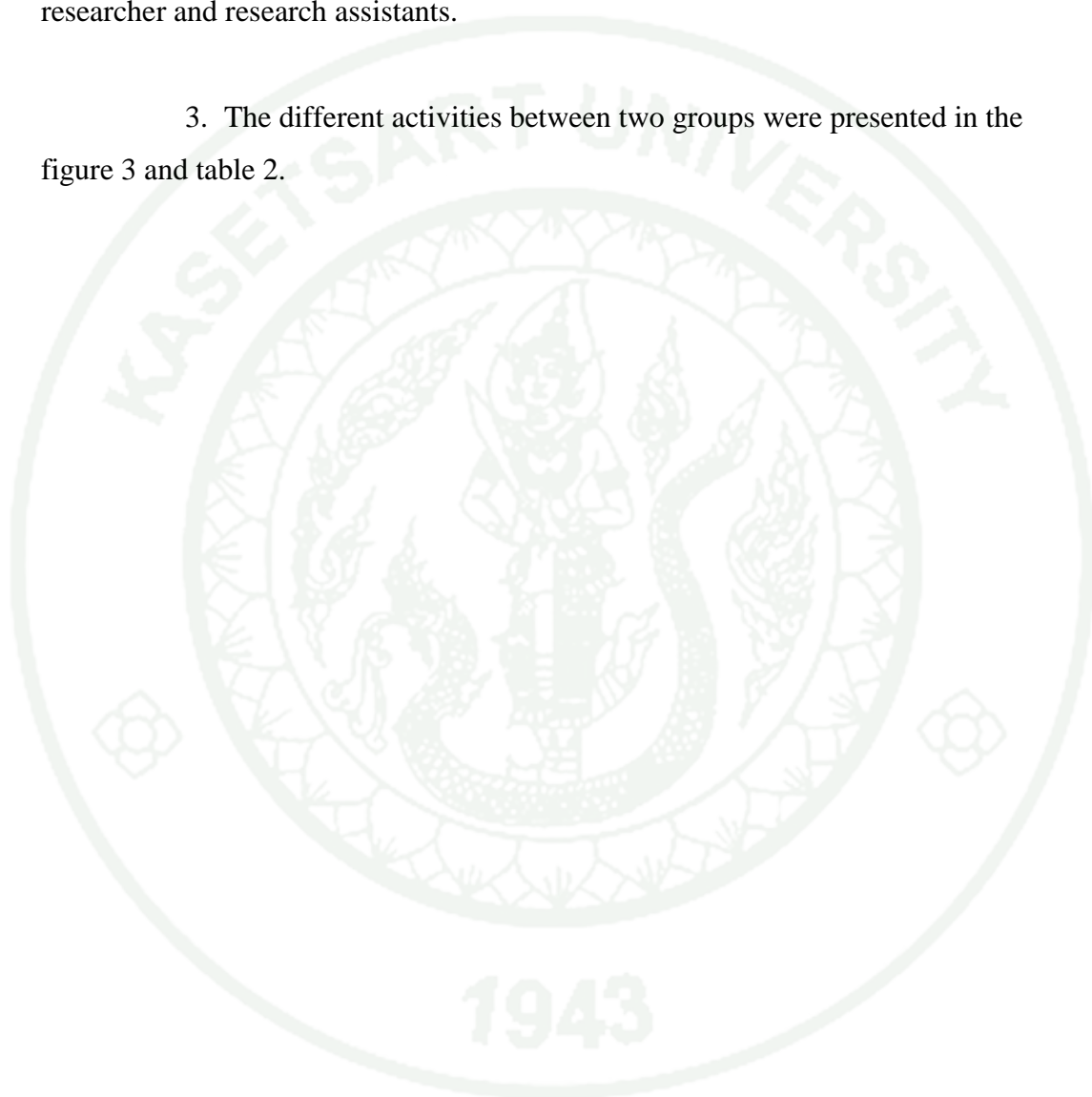
#### 4.2 Implementation phase

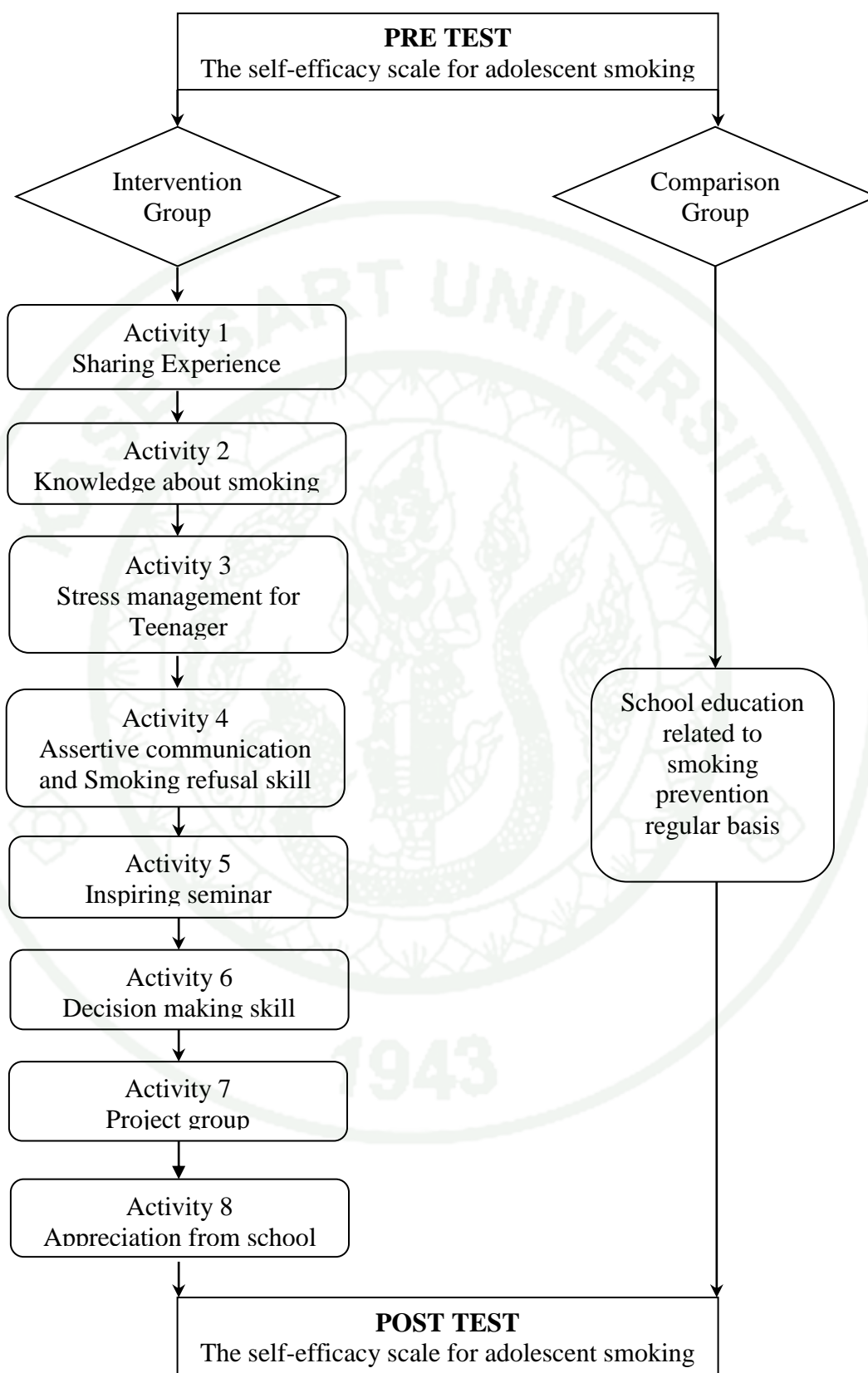
In the implementation phase, researcher and research assistants gave the questionnaires to the participants and collected questionnaire after participants filled out the questionnaires.

1. During program implementation, participants in comparison group received regular school education related to smoking prevention such as the knowledge related to the smoking behavior and its harmful effect.

2. Participants in intervention group received the self-efficacy for refusal smoking program consisting of 8 activities within 5 weeks. Times of activities set by schools' recommendation in order to avoid disturbing participant's study times. After 5 weeks of this intervention program, the second data collection was conducted by researcher and research assistants.

3. The different activities between two groups were presented in the figure 3 and table 2.





**Figure 3** Activities of intervention group and comparison group



**Table 2** Activities of intervention group and comparison group

<b>Period</b>	<b>Intervention group</b>	<b>Comparison group</b>
Week 1	<p>Activity 1: Sharing Experience/brainstorming (approximately 45 – 60 minutes)</p> <p>Group activity discussion and brainstorm in order to share self-knowledge and self- experience about smoking and developing the same perception about smoking.</p> <ul style="list-style-type: none"> <li>- Guiding sharing activity about participants' knowledge related smoking in group</li> <li>- Guiding discussion among groups</li> <li>- Summarizing and made the conclusion in same perception about the harmful of smoking</li> </ul> <p>Evaluation: the researcher observed the activity and participation of the participant in the group brainstorm.</p>	<p>The participants obtained the usual education with regard to smoking prevention program used in regular basis in the school</p>
Week 2	<p>Activity 2: Knowledge about smoking (approximately 45 – 60 minutes).</p> <p>Pre Test: Research assistants distributed the 10 multiple choice questions related topic.</p> <p>The researcher gave lecturer about smoking cigarette to enhancing level of knowledge on harmful ingredient of cigarettes, short-term and long-term effects of smoking on body and health, increasing awareness about consequence of smoking to second-hand smoker and understanding myth and fact about smoking.</p> <p>Post Test: Research assistant distributed the 10 multiple choice questions related topic (second test).</p>	-

**Table 2** (Continued)

<b>Period</b>	<b>Intervention group</b>	<b>Comparison group</b>
Week 2	<p>Activity 3: Stress management for Teenager (approximately 45 – 60 minutes).</p> <p>The researcher gave the lecture about stress management which fit to adolescents in order to make better understanding about stress, emotion experience and psychological stressor. In additional, participants also practiced some strategies to handle stress situation, created positive mood and reduced stress in daily activity.</p> <p>Evaluation:</p> <ul style="list-style-type: none"> <li>- Researcher observed the participant relaxation technique practices.</li> <li>- Research assistants distributed the open question form related some strategies to manage stress situation.</li> </ul>	-
Week 3	<p>Activity 4: Assertive communication and Smoking refusal skill (45 – 60 minutes).</p> <p>The participants learned how the way to say no to cigarette offers in order to handling the situation of social pressure. They watched the video about some ways to refuse cigarette. At the end, the participants made a role play in small group to practice refusal skill in smoking and friendly communication.</p> <p>Evaluation:</p> <ul style="list-style-type: none"> <li>- The researcher observed the small group activity</li> <li>- The researcher made on checklist activity of role play.</li> </ul>	-

**Table 2** (Continued)

<b>Period</b>	<b>Intervention group</b>	<b>Comparison group</b>
Week 3	<p>Activity 5: Inspiring seminar (approximately 40 minutes).</p> <p>The guest speakers were invited to this seminar in order to give the knowledge from the model's experience to the participants. Participant learned coping modeling, enhanced participant's awareness and motivation to refuse cigarette. The guest speaker shared their experience related smoking and how they can deal with smoking behavior. In the end of seminar, the guest speaker motivated and inspired participants to against cigarette and keep refuse smoking.</p> <p>Evaluation:</p> <ul style="list-style-type: none"> <li>- Researcher observed the participation of participant during the seminar and asking question.</li> <li>- Researcher asked direct question to the participants about their comments and what they learned from the guest speakers' experiences.</li> </ul>	-
Week 4	<p>Activity 6: Decision making skills (approximately 45-60 minutes).</p> <p>Lecture about how to make decision related smoking, especially when someone offered the cigarette. In group, participants practiced how to solve the problems and made decision based on the scenario.</p> <p>Evaluation:</p> <ul style="list-style-type: none"> <li>- Researcher observed the small group activity</li> <li>- Researcher made check list of decision making step</li> </ul>	-

**Table 2** (Continued)

<b>Period</b>	<b>Intervention group</b>	<b>Comparison group</b>
Week 4	<p>Activity 7: Project group (approximately 10-15 minutes).</p> <p>In group, the participants made small project in order to develop ability to perform refusal cigarette message, increased confidence to performed refusal cigarette message to the social environment and increased motivation to promote self-efficacy in refuse smoking in group. The participant created activity in group to make poster about simple caricature shows the message how someone refuse cigarette and communicate in right way.</p>	-
Week 5	<p>Activity 8: Appreciation from school (approximately 30 minutes).</p> <p>After all the activities in the program finish, the participants received gift and a certificates as positive feedback and support from school.</p> <p>Evaluation: researcher distributed form about self-reflection question related activity 7 and activity 8.</p>	-

4. After all the activities, the researcher conducted the second data collection by distributing the self-efficacy scale for adolescent smoking. The questionnaire was distributed to both the intervention and comparison groups. Moreover, the researcher also distributed the evaluation form.

5. Finally, the participants shared their feeling about the benefit of the seminar and whether they had self-efficacy in refusing smoking after the activities series.

## 5. Data Analysis

Data were analyzed using descriptive and inferential statistics to address the research question. The SPSS program version 16 was used for data analysis.

### 5.1 Data analysis for demographic characteristics

The demographic characteristic data were analyzed for frequency, percentage, mean and standard deviation. Characteristic difference between the two groups was tested using chi-square.

### 5.2 Normality Data

After intervention was obtained, the number of participants in intervention group was 50 students and the number of participants in comparison group was 50 students. Before the data analyzed, the score of self-efficacy in refuse smoking was checked the normality by used kolmogorof smirnov. After the intervention, comparison group did not met the normal distribution data, so the researcher exclude the 4 participants with extreme score then the data in comparison group has been normal distributed. So the final participant in comparison group was 50 students.

### 5.3 Hypothesis testing

The mean difference between self-efficacy in refuse smoking was analyzed using independent t-test. The match paired t-test was used to measure the difference of self-efficacy to refuse smoking within the intervention and comparison groups before and after the intervention. The independent t-test also used to examine the difference of self-efficacy to refuse smoking between the intervention and comparison after the intervention.



## 6. Ethical Consideration

This study was approved by the institutional Ethical Review Board (IRB) of the Boromarajonani College of Nursing Nopparat Vajira, Bangkok, Thailand, and was submitted to the Director of Nation Education Department City of Bengkulu. After that, the researcher met the head master of school and got the permission to conduct the study in the school. The head master gave the appropriate times to meet the student and conducted the intervention in order to avoid disturbing the learning process.

Researcher collected the prospective participants in accordance to the inclusion criteria. Researcher explained about the objectives of the program and the general information about the benefits, overall activities, participants' role and the information related to ethical consideration. Participants received the information sheet and the consent form for parents for their permission to join the study.

The researcher respected the rights of the students and parents by avoiding the words and actions that could make students feel compelled to join as participants. Researcher explained that the willingness of the students to join in the study was voluntary and without forces either from the researcher, teachers and school.

The researcher kept the participant's identity (anonymity) to protect the participants and parents privacy. Researcher wrote the identity of the participants with a code on the questionnaire. The data files of the participants were saved into soft file and document file. For the document file, the file stored in a locked cabin for 3 years and the cabin keys were kept by researcher only. The data sheets were destroyed when the study was completed and data were deemed no longer needed. Soft file was saved in a folder on the computer and researcher gave a password that only known by researcher and advisor.

Researcher kept the information and questionnaires which filled out by the participants (confidentiality). During the research process, the researcher kept the

participants from potential physical, psychological, or social harm. Finally, the results of the study were presented with no specific mention of the identity of participants or specific school and place. The researcher distributed one copy each of the final report of this study to all the schools kindly granted permission to researcher to conduct this study.



## RESULTS AND DISCUSSION

### Results

This study is a quasi-experiment research. The purpose of this study was to examine the effect of smoking refusal smoking program among junior high school students. The results of this study are divided into three parts: 1) the demographic characteristics of adolescents, 2) the analysis of smoking refusal self-efficacy in adolescents, and 3) the analysis of smoking refusal self-efficacy components in junior high school students.

#### 1. Demographic characteristics of adolescents

This part explains about the demographic characteristics of participants in intervention and comparison groups. The difference of student's characteristics between groups was analyzed by using descriptive analysis and chi square analysis.

**Table 3** Demographic characteristics of participants in intervention (N = 50) and comparison groups (N = 50).

Personal characteristics	Number (Percentage)		p-value
	Intervention group	Comparison group	
Age			
• 13	40 (80.0)	39 (78.0)	.806
• 14	10 (20.0)	11 (22.0)	
Elementary National Exam Test (ENET) score			
• Moderate Level (8.00-7.10)	23 (46.0)	24 (48.0)	.707
• Deficient Level (7.00-6.10)	27 (54.0)	26 (52.0)	

**Table 3** (Continued)

Personal characteristics	Number (Percentage)		<i>p</i> -value
	Intervention group	Comparison group	
Father education level			
• Junior high school and less	17 (34.0)	14 (28.0)	.517
• Senior high school and higher	33 (66.0)	36 (72.0)	
Mother education level			
• Junior high school and less	13 (26.0)	15 (30.0)	.656
• Senior high school and higher	37 (74.0)	35 (70.0)	
Live with who			
• Living with Father and mother	43 (86.0)	40 (80.0)	.424
• Living with relatives	7 (14.0)	10 (20.0)	
Father smoking status			
• Yes	38 (76.0)	40 (80.0)	.629
• No	12 (24.0)	10 (20.0)	
Mother smoking status			
• Yes	1 (2.0)	3 (6.0)	.558
• No	49 (98.0)	47 (94.0)	
Sibling smoking status			
• Yes	14 (28.0)	18 (36.0)	.391
• No	36 (72.0)	32 (64.0)	
Best friend smoking status			
• Yes	12 (24.0)	23 (46.0)	.021
• No	38 (76.0)	27 (54.0)	

Based on the table 3, most of the students were 13 years old: 80.0% in the intervention and 78.0% in comparison groups. The Elementary Nation Exam Test (ENET) score was slightly higher in deficient level (7.00-6.10): 54.0% in the

intervention and 52.0% in the comparison groups. The majority of father education level of the students in both groups was senior high school and higher education with a presentation of 66.0% in the intervention and 72% in the comparison groups. The education level of the mother was senior high school and higher education: 74.0% in the intervention and 70.0% in the comparison groups. Most of the students lived with parents: 86.0% in the intervention group and 80% in the comparison group. Most of participant's fathers were smokers which presented 76.0 % in intervention and 80.0 % in comparison groups. The mothers of participants were not smoke in both intervention group (98.0 %) and comparison groups (94.0 %). Most of the siblings in both groups were non-smokers: 72.0 % in intervention and 64.0% in comparison groups. There was no significant difference in most adolescents' characteristics except best friend smoking status. The comparison group had significant higher number of best friend smoking than intervention group.

## 2. The analysis of self-efficacy score for refusal smoking in adolescents

The score of smoking refusal self-efficacy between intervention and comparison groups was analyzed and shown in table 2 as following:

**Table 4** Smoking refusal self-efficacy score in intervention and comparison groups between before and after the intervention

Smoking refusal self-efficacy score	N	Mean (SD)	Minimum score	Maximum score
Intervention group				
• Before intervention	50	101.88 (4.715)	92	116
• After intervention	50	181.52 (15.401)	127	204
Comparison group				
• Before intervention	50	111.60 (13.381)	81	136
• After intervention	50	122.24 (13.381)	87	148



According to the result in the table 4, the average of smoking refusal self-efficacy score in the intervention group before obtaining the intervention was 101.88 (SD=4.715) and after the intervention was 181.52 (SD= 15.401). The mean score of smoking refusal self-efficacy in the comparison group before intervention was 111.60 (SD=13.381) and the mean score of after intervention was 122.24 (SD=13.381).

Hypothesis 1: There is a significant difference of self-efficacy to refuse smoking score between before and after intervention in the intervention group.

**Table 5** The comparison of student's smoking refusal self-efficacy between before and after intervention in the intervention group using paired t-test.

Smoking refusal self-efficacy score	N	Mean	S.D	t	p-value
Before intervention	50	101.88	4.715	-35.518	.0001
After intervention	50	181.52	15.401		

As shown in the table 5, after intervention, smoking refusal self-efficacy score in the intervention group was significantly higher than before intervention ( $p < .001$ ).

Hypothesis 2: There is a significant difference of self-efficacy to refuse smoking between the intervention group and the comparison group.

**Table 6** Comparison of student's smoking refusal self-efficacy between intervention and comparison groups before and after intervention by using independent t-test (N=100)

Smoking refusal self-efficacy score	Group	Mean	S.D	t	p-value
Before	Intervention group	101.88	4.715	-1.181	.0001
Intervention	Comparison group	111.52	13.381		
After Intervention	Intervention group	181.52	15.401	20.617	.0001
	Comparison group	122.24	13.381		

As shown in the table 6, before intervention, smoking refusal self-efficacy score in the comparison group was significantly higher than intervention group ( $p < .001$ ) while after intervention, smoking refusal self-efficacy score in the intervention group was significantly higher than comparison group ( $p < .001$ ).

### 3. The analysis of smoking refusal self-efficacy components in junior high school students

Smoking refusal self-efficacy consists of three subscales including emotion, friend influence, and social opportunity. The effect of intervention on each subscale was tested by using Paired t-test.

The comparison of smoking refusal self-efficacy score in each subscale between before and after the intervention within groups and between groups is presented in following tables.

**Table 7** Comparison of smoking refusal self-efficacy subscales between before and after the intervention in the intervention group (n=50)

Component of self-efficacy	Mean	S.D	t	p-value
Emotion				
Before Intervention	29.14	1.917	-25.671	.0001
After Intervention	48.16	4.795		
Friend influence				
Before Intervention	26.88	1.891	-21.866	.0001
After Intervention	47.54	6.238		
Social opportunity				
Before Intervention	31.56	2.215	-45.193	.0001
After Intervention	59.08	4.125		

As shown in the table 7, in the intervention group smoking refusal self-efficacy score in all subscales after intervention was significantly higher than before intervention ( $p < .001$ ).

**Table 8** Comparison of smoking refusal self-efficacy component between before and after the intervention in the comparison group (n=50)

Component of self-efficacy	Mean	S.D	t	p-value
Emotional				
Before Intervention	29.26	4.566	-5.557	.0001
After Intervention	32.14	4.440		
Friend influence				
Before Intervention	29.26	4.566	-5.577	.0001
After Intervention	32.14	4.440		
Social opportunity				
Before Intervention	36.54	4.413	-8.713	.0001
After Intervention	40.64	4.466		

As shown in the table 8, in the comparison group smoking refusal self-efficacy score in all subscales after intervention was significantly higher than before intervention ( $p < .001$ ).

**Table 9** The comparison of smoking refusal self-efficacy component between intervention and comparison groups at before and after the intervention

Smoking refusal self-efficacy component	N	Mean	S.D	t	p-value
Emotion					
Before intervention					
Intervention group	50	29.14	1.917	-1.72	.864
Comparison group	50	29.26	6.925		
Emotion					
After intervention					
Intervention group	50	48.16	4.795	17.334	.0001
Comparison group	50	32.14	7.460		
Friend influence					
Before intervention					
Intervention group	50	26.88	1.891	-3.123	.002
Comparison group	50	28.88	6.568		
After intervention					
Intervention group	50	47.54	6.238	14.634	.0001
Comparison group	50	31.64	7.377		
Social Opportunity					
Before intervention					
Intervention group	50	31.56	2.215	-7.131	.0001
Comparison group	50	34.65	7.974		
After intervention					
Intervention group	50	59.08	4.125	21.447	.0001
Comparison group	50	40.64	8.935		

As shown in the table 9, before intervention smoking refusal self-efficacy score for friend influence and social opportunity in comparison group was significantly higher than intervention group ( $p < .001$ ) while the smoking refusal self-efficacy score for emotion was not significant difference between the intervention and comparison groups. After intervention, smoking refusal self-efficacy score in all subscales for the intervention group was significantly higher than the comparison group ( $p < .001$ ).

## Discussion

According to the result, the finding will be discussed into the two main aspects, including the demographic characteristics and hypothesis testing respectively.

### 1. Characteristics of participants

According to the findings, the majority of participants in both groups were 13 years old who are early adolescence, and were vulnerable phase in substance use (Tucker, 2005). Especially, early adolescence with low self-efficacy had a tendency to smoke (Engels *et al.*, 2005). It can be explained that, the more children are younger, the more they are vulnerability.

It was clearly seen within the study that most of the participants in both groups were in moderate level of school achievement and the others were in deficient level. The smoking refusal self-efficacy before intervention in intervention group (Mean=101.88, S.D. = 4.715) and comparison group (Mean=111.60, S.D. =13.381) was considered as low self-efficacy. The result was consistency with the study by Pennanen, *et al.* (2011) reported that students with poor grades tend to have poor self-efficacy in resisting cigarettes. Another study of Morin, *et al.* (2012) stated that students with low achievement tend to have higher levels of initiation to smoke than students with high (high achiever) or median (average achiever). This can be explained that adolescents who have poor academic achievements would be felt unsuccessful; this can bring pressure and stress in adolescents as a result. Therefore,



adolescents may easily comply with negative behaviors, such as smoking to reduce the stress. Within the current study, the poor school achievement may influence the self-efficacy at the beginning. However, the student who received another source promoting self-efficacy, the school achievement may less affect than the student who have less self-efficacy. Thus, this study can be stated that the self-efficacy for refusal smoking program can provide general influence, both for students with good school achievement and the students with poor school achievement.

With regard to the parents' education, the majority of parents' education had a high level of education within this study. This is consistent with the study from Spyrtos, *et al.* (2012) who stated that the adolescent are vulnerable for smoking if their parents had a low level of education background. This can be explained that parents who have higher education probably have the opportunity to communicate and share their knowledge with their children. In case of parents who were higher educational background could appropriately communicate good things to children. For example, parents considerably understand regarding the anti-smoking campaigns and the hazards of smoking. Therefore, they could communicate wisely to their children in order to protect and prevent them from the smoking. This can be inferred that the supports from parents to children by providing general knowledge and paying attention to their behavior are more likely to motivate children to refuse smoking. In addition, if parents dislike smoking habit, children will keep away from that because it could make their parent disappointed.

Regarding parental status, most of the students were living with their parent had high self-efficacy to refuse smoking after the intervention. This finding is consistent to the study by Gao, *et al.*, (2013) found that the single parents caused the child feel lose the protective passion and it could result in negative effect on self-efficacy in order to encourage adolescents to smoke. It is explained that children who live with their parents have a greater potential to have a strong self-efficacy to refuse smoking. Living with parents provide a good monitoring to adolescent in their behavior rather than adolescents who live with relatives, such as, grandparents, or aunts and uncles. This is because parents will tend to pay close attention to

adolescents than relatives. Supervision and attention to adolescent behavior could provide a protection as a strong support in keeping adolescents staying away from smoking. In addition, the supervision of parents also becomes a social persuasion giving adolescents a source of self-efficacy in refusal smoking.

In addition, it can be seen within this study that the majority of students' fathers were smoker. However, most of student with smoking father have significantly improved on self-efficacy to refuse smoking score after the intervention even they had smoking father. It can be explained that though, presentation of parental smoking seems to be a significant influence on self-efficacy in refusal smoking. In current study, the high number of fathers who smoke seems to affect to the low self-efficacy to refuse smoking in adolescents before intervention in the intervention group and comparison group. However, it was less likely to affect after intervention. This can be shown that the self-efficacy for refusal smoking program have a higher impact than parental smoking.

Lastly, the majority of brother who did not smoke in this study apparently be helpful to increase self-efficacy as well as the majority of friend who did not smoke could help adolescent to improve their self-efficacy. This is supported by Hiemstra, *et al.* (2011) who stated that the proportion of non-smoking friend and brother can predict adolescent smoking status. This may be associated with a decreasing of the development of self-efficacy in adolescent in refusing cigarettes. Adolescent who had few smoking friends and brother had greater potency to have high self-efficacy in refusal smoking. However, in adolescent, siblings could be a role model, in addition to parents and teachers. Older sibling could provide more dominant influence on the younger siblings.

## **2. Hypothesis Testing**

Hypothesis 1: There is a significant difference of self-efficacy to refuse smoking before and after intervention in the intervention group.

According to the findings, there is a significant improvement of self-efficacy to refuse smoking score between before and after intervention in the intervention group. This result is supported the hypothesis ( $p < .001$ ). It could be inferred that the program included many varieties of activities could promote enactive mastery experience, vicarious experience, verbal persuasion and psychological affective state, and it could influence self-efficacy as result. The effect of the program on self-efficacy in smoking refusal will be explained in the following section.

The finding shows the participants in the intervention group had increasing higher score in self-efficacy after obtaining the self-efficacy for refusal smoking program. This is consistent with Caprara *et al.*, (2005) stated that self-efficacy plays an important role in behavior of adolescent, especially in refusal risky behavior such as cigarette smoking. This could be explained by self-efficacy theory by Bandura (1997) who mentioned that self-efficacy is influenced by the previous experience, the model, physical and psychological conditions and supports from surrounding environment. Therefore, according to the program within this study, it provides all factors related to self-efficacy model by Bandura, including sharing experience, providing knowledge, improving decision making skill, stress management, ability of refusal skill and supporting from peer and school which are the part of environment atmosphere. Apparently, all procedures within the program could promote self-efficacy to refuse smoking in junior high school children in intervention group. This can be further explained part by part as following.

Regarding knowledge which is a part of enactive mastery experience, knowledge is important component in assisting a person to successfully practice a behavior. Knowledge helps to strengthen mastery experience as a source of self-efficacy (Bandura, 1997). Providing knowledge related to harmful ingredients of cigarettes, short and long term effects of cigarette effect, and also myth and fact related smoking in intervention group can enhance their knowledge, awareness and better understanding about smoking ( $p < .05$ , see in appendix). The increasing of knowledge related smoking after intervention also influence self-efficacy to refuse smoking. this finding is consistent with previous research showed that the knowledge

and self-efficacy have positive relationship which means that if someone have good knowledge, he/she will more likely to have higher self-efficacy (Mahat *et al.*, 2011).

Moreover, it can be seen in this study that, brainstorming about the experience of smoking Knowledge of cigarettes can promote decision making skill.

Brainstorming should be performed to found out the experience previous of participants. This activity aims to make participants to be aware regarding smoking experience and concerning about the impact of smoking in their experiences.

Knowledge of cigarettes as one of the forces that provide self-knowledge to the participants about the right reasons and better understanding about smoking behavior in refusing cigarettes. In addition, decision making skills give experience on participants in determining the appropriate decision based on advantage considerations, risks and consequences that will be covered when dealing with the situation offers to smoke. Thus, participants in the intervention group after discussion in the brainstorming process were able to make decisions relating to the situation of cigarette offers, and have increased in self-efficacy after the intervention. This is consistent with previous studies stated that participants who are knowledgeable about the dangers of risky behavior tend to be more confident in rejecting risk behaviors (Obuobi, 2014). In addition, other studies also support that adolescents who have high self-efficacy to refuse cigarettes are generally able to make the right decisions in the face of situations of smoking offer (Atabila and Castillo, 2013).

Related to psychological and affective state, researchers provided information and strategy related overcoming stress to intervention group. The evaluation showed that the participant in the intervention group improved stress management skill by providing some activities and strategies to reduce stress. This support the final outcome showed that after the program, participants in the intervention group have high self-efficacy in refusal smoking including when facing with emotional conditions and offering cigarette from friends. This finding is consistent with some studies demonstrated that the ability to control the psychological condition by stress management could improve self-efficacy in showing an expected behavior



(Bushy *et al.*, 2004; Bragard *et al.*, 2009). With regard to the positive effect of stress management on increasing self-efficacy, it is also supported by another study stated that a person who have low self-efficacy to refused smoking could be due to the mediation of stress conditions (Mee, 2014). In addition, stress management is a part of proficient performance that could result in the co-variation in perceived efficacy (Bandura, 2006).

In relation to vicarious experience, adolescent and a model that have successful experience and unsuccessful experience in refusal smoking were provided to intervention group. As a role model, the adolescent shared his experiences and strategies to resist smoking in terms of the local culture. In addition, other role models also shared the experience of negative effects in the form of illness due to smoking habits. Then, participants in the intervention group also practice smoking refusal skill via conversation and assertive communication in small groups. The finding showed that, the participants in the intervention group had higher smoking refusal skills and lead to higher self-efficacy to refuse smoking as a result. This finding is consistent with (Karimy, 2013). found that self-efficacy in refusal smoking related to the ability adolescent in refusal skills In addition, the role model apparently be a key figure in developed self-efficacy belief in early adolescent (Wedcliffe, 2007). Adolescents have a higher confidence to comply with a specific task when they see an achievement in the same task from their role model (Parsa, 2014). In other words, this study which has a construction of self-efficacy sources can inspire adolescents to refuse a cigarette as a result.

Related to verbal persuasion, group activity which performed abilities in promoting refusal skill in refuse smoking was modified during the study. The group project can make participants work in group and support each other to finish the task. As the result of group project participants got the reward and appreciation from school. The support from friends who have the same task and the appreciation from school provide source (environment and the school support) could strengthen participants in refuse smoking. The finding showed that participant in intervention group have higher self-efficacy in refuse smoking when they have a greater support



from others who belief to their ability to performed good self-efficacy. This finding is consistent with the study by Blake *et al.* (2001) provided intervention in school-based abstinence to improving strategies for preventing early onset of sexual behavior, the result showed the support from environment such us family and school could influence the adolescents' self-efficacy for refusing high-risk behaviors. This can be explained that environmental influences on adolescent, particularly in boys are very important. The desire to get awards and recognition for its ability can make them to be a self pride and motivate themselves to do another thing that can bring the award furthermore.

Moreover, environments which not applied the smoke free area such us in neighborhoods, homes and other public facilities outside of school might make the adolescent perceive that smoking is permitted habitually and do not violate existing norms. Environment which does not prohibit smoking might make adolescent easily to accept smoking behavior and put them at high risk for having a weak self-efficacy when getting an invitation to smoke. Some Previous study also showed the relationship between self-efficacy and social support which can influence each other (Ontai and Sano, 2008; Young, 2011). The lack of legislation smoking bans in schools and health promotion for smoking prevention helps to improve self-efficacy in adolescent smoking refused (Schwarzer, 2005). However, the real appreciation in the form of awards and feedback from the school representative to student could promote and demonstrate the behavior of refusal smoking. This is because it gave a distinct impression on the students who perform positive behavior such as refusal smoking that they are doing in accordance with the demands of the social norms.

In addition, another thing which promotes an achievement to this program might be from the active learning that was designed properly in relation to cognitive development in adolescent. It can be seen during study that active learning method was greatly stimulated students to be able and easily understand the lesson. Due to the overall material given is one form of life skill, then the learning method by task and practice will further stimulate students' thinking processes. In the current program, active learning have been compiled in teaching methods, such as discussion,

expressing opinion, role play, small group discussion and group project. This is consistent with Research of Lotrean *et al.* (2010) who applied the method of small group discussion and role play activities and found that it can increase the level of self-efficacy in resisting tobacco Romanian students. In addition, group project was proven to help increase the level of self-efficacy in adolescent to refuse cigarettes in the Philippines (Atabilla and Castillo, 2013). To teach life skills in adolescents should be given in a funny way. Most of the material that was taught in the program is a life skill that was useful for students as a provision to encourage confidence in dealing with cigarettes. This is in contrast with the general subjects such as science, math, sports, or religions in which they can be controlled by the way of memorization and practice calculate. Social problems such as cigarettes require proper life skills where adolescents can properly use it when they need. Learning life skills is a new thing for students. Students would not obtain grades of this studying, but students think to be willing choose to receive this knowledge without any demands of good grades. In addition, students can also use this knowledge directly in the real world any time. And this is different from common lessons they receive in the school which may appear in the comparison group.

Hypothesis 2: There is a significant difference of self-efficacy to refuse smoking between the intervention group and the comparison group.

The findings in this study found that after self-efficacy for refusal smoking program there was significant difference between intervention group and comparison group ( $p < .001$ ).

These results are supported by a statement that self-efficacy is the ability of a person to present a specific task with a strong self-confidence (Bandura, 1997). This finding is also consistent with Atabila and Castillo (2013) which applied 3 weeks of smoking prevention curriculum to improve smoking-related knowledge, refusal self-efficacy, attitudes and intentions of adolescents, after the intervention smoking refusal self-efficacy was increased. Furthermore, the study conducted by Pop (2014) showed the secondary school student who participated in school based smoking prevention

program including presentation negative health effects of smoking, providing visual material and playing refusal cigarette could have increasing in tobacco refusal self-efficacy higher than the students who did not received the program. Provide problem solving skill such as decision making skill in adolescent may improve individual's belief in his/her ability (Farokhzadian *et al.*, 2013).

Similarly, a program of curriculum about smoking focused on promoting students' transfer of knowledge, skills and attitudes to other domains, including smoking refusal skills by watching video regarding peer pressure situation, providing some strategies to respond the situation, and discussion the significant effect to refusal self-efficacy on smoking in four months after intervention finish (Petters *et al.*, 2013). In addition, in relation to knowledge and refusal skill, the finding also consistent with study which conducted 14 lessons of information about smoking and refusal skills training, and the result reported that the adolescent in intervention group have higher situational self-efficacy in refusing smoking than adolescents from the control groups (Pennanen, 2012). Moreover, the difference in duration and length of session between this study and another study could have influenced to the length effect of self-efficacy in participant. This can be explained as the same as the previous part in relation to demographic background and the component of self-efficacy program included in this study. Self-efficacy obtained after the person has the confidence that he is able to perform the task successfully with the true knowledge and proper skills. Correct understanding of the negative effects of proper smoking, skills in dealing with the situation offers smoking will improve self-efficacy in refusing cigarettes (Bandura, 1977).

However, it can be seen that the comparison group also have a higher self-efficacy for refusal smoking but it was not greater than the intervention group. This can be explained that while the intervention group obtained the intervention from this study, the comparison group also usually had a common program with regard to the health and self-care program. This is the limitation that the researcher cannot control within this study. Knowledge about harmful effects of smoking cigarettes or negative effects on health can build confidence in rejecting smoke in participants. Therefore,

the comparison group may be obtained the common knowledge from the curriculum and also got the knowledge from other multimedia such as television and internet. According to Bandura's theory of self-efficacy, verbal persuasions may be obtained from those who close to the participants in refusal the influence of cigarette. In addition, some of the knowledge which can come from the media or other health campaigns may also influence participants in a variety of ways. Thus, this can result in the higher self-efficacy to refuse smoking as can be seen in the study.

### **3. Strength of the study**

The application of self-efficacy theory by using four sources of self-efficacy to develop the intervention could provide comprehensive program to increase smoking refusal efficacy among adolescents. In addition, participants in this study were recruited from two schools that had geographic distance in location. By using this method, contamination of the intervention between two groups could be avoided.

### **4. Limitations of the study**

The sample only comes from two randomly selected schools in Bengkulu city. Due to the small number of samples, the results from this study could limit to general population and other age groups. In addition, researcher could not fully match all participant characteristics that could influence or affect the results of the study.



## CONCLUSION AND RECOMMENDATIONS

### Conclusion

This study is quasi-experimental research with two groups, pre -posttest design. The objective of this study was aimed to evaluate the effectiveness of the self-efficacy for refusal smoking program among male junior high school in Bengkulu, Indonesia.

Self-efficacy theory was employed as guidelines to construct the activities in the program within this study. Male student who obtained 7<sup>th</sup> grades from two different public junior high schools in Bengkulu City have been selected by purposive sampling and matched paired between two groups. The depression screening using Beck Depression Inventory-II (BDI-II) Indonesian version also provided to exclude the student who have depression symptom. Public junior high school number 12 was selected as intervention group with final participant 50 students and public junior high school number 8 was selected as comparison group with 50 students. Only student in the intervention group received self-efficacy for refusal smoking program, and the comparison group only received a regular basis education with regard to smoking in .Instruments were used the self-efficacy to refuse smoking program and self-administrated questionnaire. The independent t-test and match paired t-test was used to measure the different of self-efficacy to refuse smoking within intervention group and comparison group. In conclusion, there is significant difference of self- efficacy to refuse smoking within intervention group ( $p < .001$ ) and there is significant difference of self- efficacy to refuse smoking between intervention group and comparison ( $p < .001$ ) in this study.



## **Recommendations**

The study shown that modification of several activities program based on four source of self-efficacy theory very useful for promoting self-efficacy in refusal smoking for 7<sup>th</sup> grades junior high school. Based on the finding, the following recommendation should be given:

### **1. Nursing practice**

Health care provider especially who is responsible in school should provide the self-efficacy for refusal smoking program based on self-efficacy theory to promote four source of self-efficacy including enactive mastery experience, psychological and affective state, vicarious experience and verbal persuasion. This could increase self-efficacy to refuse smoking in three temptations including emotional factor, friend influence and social opportunity.

### **2. Nursing education**

According to research result, some activities modified within the program on self-efficacy theory have influence self-efficacy to refuse smoking in three temptation, including emotion, friend influence and social opportunity. It is advisable to support and encourage teaching and learning approach by providing information, skill and motivation about the effective result of the intervention based on self-efficacy theory. Nurse educator should incorporate self-efficacy for refusal smoking program based on self-efficacy's sources in the theoretical and practical learning of nursing student to extend their knowledge and skill in smoking prevention program and the result of this study can be an example in teaching class or learning approach in specific community, especially adolescent in school age.

### **3. Future research**

The finding of this research showed that some demographic factors affect the increasing of self-efficacy in adolescents. Therefore, for further research needs to be assessed the long-term effect of this program if there is a change in participant's demographic characteristic. In addition, the presence of other mentoring programs can be combined with the self-efficacy for refusal smoking program in supporting the smoking behavior prevention among adolescents

### **4. Policy**

The finding of this research showed that the program have been proven effective for adolescents which has just entered junior high school. Self-efficacy for refusal smoking program can be recommended as a companion program on tobacco control program and clean and healthy behavior program (PHBS) in the public health promotion.

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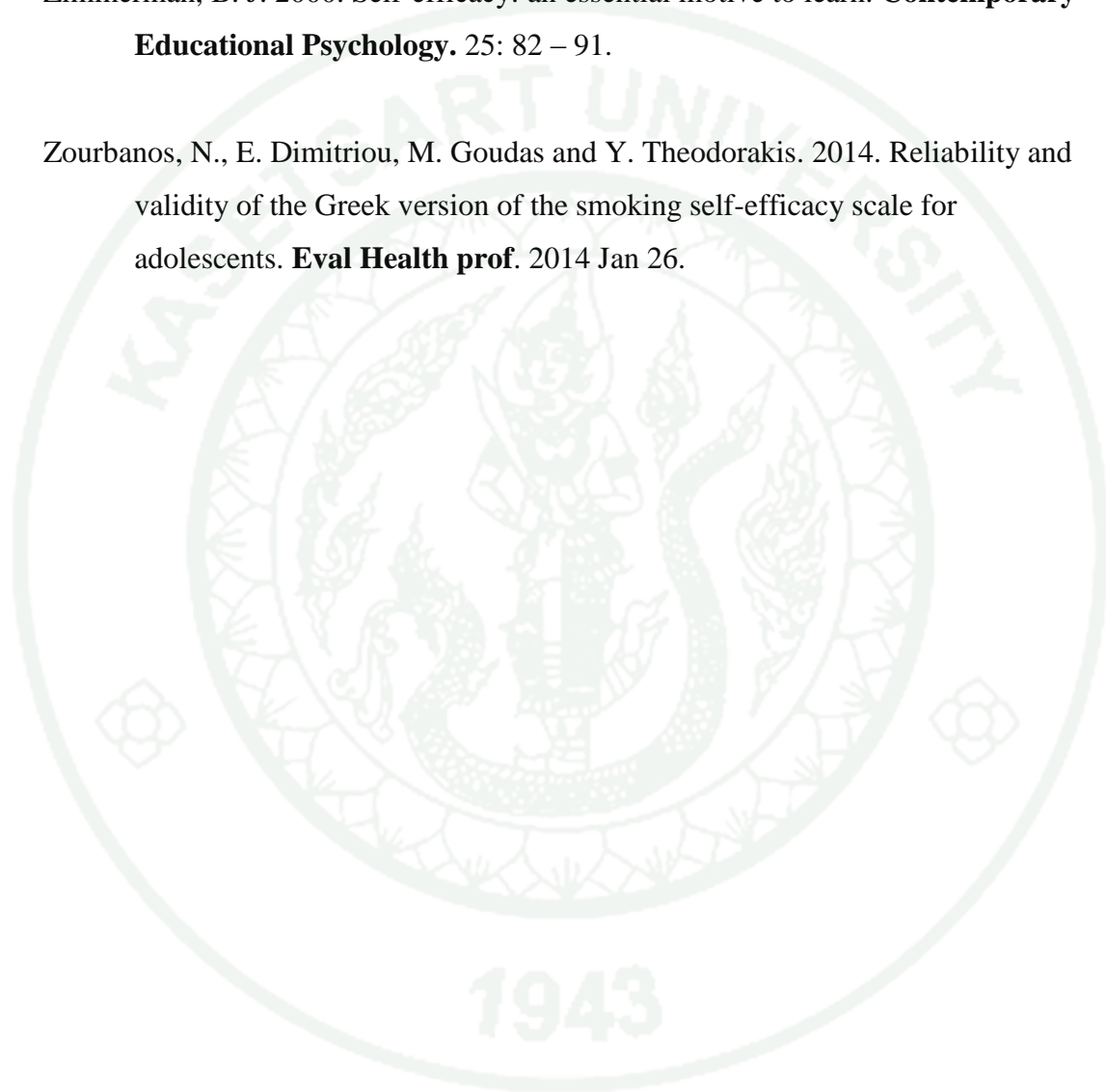
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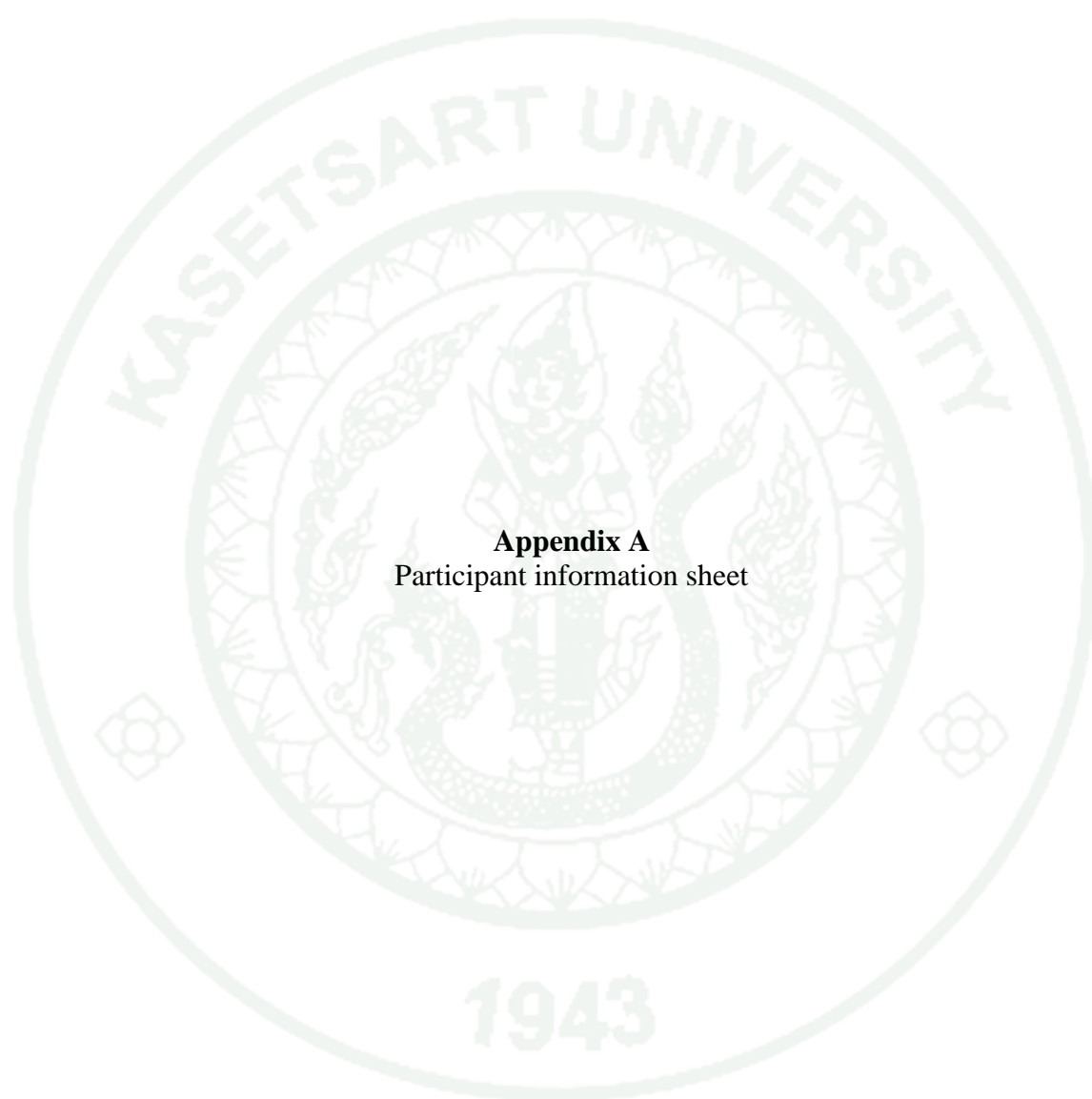
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## APPENDICES



**Appendix A**  
Participant information sheet

	<b>Baromarajonnani College of Nursing Nopparat Vajira</b>	<b>Participant Information Sheet (English version)</b>
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**Title of research project**    Effect of The Self Efficacy Program on Smoking Prevention among Junior High School in Bengkulu, Indonesia.

**Researcher name**            Tita Septi Handayani

**Position**                        Student of Master of Nursing Science in Family and Community

**Home address**                Komp. Pu, Jalan Batang Hari, No. 50, Simpang Kampar, Bengkulu

**Office address**                Jalan Merapi Raya No 43, Kebun Tebeng, Bengkulu City, Indonesia

**Telephone (office)**            (+62) 736-21977

**Cell phone**                    (+66) 906608337, +6282184258878

**E-mail**                          [handayani\\_tita@yahoo.co.id](mailto:handayani_tita@yahoo.co.id)

1. Study title

Effect of the self efficacy program on smoking prevention among junior high school in Bengkulu city, Bengkulu Province, Indonesia.

2. Invitation paragraph


The participants are being invited to take part in this study on self efficacy program in order to refuse smoking behavior. Before you decide it is important for you to understand why the study is being done and what is involved. Please take time to read the following information carefully and feel free to discuss with researcher if you would like to know more information.

3. What is the purpose of the study?

The purpose of this study is to provide education and training programs for adolescents in order to refuse cigarettes in a variety condition.

4. Why have I been chosen?

In order to test the effectiveness of self-efficacy program in male student who attend 7<sup>th</sup> grades in junior high school.

	<p align="center"><b>Baromarajonnan College of Nursing Nopparat Vajira</b></p>	<p align="center"><b>Participant Information Sheet (English version)</b></p>
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**5. Do I have to take part?**

Taking part in this study is entirely voluntary. You are free to join or withdraw from the study at any time without giving a reason. If you decide to take part, you will be given this information sheet to keep and you will be asked to sign a consent form (participants will be asked to sign the assent form and parent or guardian will be asked to sign the consent form). Decision to withdraw or decision to not take part will not affect the education of participant at the school or any standard of care that participants will be received at the public health center.

**6. What will happen to me if I take part?**

If participant is in the intervention group, your child will participate in the program for 8 sessions within 5 weeks. If participant is in the comparison group, then the participant will only fill out the questionnaire without join the program.

**7. What is involved and what do I have to do?**


If participant are willing to take part, participant will be contacted by the researcher to discuss further arrangements. Two similar schools will be assigned into intervention group and comparison group. Participants who are in the intervention group will be received self-efficacy program on smoking prevention.

Before the program begins, participants will be asked to answer questionnaires about their background, depression inventory test and self-efficacy to refuse smoking offers which are taken 30-40 minutes. The questionnaire will consist of 64 questions. The participants also have an opportunity to skip some questions if they do not want to answer.

After that, self-efficacy program will be adopted in 5 weeks, involving with 8 activities whilst the other group will be obtained the regular basis. Over 5 weeks, meetings will be provided with various activities. Activities consist of two types; learning activities in the classroom for 40-60 minutes and outdoor activities in school environment such as group project. However, this project will not disturb participants' learning schedule at school. The activities will start on third week of July until third week of August.

**8. What are the possible disadvantages and risks of taking part?**

This research will not harmful because participants will be received the education from the researcher who is a professional nurse as well as health care service from Primary Health Centre. All processes of intervention will be proven by3 expertise and also ethical research committee from Thailand and also in Indonesia before complying within this study.

	<p align="center"><b>Baromarajonani College of Nursing Nopparat Vajira</b></p>	<p align="center"><b>Participant Information Sheet (English version)</b></p>
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9. What are the possible benefits of taking part?

This program will benefit for further study about self-efficacy to refuse smoking among seventh grade students of public junior high schools. Participants will have the opportunity to receive information about the harmful of smoking cigarette, some strategies and skills to refuse smoking and also sharing idea and experience with another participant who have the same problem. The benefit of this study is not only for intervention group, but also for the comparison group. If this research is effective and the schools agree to apply this program, the comparison group will have an opportunity to join the same intervention that provided by school teacher afterward. In addition, the further study will be useful for schools, nurses, and health care provider to provide appropriate program to decrease smoking among seventh grade student junior high school.

10. What if new information becomes available?

If there is any news or further information, researcher will definitely inform you.


11. What if something goes wrong?

If participants feel less comfortable to carry out the study, they can withdraw any time without negative consequences. Regardless of this, if you wish to complain, or have any concerns about any aspect of the way participants have been approached or treated during the course of this study, you can contact the local committee at Integrated Licensing Service Office (KP2T) Bengkulu province at Jalan Pembangunan No. 01, Kelurahan Padang Harapan, Bengkulu or call center of KP2T on telephone number (0736) 23512. You also can report directly to the Ethics Review Committee for Research Involving Human Research Subjects, Boromarajonani College of Nursing Nopparat Vajira, 681 Rhamintra Road, Khannayao, Bangkok 10230, Thailand, Phone +662-540-6500.

12. Will my taking part in this study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential. To protect the parent/guardian and participant's privacy, code number will be used to process the data without any possibility to link the data to participants. Researcher will be responsible to maintain confidentiality by manage of private information in order to protect the participant's identity and keep the information in the researcher's file in the secured cabinet.



	<p align="center"><b>Baromarajonani College of Nursing Nopparat Vajira</b></p>	<p align="center"><b>Participant Information Sheet (English version)</b></p>
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**13. What will happen to the results of the research study?**

The result will be published and explained overview perspective and will not be mentioned about any specific data that will indicate individual participants, school or other specific name. Questionnaires, video record, and the photos will be stored in locked file cabinets that can only access by researcher and advisor. After the end of the study, the questionnaires will be destroyed in 3 years.

**14. Who has reviewed the study?**

All research that involves the student premises or facilities already approved by an Ethics Review Committee for Research Involving Human Research Subjects, Baromarajonani College of Nursing Nopparat Vajira before it goes ahead. Approval can guarantee that participants will not be harmed during study, and the committee is satisfied that the participant' rights will be respected.

**15. What parents/guardians need to do next?**

If parent allow participant to take part in the program, please sign two copies of informed consent. One copy of the consent form will be kept by parent and one will be kept by researcher.

**16. What should I do if I want to participate? (Participant)**

If you would like to participate in this research project please complete and Assent form and return to the researcher. The researcher will then contact you to discuss the study and provide further information.

**17. Contact for Further Information**


If you have any question or would like to obtain more information, you can contact the researcher all time. The researcher phone number is 081367721998.

If researcher does not perform upon participants as indicated in the information, you can complain to the Ethics Review Committee for Research Involving Human Research Subjects, Baromarajonani College of Nursing Nopparat Vajira, 681 Rhamintra Road, Khannayao, Bangkok 10230, Thailand, Phone +662-540-6500.

Thank you for taking time to read this information sheet.  
We are gratefully for your participation in this study.

Your Sincerely,

Tita Septi Handayani  
Researcher

	<b>Baromarajonnani College of Nursing Nopparat Vajira</b>	<b>Form of Participant Information Sheet (Bahasa Indonesia version)</b>
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**Judul penelitian** Efek Program Ketahanan Diri pada Pencegahan Merokok diantara Siswa Sekolah Menengah Pertama di Bengkulu, Indonesia.

**Nama Peneliti** Tita Septi Handayani

**Status** Mahasiswa Program Master Keperawatan spesialisasi Keperawatan Keluarga dan Komunitas.

**Alamat Rumah** Komplek. PU, Jalan Batang Hari, No. 50, Simpang Kampar, Bengkulu, Indonesia.

**Alamat Kantor** Komplek. PU, Jalan Batang Hari, No. 50, Simpang Kampar, Bengkulu, Indonesia.

**Telepon (Kantor)** (+62) 736-21977

**Telepon Selular** (+66) 906608337, +6282184258878

**E-mail** [handayani\\_tita@yahoo.co.id](mailto:handayani_tita@yahoo.co.id)

#### 1. Judul Penelitian


Pengaruh Program Keyakinan Diri untuk Pencegahan Merokok pada Siswa Sekolah Menengah Pertama (SMP) di Kecamatan Teluk Segara, Propinsi Bengkulu, Indonesia.

#### 2. Undangan

Peserta diundang untuk berpartisipasi dalam penelitian program keyakinan diri yang bertujuan agar peserta memiliki keyakinan diri dalam menolak rokok. sebelum anda memutuskan anak anda untuk berpartisipasi pada penelitian ini, penting bagi anda untuk memahami tentang penelitian ini dan hal-hal yang terkait dalam program penelitian ini. Silahkan membaca dengan teliti dan seksama informasi yang tertera pada lembar informasi ini. Anda dapat hubungi peneliti kapan saja apabila ada hal-hal yang kurang jelas atau anda membutuhkan informasi lebih lanjut.

#### 3. Apakah tujuan penelitian ini?

Tujuan penelitian ini adalah untuk memberikan pendidikan dan pelatihan pada remaja dalam rangka menolak rokok dalam berbagai situasi dan kondisi.

	<p align="center"><b>Baromrajonnani College of Nursing Nopparat Vajira</b></p>	<p align="center"><b>Form of Participant Information Sheet (Bahasa Indonesia version)</b></p>
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**4. Mengapa anak saya yang terpilih?**

Anak anda terpilih untuk menjadi peserta pada penelitian ini karena program ini ditujukan pada siswa laki-laki yang duduk di bangku kelas 7 sekolah menengah pertama (SMP). Keikutsertaan anak anda dalam penelitian akan dinilai sebagai suatu evaluasi pengaruh program keyakinan diri remaja dalam menolak rokok.

**5. Apakah saya atau anak saya harus ikut serta dalam penelitian ini?**

Keputusan untuk ikut serta dalam penelitian ini bersifat sukarela. Anak anda bebas untuk ikut serta atau keluar dari penelitian kapan saja anak anda mau tanpa harus memberitahukan alasan kenapa anak anda memutuskan untuk keluar dari penelitian. Jika anda memutuskan anak anda untuk ikut serta dalam penelitian, anda dapat menyimpan lembar informasi ini dan silahkan menandatangani formulir persetujuan yang telah kami lampirkan (anak anda sebagai peserta akan menandatangani formulir persetujuan peserta atau assent consent dan orang tua akan menandatangani formulir persetujuan orang tua atau informed consent). Apabila anda atau anak anda memutuskan untuk keluar atau tidak bergabung dengan penelitian, maka hal ini tidak akan mempengaruhi proses pendidikan yang akan anak anda terima di sekolah atau pelayanan kesehatan yang akan diberikan di pusat pelayanan kesehatan (PUSKESMAS) setempat.


**6. Apa yang akan terjadi apabila saya mengizinkan anak saya untuk ikut serta dalam penelitian?**

Jika anak anda termasuk peserta dalam kelompok perlakuan, maka anak anda akan mengikuti program penelitian sebanyak 8 sesi selama 5 minggu. Jika anak anda termasuk peserta dalam kelompok pembandingan, maka anak anda hanya akan mengisi kuesioner tanpa mengikuti program penelitian seperti pada kelompok perlakuan.

**7. Apa yang akan terjadi dan apa yang harus saya atau anak saya lakukan?**

Jika peserta memiliki keinginan untuk ikut serta dalam penelitian, peneliti akan menghubungi peserta untuk mendiskusikan persiapan yang harus dilakukan sebelum program penelitian dimulai. Dua sekolah menengah pertama (SMP) akan dipilih sebagai kelompok perlakuan dan kelompok pembandingan. Peserta yang berada pada sekolah yang menjadi kelompok perlakuan akan mengikuti program keyakinan diri dalam pencegahan merokok.

Sebelum program dimulai, peserta akan mengisi kuesioner tentang informasi latar belakang, tes gejala depresi, dan kuesioner keyakinan diri dalam menolak tawaran rokok. Kuesioner terdiri dari 64 pertanyaan. Pengisian kuesioner ini akan memakan waktu kurang lebih 30-40 menit. Peserta diperbolehkan untuk tidak menjawab pertanyaan apabila peserta merasa tidak ingin untuk menjawab pertanyaan tersebut.

	<p align="center"><b>Baromarajonnani College of Nursing Nopparat Vajira</b></p>	<p align="center"><b>Form of Participant Information Sheet (Bahasa Indonesia version)</b></p>
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Setelah itu, program keyakinan diri akan dilakukan selama 5 minggu dengan 8 sesi kegiatan pada kelompok perlakuan. Sementara kelompok lain mengikuti program di sekolah sebagaimana biasanya. Selama 5 minggu kegiatan yang akan dilakukan terdiri dari berbagai macam aktivitas. Aktivitas terdiri dari 2 jenis; aktivitas pembelajaran di dalam kelas selama 40-60 menit dan aktivitas di luar kelas. Aktivitas yang dilakukan di luar kelas masih berada dalam lingkungan sekolah. Program penelitian tidak akan mengganggu jadwal pelajaran peserta di sekolah. Kegiatan ini akan dimulai pada minggu ketiga Juli hingga minggu ketiga agustus.

**8. Apa manfaat yang mungkin didapat atau resiko yang dapat terjadi apabila saya atau anak saya ikut serta dalam penelitian?**


Penelitian ini tidak akan membahayakan untuk peserta karena peserta akan menerima pendidikan dari peneliti yang merupakan perawat profesional sama seperti pelayanan kesehatan yang diberikan oleh pusat kesehatan masyarakat (PUSKESMAS). Program penelitian ini telah diperiksa dan dinilai oleh 5 orang ahli dan juga mendapatkan izin penelitian dari panitia etik penelitian di Thailand dan Indonesia sebelum dilakukan pada peserta.

Peneliti memberikan jaminan bahwa penelitian ini tidak akan menyebabkan hal buruk pada siapapun. Semua data peserta akan dijaga kerahasiaannya dan ditampilkan tanpa menyebutkan nama sebenarnya. Data peserta akan dilindungi dengan sebaik-baiknya. Misalnya, dokumen tertulis akan disimpan dalam lemari berkunci dan dokumen elektronik akan disimpan dalam file rahasia di computer. Dokumen-dokumen ini hanya dapat diakses oleh peneliti. Namun, jika peneliti menemukan isu-isu negatif seperti adanya peserta yang diketahui memiliki tanda-tanda depresi sebelum studi dimulai, peserta akan dirujuk ke petugas kesehatan profesional untuk menyelesaikan masalah, apabila diperlukan.

**9. Apa manfaat atau keuntungan yang mungkin bisa saya atau anak saya dapatkan apabila ikut serta dalam penelitian ini?**

Program ini akan memberikan manfaat dalam menambah pengetahuan tentang program keyakinan diri dalam menolak rokok pada siswa kelas 7 sekolah menengah pertama (SMP). Peserta memiliki kesempatan untuk menerima informasi tentang bahaya merokok, strategi dan tehnik untuk menolak rokok, serta berbagi pengalaman dan ide dengan peserta lain yang memiliki permasalahan yang sama terkait rokok. Manfaat dari penelitian ini tidak hanya diperoleh peserta pada kelompok perlakuan, tapi juga bagi peserta pada kelompok pembandingan. Apabila penelitian ini terbukti efektif dan memberikan pengaruh yang baik serta pihak sekolah setuju untuk menerapkan program ini, maka peserta pada sekolah kelompok pembandingan memiliki kesempatan menerima program yang sama yang akan diberikan oleh guru sekolah masing-masing.



	<p align="center"><b>Baromarajonani College of Nursing Nopparat Vajira</b></p>	<p align="center"><b>Form of Participant Information Sheet (Bahasa Indonesia version)</b></p>
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**10. Bagaimana jika ada informasi lebih lanjut terkait peneliti?**

Apabila ada beberapa informasi baru terkait penelitian, maka peneliti pasti akan menginformasikan kepada anda.

**11. Bagaimana jika terjadi hal buruk selama proses penelitian?**

Jika peserta merasa kurang nyaman dalam mengikuti program penelitian, peserta bisa keluar atau mengundurkan diri kapan saja tanpa adanya dampak buruk yang mungkin menimpa peserta. Apabila anda memiliki keluhan, atau mempunyai keprihatinan apapun tentang segala aspek dari peserta baik selama proses persiapan penelitian atau selama penelitian berlangsung, anda dapat melayangkan pengaduan dan keluhan pada Kantor Pelayanan Perijinan Terpadu (KP2T) Propinsi Bengkulu dengan alamat Jalan Pembangunan No. 01, Kelurahan Padang Harapan, Bengkulu atau menghubungi call centre of KP2T pada nomor telepon (0736) 23512. Anda dapat juga melaporkan kepada Komite Etika Ulasan Penelitian yang Melibatkan Subyek Penelitian Manusia, Baromarajonani College of Nursing Nopparat Vajira, 681 Rhamintra Road, Khannayao, Bangkok 10230, Thailand, Phone +662-540-6500.

**12. Apakah keikutsertaan saya atau anak saya dalam penelitian ini akan dijaga kerahasiaannya?**

Semua informasi yang dikumpulkan selama penelitian akan dijaga kerahasiaannya secara ketat. Untuk melindungi kerahasiaan orang tua atau wali dan peserta, maka akan digunakan nomor kode tanpa mencantumkan informasi yang mungkin dapat menghubungkan dengan peserta dan orang tua atau wali. Peneliti akan bertanggungjawab dalam menjaga kerahasiaan dengan menjaga informasi pribadi yang bertujuan menjaga identitas peserta dan menyimpan informasi tersebut dalam laci berpengamanan.


**13. Apa yang akan terjadi pada hasil penelitian?**

Hasil penelitian akan diterbitkan dan dijelaskan dengan sudut pandang tinjauan tanpa menyebutkan tentang data spesifik yang dapat merujuk pada peserta, sekolah atau nama spesifik lainnya. Kuesioner, rekaman video, dan foto-foto akan disimpan dalam lemari arsip terkunci yang hanya bisa dilihat dan dibaca oleh peneliti dan pembimbing. Setelah penelitian selesai, kuesioner akan dihancurkan dalam kurun waktu 3 tahun.

**14. Siapa yang telah mengkaji dan mempelajari program penelitian ini?**

Semua hal yang berkaitan dengan penelitian ini seperti siswa dan fasilitas yang digunakan telah disetujui oleh Komite Etika Ulasan Penelitian yang Melibatkan Subyek Penelitian Manusia, Baromarajonani College of Nursing Nopparat Vajira sebelum dilakukan.



	<p align="center"><b>Baromarajonani College of Nursing Nopparat Vajira</b></p>	<p align="center"><b>Form of Participant Information Sheet (Bahasa Indonesia version)</b></p>
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Persetujuan ini memberikan jaminan bahwa peserta tidak akan dirugikan selama penelitian, dan komite etika yakin bahwa hak-hak peserta akan dihormati.

15. Apa yang harus dilakukan orang tua atau wali selanjutnya?

Jika orang tua atau wali mengizinkan anaknya untuk ikut serta dalam program penelitian, silahkan menanda tangani dua rangkap formulir persetujuan orang tua atau wali atau informed consent. Satu rangkap formulir persetujuan akan disimpan oleh orang tua atau wali dan satu formulir lain akan disimpan oleh peneliti.

16. Apa yang harus saya lakukan jika saya setuju untuk menjadi peserta? (anak)

Jika kamu setuju untuk menjadi peserta pada penelitian ini, silahkan melengkapi dan menandatangani formulir persetujuan peserta atau assent form. Selanjutnya, formulir diserahkan kembali kepada peneliti. Peneliti akan menghubungi kamu untuk berdiskusi dan memberikan informasi lebih lanjut tentang program penelitian.

17. Kontak untuk informasi lebih lanjut

Jika Anda memiliki pertanyaan atau ingin memperoleh informasi lebih lanjut, Andadapat menghubungi peneliti kapan saja. Nomor telepon peneliti adalah 081367721998.

Jika peneliti tidak melakukan prosedur atau program pada peserta seperti yang ditulis dalam lembar informasi, Anda bisa mengajukan keluhan kepada Komite Etika Ulasan Penelitian yang Melibatkan Subyek Penelitian Manusia, Baromarajonani College of Nursing Nopparat Vajira, 681 Rhamintra Road, Khannayao, Bangkok 10230, Thailand, Telepon +662-540-6500.


Terimakasih telah meluangkan waktu untuk membaca lembar informasi ini.  
Terimakasih sebelumnya atas partisipasi anda dalam penelitian ini.

Hormat saya

Tita Septi Handayani  
Peneliti



**Appendix B**  
Informed consent form for parent or guardian

	<b>Baromarajonnani College of Nursing Nopparat Vajira</b>	<b>Informed consent form for parent or guardian (English version)</b>
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**Address** :.....

**Date** :.....

**Code Number of Participant** :.....

**Title** Effect of The Self-Efficacy Program on Smoking Prevention among Junior High School in Bengkulu city, Bengkulu Province, Indonesia

**Principle researcher's name** Tita Septi Handayani

**Contact address** Komp. PU, Jl. Batang Hari, No. 50, Simpang Kampar, Bengkulu

**Phone number** +6282184258878

I have been clearly informed about the rationale and the objective of this study in which my child will be engaged with in details, harm, and benefit of the study. In addition, the researcher has explained to me and I have been clearly understood regarding this phase of study.


I agree to allow my child to participate in program in attendance the self-efficacy smoking prevention program. My child will asked to fill out the questionnaire about his background, depression inventory test and the efficacy in refuse smoking offers cigarette. It takes time about 30 - 40 minutes with 64 questions.

After that my child will participate in this program in 5 weeks, involving with 8activities. Over 5 weeks, meetings will be provided with various activities. Activities consist of two types; learning activities in the classroom for 40-60 minutes and outdoor activities in school environment such as group project. The activities will start on third week of July until third week of August.

I have opportunity to ask to the researcher. The researcher will be responsible for maintain confidentiality by manage the private information to protect that my child's identity and keep the information safely.

Even though I have allowed my child to take part in this study, my child deserve to withdraw from this activity anytime and do not need to give any reason. This withdrawal will not have any negative impact upon my child and he still receives the education from his school.

The researcher has guaranteed that the program will be acted upon my child would be exactly the same as indicated in the information sheet. Any of my child's personal information will be kept confidentially. Result of this phase will be report as

	<p align="center"><b>Baromarajonani College of Nursing Nopparat Vajira</b></p>	<p align="center"><b>Informed consent form for parent or guardian (English version)</b></p>
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total picture. There would not be personal information in this study associated to my child will not presented in the report.


If my child is not treated as indicated in the information sheet, I can contact the local committee at Integrated Licensing Service Office (KP2T) Bengkulu province at Jalan Pembangunan No. 01, Kelurahan Padang Harapan, Bengkulu or call center of KP2T on telephone number (0736) 23512 or I can report to the Ethics Review Committee for Research Involving Human Research Subjects, Baromarajonani College of Nursing Nopparat Vajira, 681 Rhamintra Road, Khannayao, Bangkok 10230, Thailand, Phone. +662-540-6500.

I have received a copy of information sheet and informed consent form as well.

Date.....  
Sign .....  
(Tita Septi Handayani)  
Researcher

Date.....  
Sign.....  
(.....)  
Parent or Guardian

Date.....  
Sign .....  
(.....)  
Witness

	<b>Baromarajonnani College of Nursing Nopparat Vajira</b>	<b>Informed consent form for parent or guardian (Indonesia version)</b>
---	---	---

**Alamat** :.....

**Tanggal** :.....

**Kode Nomor Peserta** :.....

**Judul** Efek Program Ketahanan Diri pada Pencegahan Merokok  
diantara Siswa Sekolah Menengah Pertama di Kota  
Bengkulu, Provinsi

**Nama Peneliti** Tita Septi Handayani

**Alamat** Komplek PU, Jl. Batang Hari, No. 50, Simpang Kampar,  
Bengkulu

**Nomor Telepon** 085267480373

Saya telah mendapat informasi yang jelas tentang dasar dan tujuan dari penelitian ini dimana anak saya akan terlibat secara rinci, termasuk kerugian dan manfaat penelitian. Selain itu, peneliti telah menjelaskan kepada saya dan saya telah memahami dengan jelas mengenai tahap penelitian ini.


Saya setuju untuk mengizinkan anak saya untuk berpartisipasi dalam program keyakinan diri untuk pencegahan merokok. Anak saya akan diminta untuk mengisi kuesioner tentang informasi latar belakang, tes gejala depresi, dan kuesioner keyakinan diri dalam menolak tawaran rokok. Pengisian kuesioner ini akan memakan waktu kurang lebih 30-40 menit untuk menjawab 64 pertanyaan.

Setelah itu, anak saya akan mengikuti program penelitian selama 4 minggu dengan 8 sesi kegiatan selama 4 minggu kegiatan yang akan dilakukan terdiri dari berbagai macam aktivitas. Aktivitas terdiri dari 2 jenis; aktivitas pembelajaran di dalam kelas selama 40-60 menit dan aktivitas di luar kelas. Aktivitas yang dilakukan di luar kelas berada dalam lingkungan sekolah.

Saya memiliki kesempatan untuk bertanya kepada peneliti. Peneliti akan bertanggung jawab untuk menjaga kerahasiaan dengan mengelola informasi pribadi untuk melindungi identitas saya dan anak saya serta menyimpan informasi tersebut dengan aman.

Meskipun saya telah mengizinkan anak saya untuk ikut serta dalam penelitian ini, anak saya berhak untuk keluar atau mengundurkan diri dari kegiatan ini kapan



	<b>Baromarajonani College of Nursing Nopparat Vajira</b>	<b>Informed consent form for parent or guardian (Indonesia version)</b>
---	--	---

saja dan tanpa memberikan alasan apapun. Pengunduran diri ini tidak akan memberikan dampak negatif pada anak saya dan dia masih menerima pendidikan seperti biasa dari sekolahnya.

Peneliti telah menjamin bahwa program yang akan ditindaklanjuti kepada anak saya akan persis sama seperti yang dijelaskan dalam lembar informasi. Setiap informasi pribadi anak saya akan dijaga kerahasiaannya. Hasil dari penelitian ini akan dilaporkan sebagai gambaran umum secara keseluruhan. Informasi pribadi terkait dengan anak saya tidak akan disajikan dalam laporan penelitian.

Jika anak saya tidak diperlakukan sebagaimana yang tertulis pada lembar informasi, saya dapat melayangkan pengaduan dan keluhan pada Kantor Pelayanan Perijinan Terpadu (KP2T) Propinsi Bengkulu dengan alamat Jalan Pembangunan No. 01, Kelurahan Padang Harapan, Bengkulu atau menghubungi call centre of KP2T pada nomor telepon (0736) 23512 atau melaporkan kepada Komite Etika Ulasan Penelitian yang Melibatkan Subyek Penelitian Manusia, Baromarajonani College of Nursing Nopparat Vajira, 681 Rhamintra Road, Khannayao, Bangkok 10230, Thailand, Phone +662-540-6500.

Saya telah menerima salinan lembar informasi dan formulir persetujuan penelitian.

Sign .....

Sign .....

(Tita Septi Handayani)

(.....)

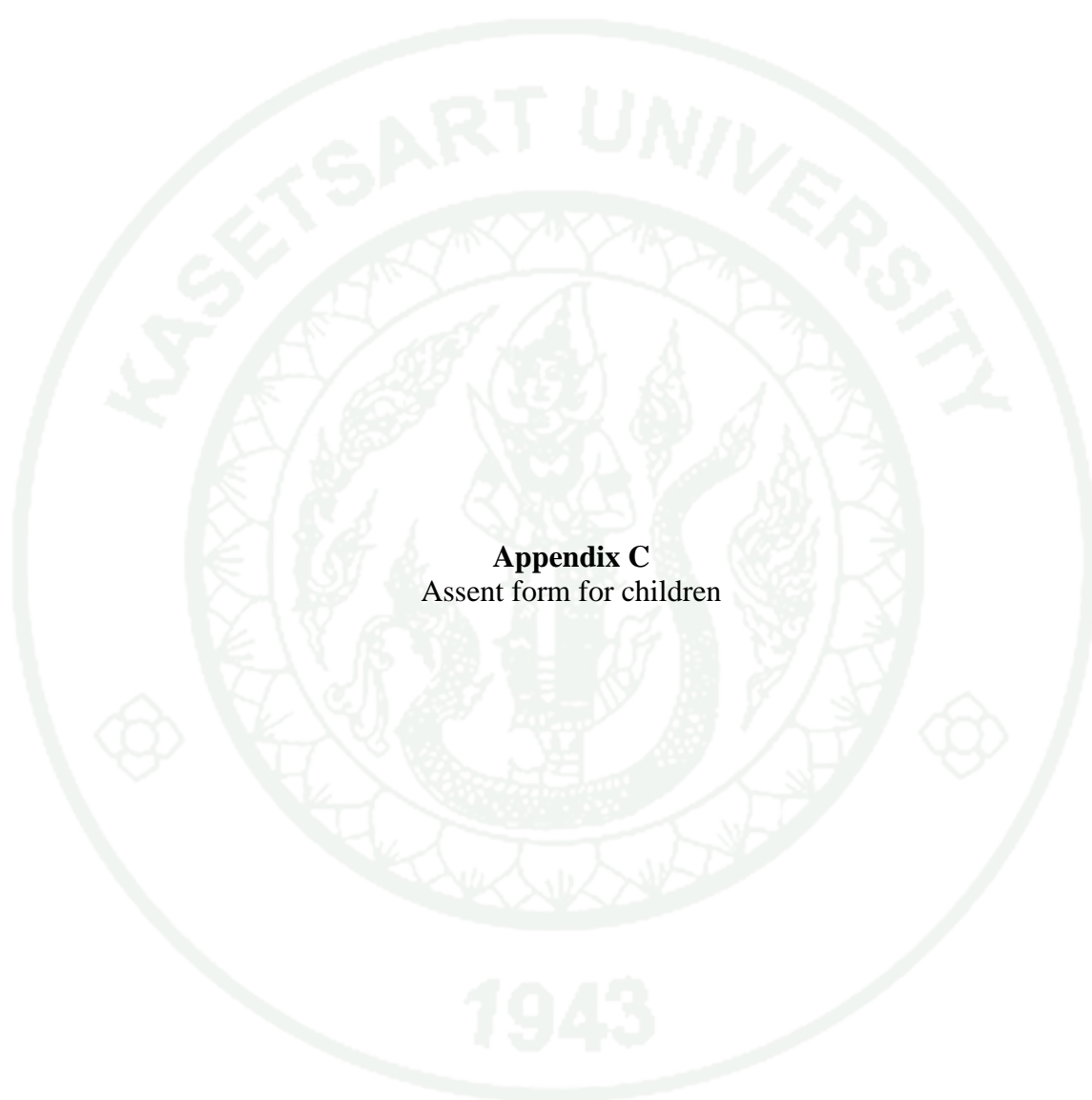
Peneliti

Orang tua / Wali


Sign

(.....)

Saksi



**Appendix C**  
Assent form for children

	<p align="center"><b>Baromarajonani College of Nursing Nopparat Vajira</b></p>	<p align="center"><b>Assent form for children (English version)</b></p>
---	--	---

**My name is.....**

**My date of birth is.....**

**My school and class are.....**

I would like to take part in the program of this study entitled Effect of the Self-Efficacy Program on Smoking Prevention among Junior High School in Bengkulu city, Bengkulu Province, Indonesia. I have been given and read the information sheet. My parents or guardian have allowed me to take part in this study.

I will be asked to fill out the questionnaire about my background, depression inventory test and the efficacy in refuse smoking offers cigarette with 64 questions.

After that I will participate in this program in 5 weeks, involving with 8 activities. Over 5 weeks, meetings will be provided with various activities. Activities consist of two types; learning activities in the classroom for 40-60 minutes and outdoor activities in school environment such as group project. The activities will start on third week of July until third week of August.

I have opportunity to ask to the researcher. I can decide not to answer any questions if I do not want to answer or free to withdraw from the program any time. I deserve to withdraw from this activity any time as I wish without provide any reason. This withdrawal will not have any negative impact upon me and I still receive the education from my school. No data in the report will be able to link back to me or my school.


If I am not treated as indicated in the information sheet, I can contact the local committee at Integrated Licensing Service Office(KP2T) Bengkulu province at Jalan Pembangunan No. 01, Kelurahan Padang Harapan, Bengkulu or call centre of KP2T on telephone number (0736) 23512 or report directly to the Ethics Review Committee for Research Involving Human Research Subjects, Baromarajonani College of Nursing Nopparat Vajira, 681 Rhamintra Road, Khannayao, Bangkok 10230, Thailand, Phone +662-540-6500.

Sign .....

(Tita Septi Handayani)

Sign.....

(.....)

	<p align="center"><b>Baromarajonani College of Nursing Nopparat Vajira</b></p>	<p align="center"><b>Assent form for children (Bahasa Indonesia version)</b></p>
---	--	--

**Nama Saya** .....

**Tanggal lahir saya** .....

**SMP dan Kelas saya** .....

Saya ingin ikut serta dalam program penelitian ini yang berjudul Pengaruh Program Keyakinan Diri untuk Pencegahan Merokok pada Siswa Sekolah Menengah Pertama (SMP) di Kota Bengkulu, Propinsi Bengkulu, Indonesia. Saya telah diberi lembar informasi dan membacanya dengan seksama. Orangtua saya atau wali telah memberikan saya ijin untuk ikut serta dalam program penelitian ini.

Saya akan mengisi kuesioner tentang informasi latar belakang, tes gejala depresi, dan kuesioner keyakinan diri dalam menolak tawaran rokok sebanyak 64 pertanyaan.

Setelah itu, saya akan mengikuti program penelitian selama 4 minggu dengan 8 sesi kegiatan. Selama 4 minggu kegiatan yang akan dilakukan terdiri dari berbagai macam aktivitas. Aktivitas terdiri dari 2 jenis; aktivitas pembelajaran di dalam kelas selama 40-60 menit dan aktivitas di luar kelas. Aktivitas yang dilakukan di luar kelas berada dalam lingkungan sekolah. Kegiatan ini akan dilakukan pada bulan agustus 2014.

Saya memiliki kesempatan untuk bertanya kepada peneliti. Saya bisa memutuskan untuk tidak menjawab pertanyaan jika saya tidak ingin menjawab atau bebas untuk mengundurkan diri dari program setiap saat. Saya berhak untuk keluar atau mengundurkan diri dari kegiatan ini kapan saja dan tanpa memberikan alasan apapun. Pengunduran diri ini tidak akan memberikan dampak negatif pada saya dan saya masih menerima pendidikan seperti biasa dari sekolah saya. Tidak ada data dalam laporan akan dapat menghubungkan kembali kepada saya atau sekolah saya.

Jika saya tidak diperlakukan sebagaimana yang tertulis pada lembar informasi, saya dapat melayangkan pengaduan dan keluhan pada Kantor Pelayanan Perijinan Terpadu (KP2T) Propinsi Bengkulu dengan alamat Jalan Pembangunan No. 01, Kelurahan Padang Harapan, Bengkulu atau menghubungi call centre of KP2T pada nomor telepon (0736) 23512 atau melaporkan kepada Komite Etika Ulasan Penelitian yang Melibatkan Subyek Penelitian Manusia, Baromarajonani College of Nursing Nopparat Vajira, 681 Rhamintra Road, Khannayao, Bangkok 10230, Thailand, Phone +662-540-6500.

Ttd .....

Ttd.....

(Tita Septi Handayani)  
Peneliti

(.....)  
Anak



**Appendix D**  
Questionnaires





5. Whom do you live with?  
☐ Both mother and father  
☐ only mother or only father
6. Does your father smoke?  
☐ Yes  
☐ No
7. Does your mother smoke?  
☐ Yes  
☐ No
8. Does your sister or brother smoke?  
☐ Yes  
☐ No
9. Does your best friend smoke?  
☐ Yes  
☐ No

## 2. Self-Efficacy Scale For Adolescent Smoking By Lawrence

### Direction

The following items ask you to describe your ability to handle smoking situations. Your answers will be kept secretly. Not even your teacher or parents will see them. You do not need to write your name on the paper. Please try to answer as honest as you can.

The following pages contain a list of situations in which young people may find themselves smoking cigarettes. Sometimes it is easier to resist smoking than at other times. In the column at the right, place the number from 1 to 6 using the scale below to show how much you could resist smoking in each case.

1	2	3	4	5	6
I am very sure I would smoke	I most likely would smoke	I probably would smoke	I probably would NOT smoke	I most likely would NOT smoke	I am very sure I would NOT smoke

HOW SURE ARE YOU THAT YOU COULD RESIST SMOKING CIGARETTES:

When your best friend is smoking.....2

If you think that you would most likely smoke too, then you would put a number 2 in the right hand space or the number (1 through 6) of the best answer for you.

1 I am very sure I would smoke	2 I most likely would smoke	3 I probably would smoke	4 I probably would NOT smoke	5 I most likely would NOT smoke	6 I am very sure I would NOT smoke
---	--------------------------------------	--------------------------------	---------------------------------------	--	---

#### HOW SURE ARE YOU THAT YOU COULD RESIST SMOKING CIGARETTES:

1. When you are at a friend's house, no adults are home.....
2. When you are playing video games.....
3. When you are at mall with friends.....
4. When you are watching TV.....
5. When you see others smoking.....

#### HOW SURE ARE YOU THAT YOU COULD RESIST SMOKING CIGARETTES:

6. When you are doing homework.....
7. When you are uptight.....
8. When you are riding your bike.....
9. When you are angry.....
10. When you go hangout with your friend.....
11. When you are at school during recess or after school.....

#### HOW SURE ARE YOU THAT YOU COULD RESIST SMOKING CIGARETTES:

12. When someone offers you a cigarette.....
13. When you want to look cool.....
14. When you want to feel more grow up.....
15. When you are bored.....
16. When you want to look better.....
17. When you want to take a break from studying.....

#### HOW SURE ARE YOU THAT YOU COULD RESIST SMOKING CIGARETTES:

18. When you feel ashamed.....
19. When you are waiting to go into the movies.....
20. When you are waiting for someone.....
21. When you feel restless.....
22. When you are playing in your neighborhood.....
23. When you feel frustrated.....

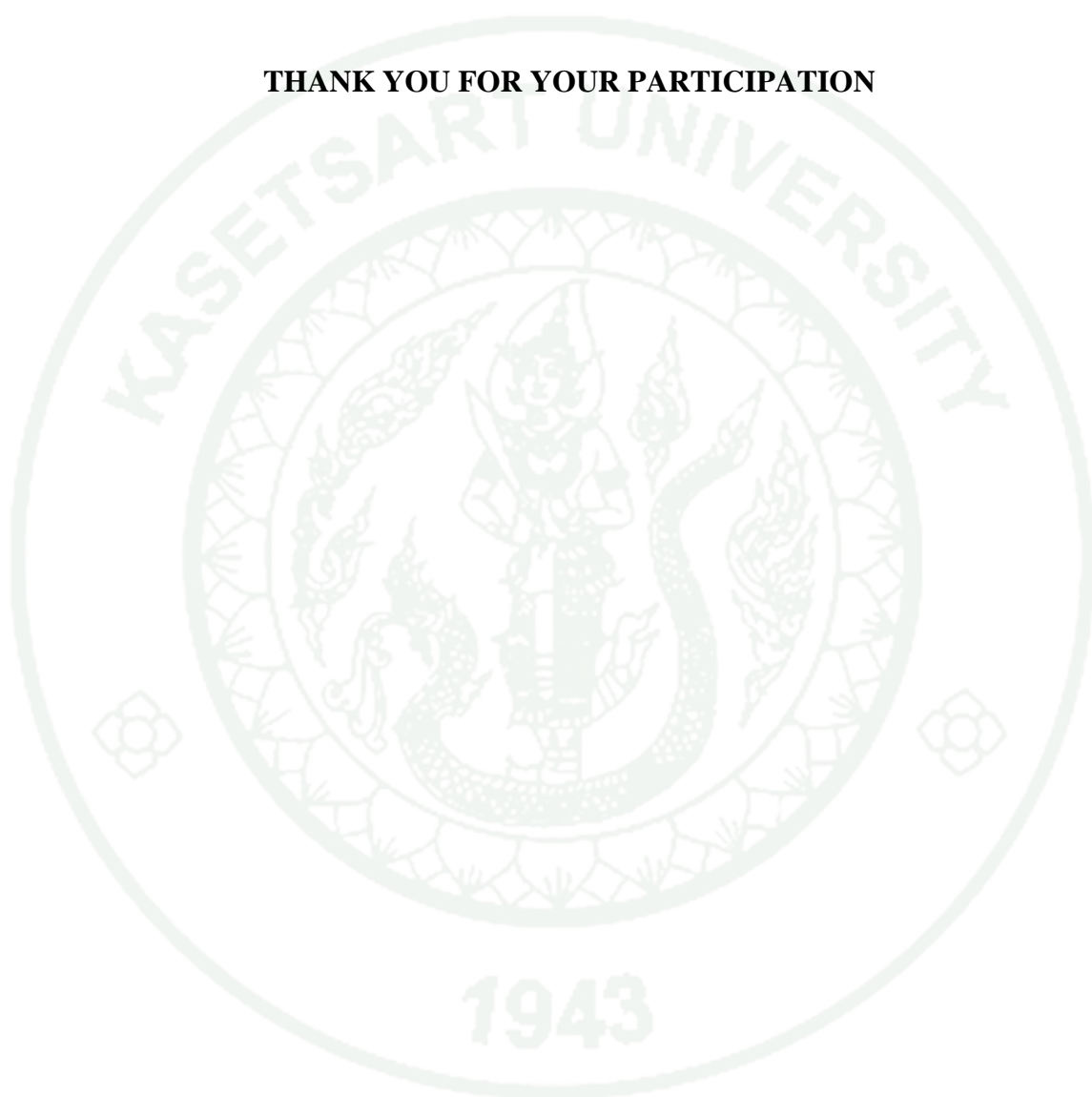
#### HOW SURE ARE YOU THAT YOU COULD RESIST SMOKING CIGARETTES:

24. When you want to feel more accepted by friends.....
25. When you are worried.....
26. When you feel upset.....
27. When you feel down.....
28. When you feel nervous.....
29. When you are on the way home from school.....

**HOW SURE ARE YOU THAT YOU COULD RESIST SMOKING CIGARETTES:**

- 30. When you feel sad..... \_\_\_\_\_
- 31. When your best friend is smoking..... \_\_\_\_\_
- 32. When your friends are smoking..... \_\_\_\_\_
- 33. When you are by yourself..... \_\_\_\_\_
- 34. When your brother or sister is smoking..... \_\_\_\_\_

**THANK YOU FOR YOUR PARTICIPATION**



**BDI-II INDONESIA VERSION**

Name :		
Age :	years	Religion :

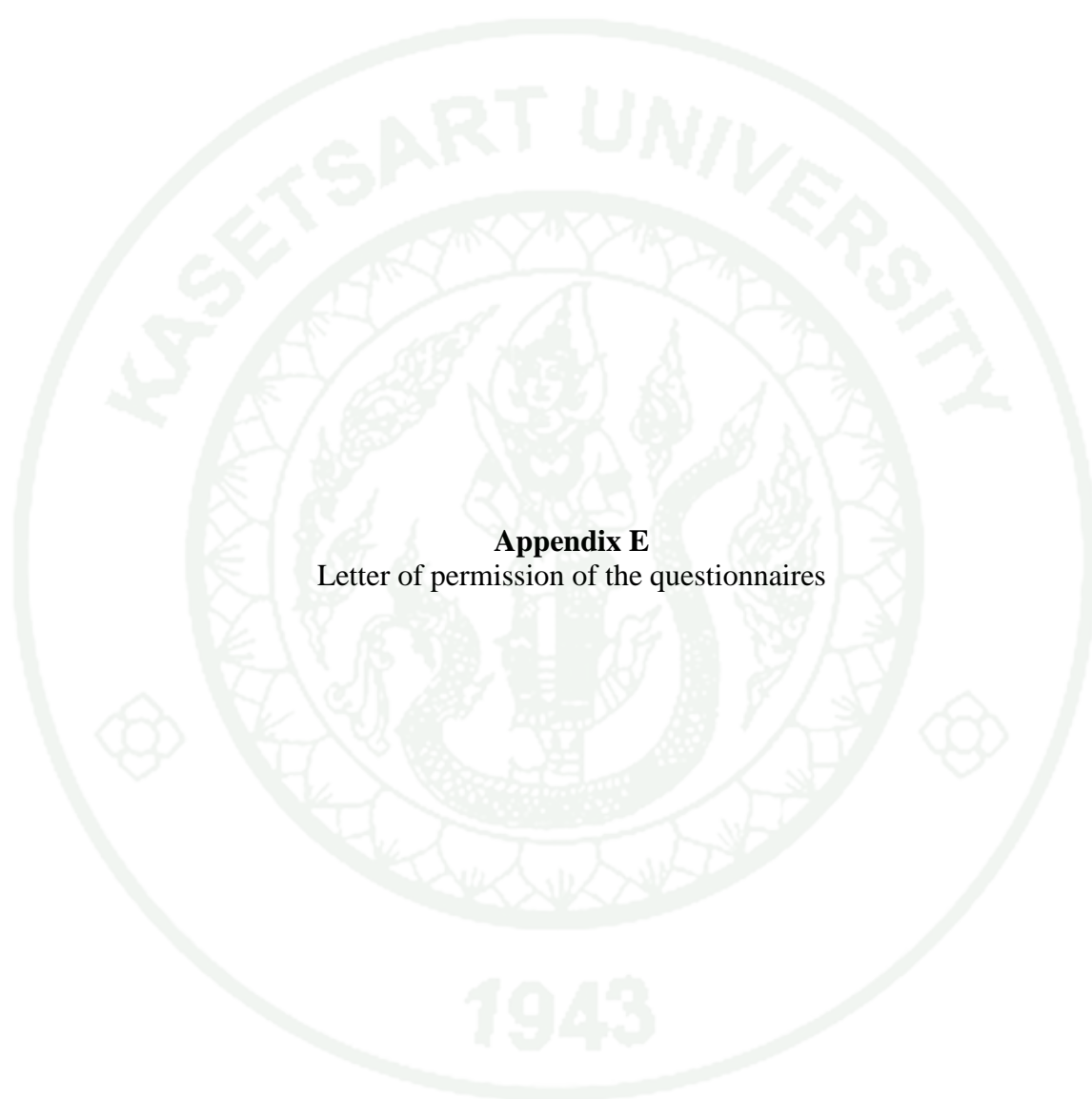
Directions: The following questionnaire consists of 21 groups of statements. Please read each group of statements carefully, then select one of the statements in each group that best describes your feelings during the last 2 weeks, including today. Circle the number beside the statement you choose. If in a group there are some similar statements, circle the highest number of that group of statements. Make sure that you do not choose more than one statement in each group, including 16 statements (changes in sleep patterns) and statement 18 (appetite changes).

<b>1. Sadness</b> 0. I do not feel sad. 1. I often feel sad. 2. I feel sad all the time. 3. I feel very unhappy or sad to the unbearable level.	<b>3. The failure of past</b> 0. I do not feel like a failure. 1. I have failed more than it should be. 2. I do a lot of failures in the past. 3. I feel like a total failure (actually fail).
<b>2. Pessimistic</b> 0. I do not doubt my future. 1. I feel more doubtful about my future than usual. 2. I feel that everything is not going well for me. 3. I feel that there is no hope for my future and it will get worse.	<b>4. Lose of passion</b> 0. I get pleasure from the things I do. 1. I do not enjoy anything as usual. 2. I only get very little pleasure from the things I can usually enjoy. 3. I do not get pleasure at all from the things I can usually enjoy.
<b>5. Guilt</b> 0. I did not feel guilty at all. 1. I feel guilty over many things that have or should have done. 2. I often feel guilty. 3. I feel guilty all the time.	<b>9. Thoughts or suicidal desire</b> 0. I do not think of suicide. 1. I think of suicide, but it will not do it. 2. I want to kill myself. 3. I would do suicide if there is a chance.
<b>6. Feeling punished</b> 0. I do not feel that I was being punished. 1. I feel that maybe I will be punished. 2. I am sure that I will be punished. 3. I feel that I am being punished.	<b>10. Crying</b> 0. I do not cry anymore as usual. 1. I cry more often than usual. 2. I cry even to a small problem. 3. I think I really want to cry but could not.



<p><b>7. Not liking yourself</b></p> <ul style="list-style-type: none"> <li>0. I do not feel disappointed in myself.</li> <li>1. I lost confidence in myself.</li> <li>2. I feel disappointed in myself.</li> <li>3. I hate myself.</li> </ul>	<p><b>11. Restless</b></p> <ul style="list-style-type: none"> <li>0. I no longer feel anxious or depressed than usual.</li> <li>1. I feel more easily worried or depressed than usual.</li> <li>2. I am very depressed and restless until it difficult to remain silent.</li> <li>3. I am so restless that should always be moving or doing something.</li> </ul>
<p><b>8. Criticizing yourself</b></p> <ul style="list-style-type: none"> <li>0. I do not criticize or blame myself more than usual.</li> <li>1. I criticize myself more than usual.</li> <li>2. I criticize myself for all the mistakes I did.</li> <li>3. I blame myself for all the bad things that happen.</li> </ul>	<p><b>12. Lose of interest</b></p> <ul style="list-style-type: none"> <li>0. I have not lost interest to relate with other people or do activities.</li> <li>1. I am less inclined to relate to others or something than usual.</li> <li>2. I lost almost all my interest to relate with other people or against something.</li> <li>3. I am not interested in anything.</li> </ul>
<p><b>13. Hard to make decisions</b></p> <ul style="list-style-type: none"> <li>0. I can make a decision as I usually do.</li> <li>1. I am a bit difficult to make decision than usual.</li> <li>2. I face much more difficulty in making decision than usual.</li> <li>3. I have trouble every time I make decision.</li> </ul>	<p><b>16. Changes in sleep patterns</b></p> <ul style="list-style-type: none"> <li>0. I have not experienced any change in my sleeping patterns.</li> <li>1. a. I sleep more than usual. b. I sleep less than usual.</li> <li>2. a. I sleep a lot longer than usual. b. I sleep much less than usual.</li> <li>3. a. I slept most of the day. b. I wake up 1-2 hours earlier and cannot fall back sleep.</li> </ul>
<p><b>14. Feeling unworthy</b></p> <ul style="list-style-type: none"> <li>0. I feel worthy.</li> <li>1. I feel unworthy and useless than usual.</li> <li>2. I feel less worthy than others.</li> <li>3. I did not feel worthy at all.</li> </ul>	<p><b>17. Irritable</b></p> <ul style="list-style-type: none"> <li>0. I am not more irritable as usual.</li> <li>1. I am more irritable than usual.</li> <li>2. I am much more irritable than usual.</li> <li>3. I am irritable all the time.</li> </ul>
<p><b>15. Lose of energy (enthusiasm)</b></p> <ul style="list-style-type: none"> <li>0. I have energy (enthusiasm) as usual.</li> <li>1. I have less energy than I should have.</li> <li>2. I do not have enough energy to do much.</li> <li>3. I do not have enough energy to do anything.</li> </ul>	<p><b>18. Changes in appetite</b></p> <ul style="list-style-type: none"> <li>0. My appetite has not changed (not worse) than usual.</li> <li>1. a. My appetite is less than usual. b. My appetite more than usual.</li> <li>2. a. My appetite is much less than usual. b. My appetite is much more than usual.</li> <li>3. a. I have no appetite at all. b. I want to eat all the time.</li> </ul>

<p><b>19. Difficulty in concentrating</b></p> <ul style="list-style-type: none"> <li>0. I am able to concentrate as usual.</li> <li>1. I am not able to concentrate as usual.</li> <li>2. I am very difficult to keep the mind focus on something in the long term.</li> <li>3. I feel that I am not able to concentrate in all respects.</li> </ul>	<p><b>20. Tired or Fatigue</b></p> <ul style="list-style-type: none"> <li>0. I am no more tired or exhausted than usual.</li> <li>1. I am tired or exhausted more easily than usual.</li> <li>2. I feel tired or exhausted to do a lot of things that I usually do.</li> <li>3. I am too tired or exhausted to do almost all the things that I usually do.</li> </ul>
<p><b>21. Lose of sexual desire</b></p> <ul style="list-style-type: none"> <li>0. I do not see any change in my sexual arousal.</li> <li>1. My sexual arousal is reduced, not as usual.</li> <li>2. I became much less interested in sexual activity at this time.</li> <li>3. My sexual desires completely disappear.</li> </ul>	



**Appendix E**  
Letter of permission of the questionnaires

# 1. BDI-II Indonesia version Questionnaire

On Tuesday, June 3, 2014 12:50 PM, Tita Handayani <handayani\_tita@yahoo.co.id> wrote:

Dear Mr Henndy Ginting,

My name is Tita Septi Handayani and my origin is Indonesia. Right now I am study in Master of Nursing Science at Boromarajonani College of Nursing Nopparat Vajira affiliated with Kasetsart University, Thailand. Herewith, I would like to request the permission to use BDI-II Indonesia version as tool for my thesis. In addition, my thesis interest is smoking self-efficacy among adolescent. Therefore, since I read through from articles, BDI-II Indonesia version will be an appropriate tool for my thesis. Thank you for your attention.

Best regard,

Tita Septi Handayani, S.Kep, Ns

On Tuesday, June 3, 2014, 14:19, henndy ginting <henndyg@yahoo.com> wrote:

Hallo Tita,

Could you email me your brief cv and the name of your supervisor please?

Best,

Dr. Henndy Ginting, Psik.

Lecturer at the Faculty of Psychology

Maranatha Christian University

GWM 10th floor, Room H.10-B.1A

Suria Sumantri 65, Bandung 40164

Indonesia

On Tuesday, June 3, 2014 3:28 PM, Tita <handayani\_tita@yahoo.co.id> wrote:

Dear Mr. Henndy Ginting,

Thank you for your positive respond. I send my CV in the attachment.

My thesis supervisor is Ms. Dr. Susheewa Wichaikull, RN, Ph. D

Best regard,

Tita Septi Handayani, S.Kep, Ns

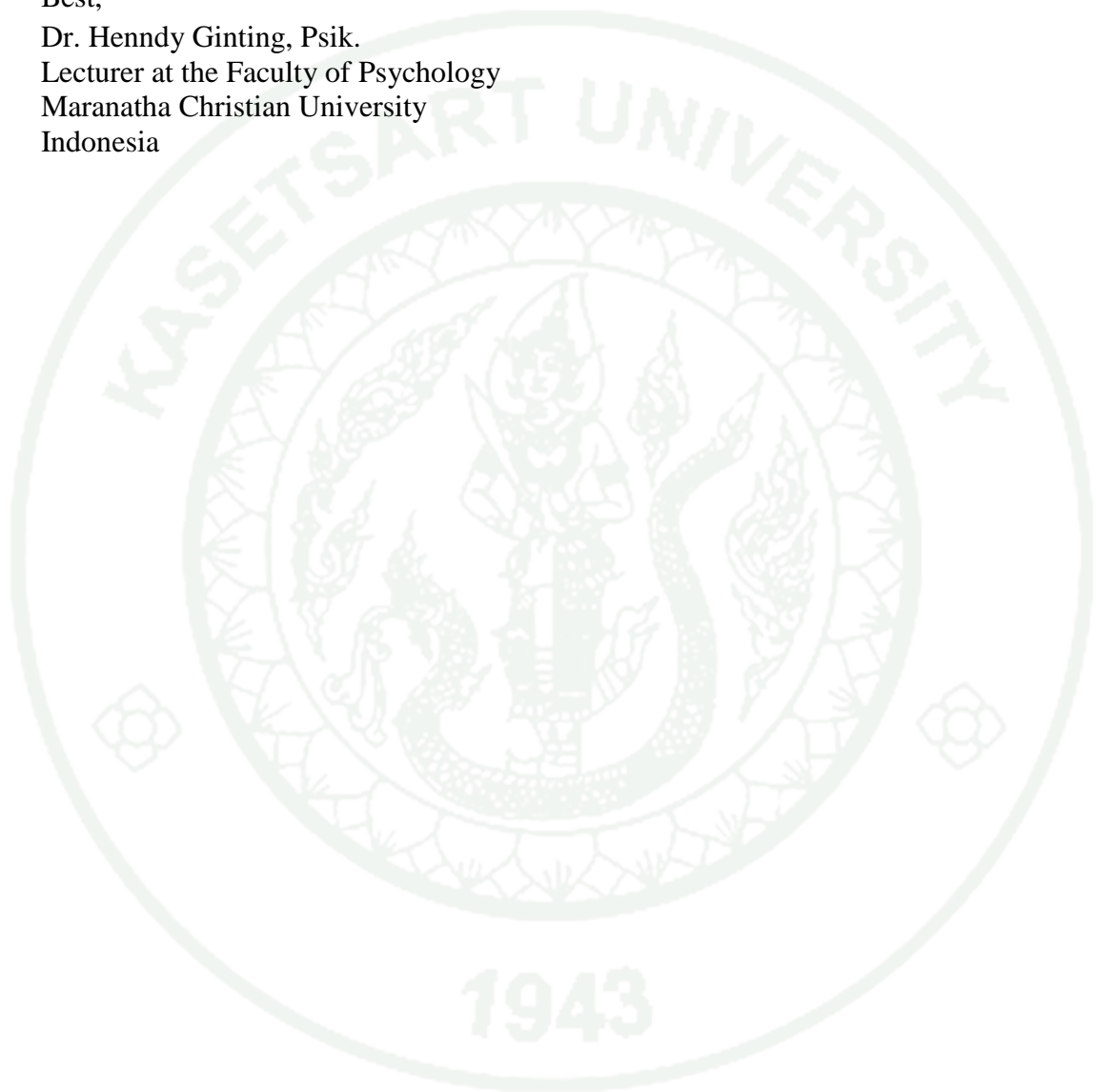
On Friday, June 5, henndy ginting <henndyg@yahoo.com> wrote:

Dear Tita,

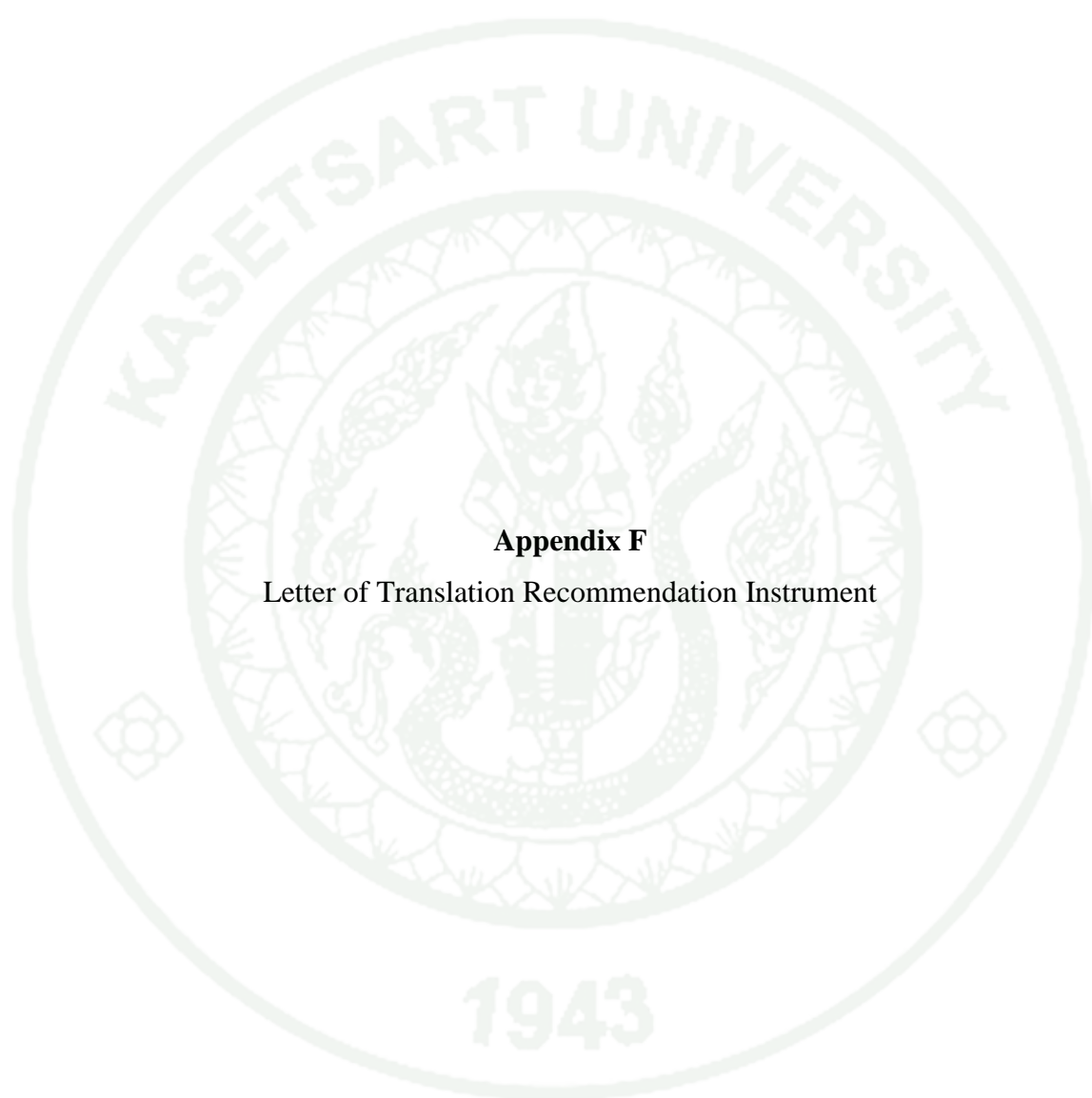
Attached please find the questionnaire. Please keep it secret.

Best,

Dr. Henndy Ginting, Psik.  
Lecturer at the Faculty of Psychology  
Maranatha Christian University  
Indonesia








## **Appendix F**

### **Letter of Translation Recommendation Instrument**



**YAYASAN  
ENGLISH BEST FOUNDATION  
ENGLISH COM**

Jl. Mahendradatta No. 96 Padangsembian Denpasar Barat, Bali – Indonesia  
Telp. (0361) 2786029 email: [ec.eduenglish@yahoo.com](mailto:ec.eduenglish@yahoo.com)  English Com Bali

**DECLARATION LETTER OF TRANSLATION**

**To Whom it May Concern**

I, the undersigned

Name : I MADE SUWITRA, S.S., M.HUM  
Profession : English Teacher/Lecturer  
Indonesian Teacher for Foreigners, Translator &  
Interpreter at English Best Foundation (English Com  
Bali), Denpasar –Bali, Indonesia  
Education : Master's in Linguistics, Postgraduate Studies, Udayana  
University (2010)

hereby declare that it is true that I was appointed as an authorized translator for  
Ms Tita Septi Handayani in title of research: **Effect of the self-efficacy for refusal  
smoking program among junior high school in Bengkulu, Indonesia.**

The letters that I have translated from English to Indonesian are:

1. Questionnaire demographic and the self-efficacy scale for adolescent smoking
2. The self-efficacy program on smoking prevention guidelines
3. Guidelines of evaluation for researcher

I also hereby guarantee that to the best of my knowledge and belief the  
translation of the questionnaire is a true and correct Indonesian Language Version.  
Thus, this Declaration Letter is truly drawn up and it can be applied where necessary.

Denpasar-Bali, 27 June 2014

Truly Yours,



I MADE SUWITRA, S.S., M.HUM



MINISTRY OF EDUCATION AND CULTURE  
UNIVERSITY OF BENGKULU

UPT BAHASA

Jl. WR. Supratman Kandang Limun Bengkulu Telp/Fax (0736) 342305

Email: [office@upthahasauib.com](mailto:office@upthahasauib.com) Web: [www.upthahasauib.com](http://www.upthahasauib.com)

**CONFIRMATION LETTER**

No: 249/UN30.19/PP/2014

The Head of UPT Bahasa Universitas Bengkulu declares that the following Journal of;

Name : Tita Septi Handayani

Title : Smoking Information "*Basic Materials of Cigarettes and Its Effects*"

Has been translated from *Bahasa Indonesia* into English in July 8<sup>th</sup> 2014 here by the confirmation was made to be used as it is supposed to be.



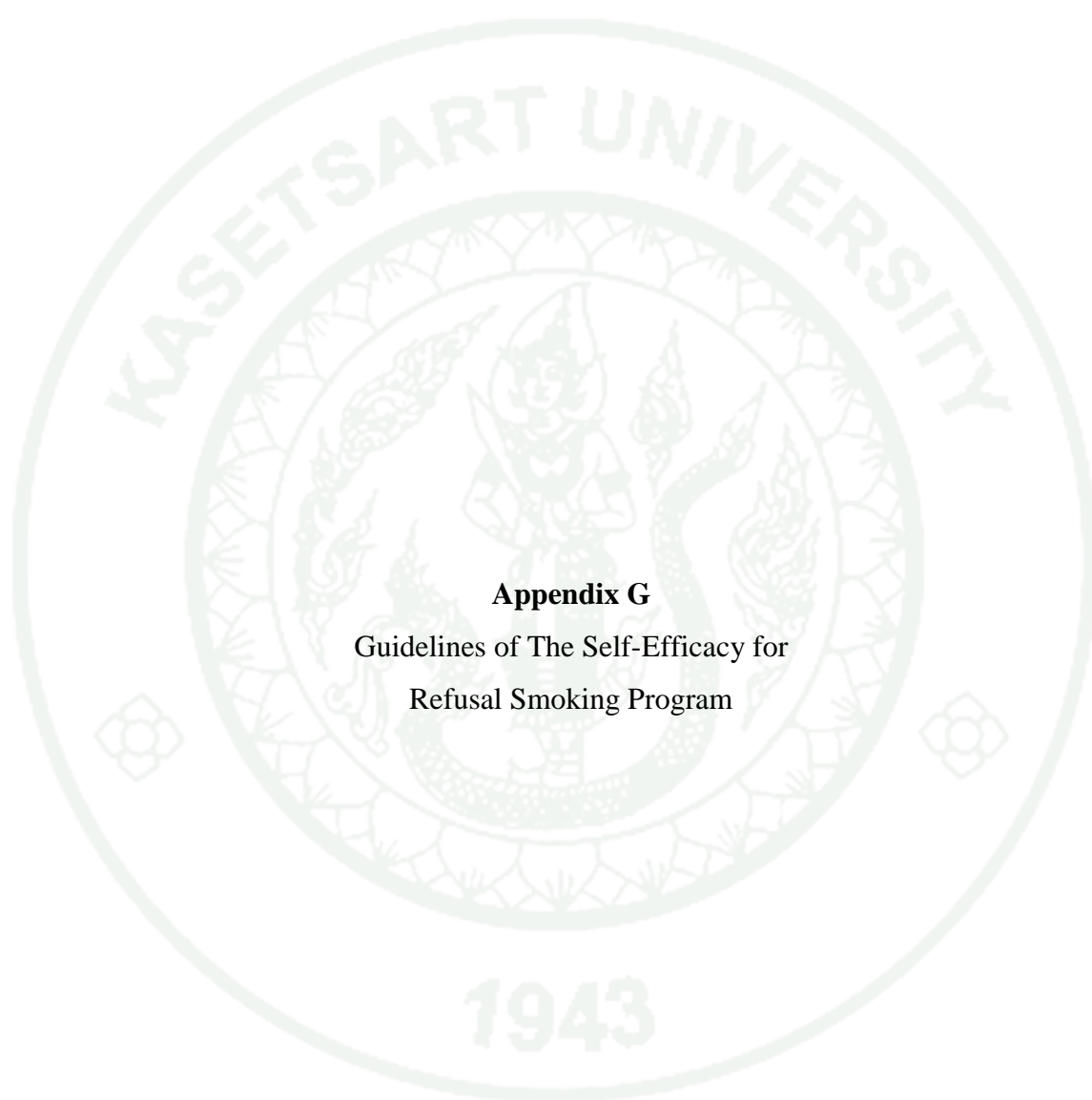
Bengkulu, July 8<sup>th</sup> 2014

Head

*[Signature]*  
Drs. Syahrial, Dip. TESL, MA, M.Phil

NIP.19580616 198503 1 003

1943



### **Appendix G**

Guidelines of The Self-Efficacy for  
Refusal Smoking Program

**GUIDELINES OF  
THE SELF EFFICACY FOR REFUSE SMOKING PROGRAM**

**Content**

Introduction

Activities 1. Sharing Experience

Activities 2. Knowledge about smoking cigarette

Activities 3. Stress management for Teenager

Activities 4. Assertive communication and smoking refusal skill

Activities 5 Inspiring seminar

Activities 6. Decision making skill

Activities 7. Project group

Activities 8. Appreciation from the school



## Introduction

Promoting the self efficacy program on smoking prevention means that promoting effective communication techniques, refusal skills, and social strategies to help adolescents in rejecting cigarettes.

Perceived Self-efficacy is the belief that one has an ability to perform a specific task. Someone with less confidence in his own abilities will not realize that his actions will be success (Bandura, 1997).

The promotion of self-efficacy is considered as an effective approach in protecting adolescents from the behaviors influence risks. Self-efficacy becomes a component in social theory, learning theory, and the theory of health promotion. Several theories which used the component of self-efficacy included Health Belief Model (HBM), Health Promotion Model by Nola Pender (HPM), Theory of planned behavior (TPB), Social Cognitive Theory, and Attitude Social influence-self-Efficacy model (ASE). Self-efficacy program is developed based on the theory of self-Efficacy by Albert Bandura (1997).

The program is developed based on four main sources of self-efficacy found in adolescents, namely the development of experience, social persuasive, stress management and good role play. The intervention will be more effective if it is delivered in a variety of media and interactive teaching methods to introduce the self-efficacy among students.

## Activities 1

### Sharing Experience

#### Expected outcomes

1. The participants share their own knowledge and experiences about smoking
2. The participants give their perception about smoking

#### The story about I, you, and cigarette

Objectives	<ol style="list-style-type: none"> <li>1. The participants share their own knowledge and experiences about smoking</li> <li>2. The participants give their perception about smoking</li> </ol>
Materials	Paper, pencil
Time	45 – 60 minutes
Process	<ol style="list-style-type: none"> <li>1. Describing the activities and the objectives of the activity</li> <li>2. Dividing the participants into a group of 7-8.</li> <li>3. Determining a note taker in each group to record the ideas presented.</li> <li>4. Asking each group to do the following activities:               <p><i>"Share your experiences about smoking to the member of your group"</i></p> <p><i>"It can be your own experience or someone else's experience, such as a family, a neighbor, a friend, teacher, or the other people around of you"</i></p> <p><i>"Briefly summarize the experiences of each member, for example Budi started smoking when offered by his brother, then he felt tightness and got cough at first cigarette"</i></p> <p><i>"each group should note the experiences summaries of the other groups"</i></p> </li> <li>5. Providing 15-20 minutes to discuss it in small groups.</li> <li>6. Asking the class to present the results of discussion.</li> <li>7. Giving responses to the results presented by all groups.</li> </ol>

## Activities2

### Knowledge about smoking

Topic: 1. Smoking ingredients

2. Short-term effects of smoking for health
3. Long-term effect of smoking for health
4. The consequence of smoking on passive smokers
5. Myths and facts about smoking

### Expected outcomes

1. The participants enhance the level of knowledge on harmful ingredients of cigarettes
2. The participants enhance the level of knowledge about short-term effects of smoking on body and health
3. The participants enhance the level of knowledge about long-term effects of smoking on body and health
4. The participants enhance the awareness about the consequences of smoking for passive smokers or second-hand smokers
5. The participants increase the understanding about myths and facts about smoking

### Cigarette

Objective	<ol style="list-style-type: none"> <li>1. The participants enhance the level of knowledge on harmful ingredients of cigarettes</li> <li>2. The participants enhance the level of knowledge about short-term effects of smoking on body and health</li> <li>3. The participants enhance the level of knowledge about long-term effects of smoking on body and health</li> <li>4. The participants enhance the awareness about the consequences of smoking for passive smokers or second-hand smokers</li> <li>5. The participants increase the understanding about myths and facts about smoking</li> </ol>
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Materials	Handout, Video interactive
Time	45 – 60 minutes
Process	<ol style="list-style-type: none"> <li>1. Describing the activities to be carried out and the objectives of the activity</li> <li>2. Asking some questions which related to the topic: <ul style="list-style-type: none"> <li><i>"What do you know about the ingredients contained in cigarettes?"</i></li> <li><i>"Do you know that the ingredients contained in cigarettes are not good for health?"</i></li> <li><i>"Do you think cigarettes are dangerous? Does it give any effects to the smoker only?"</i></li> <li><i>"Is it harmful or not? why"</i></li> </ul> </li> <li>3. Explaining the harmful ingredients inside the cigarette: <ul style="list-style-type: none"> <li>a) Nicotine</li> <li>b) Carbon Monoxide</li> <li>c) Tar</li> </ul> </li> <li>4. Asking the participant's experiences when they smoke or when they are around of the smoker: <ul style="list-style-type: none"> <li><i>"Do you ever see people smoking?"</i></li> <li><i>"What do you feel when being around people who smoke?"</i></li> <li><i>"As a passive smoker, do you think that cigarette is dangerous for you?"</i></li> <li><i>"Why is it also dangerous for people who do not smoke?"</i></li> </ul> </li> <li>5. Explaining the effects of smoking cigarette for health <ul style="list-style-type: none"> <li>a) The ingredients of cigarettes and its relation to the onset of disease</li> <li>b) Long-Term Effects</li> </ul> </li> <li>6. Asking the opinion of the participants about the effects of smoking to the smoker and people surround the smoker, like family or friends <ul style="list-style-type: none"> <li><i>"Do you think people who smoke will impact other family members?"</i></li> </ul> </li> </ol>

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*"Do you think the person who does not smoke impacted by those who smoke?"*

7. Explaining about the effects of smoking cigarette to the secondhand smokers
  8. Asking a question about opening ever heard or read about cigarettes
  9. Exposing the myths and misconceptions about cigarettes that commonly occur in adolescents
    - a) Smoking raises the peace of mind and improves concentration
    - b) Smoking is cool and modern
    - c) You are young, you can quit anytime you want
    - d) Smoking makes you sexy
    - e) Smoking is not a problem and will not turn off
    - f) A little is okay
    - g) If you are strong and independent, no one can set you for not smoking
    - h) Smoking is definitely not ugly, the evidence is widely advertised everywhere, cigarette eadvertising may not be lying
    - i) What about it if I smoke? Anyways it is CHEAP!
    - j) Smoking is a personal right that cannot be contested
    - k) Air pollution by exhaust fumes more dangerous than cigarette smoke
  10. Asking the participants' opinions about the myths that have been described
  11. Explaining the facts about cigarettes based on previous myths
    - a) Peace of mind and relaxationis caused by cigarette addiction effects are only temporary
    - b) Smoking has become a habit of some ancient people so fantiquity performed with the aim of tradition
    - c) Effect cigarette addiction will be very difficult to be dismissed
    - d) Cigarette bad effect on one's appearance
-



- 
- e) Cigarettes cause serious detrimental health and long-term effect
  - f) Smoking is not a form of adult decisions and be responsible
  - g) Advertising cigarettes packed as possible to attract smokers and potential smokers
  - h) There have been many people who suffer from diseases caused by smoking
  - i) Buying cheap cigarettes and smoke often will spend money unconsciously.
  - j) Personal rights should not interfere with the rights of others. Cigarette smoke secondhand smoke interfere
  - k) Cigarette smoke is more dangerous than car fumes, because cigarette smoke directly into the lungs
12. Giving the opportunity to the participants to ask questions
13. Summarizing the lesson
- 

## **The Material**

### **KNOWLEDGE RELATED SMOKING**

#### **“CIGARETTE’S INGREDIENTS AND THE EFFECTS”**

Smoking is familiar and easy to find around us. Smokers could be the people around us, such as family members, friends, teachers, neighbors, or the people that we meet on the street. We can easily see cigarette ad on billboards, magazines or television. Although smoking seems natural and harmless, but it is necessary to note that smoking was very harmful for health, both for people who smoke and people who inhale cigarette smoke around smokers.

#### **1. Tobacco’s Chemical Substance**

If there are questions about why cigarettes are dangerous and should be avoided, then the answer is because almost all the ingredients contained in cigarettes are toxic substances that are harmful to health and can cause various diseases. There

are more than 4000 harmful substances in cigarettes. From many harmful substances, there are 3 of the most dangerous substances include nicotine, tar, and carbon dioxide.

### 1.1 Nicotine

Nicotine is a naturally occurring compound found in tobacco plants. When a cigarette burns, a small portion of the nicotine in tobacco will evaporate and become a component to smoke. If nicotine along with caffeine in coffee, theobromine in chocolate and other substances can affect the nervous system. When inhaled, these compounds will lead to psychological stimuli for smoker and make the smoker become addicted. Addiction makes smoker will smoke continuously will poisons the body nerves, increase blood pressure, cause constriction of peripheral blood vessels, and nicotine dependence.

### 1.2 Tar

Tar is the total content of the smoke that is produced when smoking burnt residue, which are carcinogenic or can cause cancer. Tar is actually a composite of thousands of different substances. When the cigarette smoked, the tar will be entered into the oral cavity as a dense vapor. After chilling, the vapor becomes solid and forms a brown precipitate on the surface of the tooth, respiratory tract, and lungs. Tar is also thought to lead to an increased risk of lung cancer due to exposure to cigarette smoke.

### 1.3 Carbon monoxide

Carbon monoxide is a gas that is formed when materials like oil, wood or coal is burned heating. When a cigarette burns, carbon monoxide is formed as a component of the fraction of gas fumes. The presence of carbon monoxide is sometimes associated with cardiovascular disease risk in smokers. This occurs because the carbon monoxide attaches to hemoglobin and results in reduced capacity to take up oxygen in the blood.

Carbonmonoxide has a strong tendency to bind to hemoglobin in red blood cells. Hemoglobin with oxygen should be very important for respiration of body cells, but because CO is more powerful than oxygen, the CO takes its place in side of hemoglobin. Hence, hemoglobin is coupled with CO gas. CO level in the blood of non-smokers is less than 1 percent, while in the blood of smokers achieving 4-15 percent. This will lead to health problems.

#### 1.4 Other chemical substance

- Formaldehyde-a kind of preservatives that are harmful for human consumption
- Hydrogencyanide-ever used as gas for the death penalty
- Benzene-substance that can cause cancer
- Other carcinogenic materials-more than 30 cancer-causing substances

## 2. The Effect Of Smoking Cigarette The Health

### 2.1 Direct effect

- a. Tear out a lot.
- b. Hair, clothes, body smell like cigarette smoke
- c. Pulse rate and blood pressure increases.
- d. Increased intestinal peristalsis and decreased appetite.

### 2.2 Short-term effect

- a. Cigarette smoke stimulates cough
- b. Cigarette smoke causes airway narrowing for 30-40 minutes, this situation is more severe in patients with asthma, chronic bronchitis, and lung inflammation
- c. Cigarette smoke paralyzes the respiratory tract cleaning equipment, thereby inhibiting the mucus that causes shortness of breath.

- d. Toxins from cigarette smoke is absorbed by the blood and went throughout the body, including carbon dioxide (CO) which can reduce the ability of blood to carry oxygen to body tissues. This causes dizziness and headache.
- e. Lost sense of taste and smell.
- f. Teeth and fingers become brown or black.

### 2.3 Long-term effects

- a. Potential disruption of lung function within the next few years
- b. The production of mucus in the airways becomes more or less redundant after 15 years of smoking. This causes a lot of smokers suffer from chronic bronchitis.
- c. Constriction of the airways that is settled on the symptoms of shortness of breath after approximately 5-6 years of smoking. it is the lead to respiratory infections, such as colds easily and pneumonia
- d. 80% of the effect of smoking led to cancer, including lung cancer, mouth cancer, larynx cancer, bladder cancer, pancreas cancer and kidney cancer.
- e. Exacerbate narrowing / hardening of the blood vessels, particularly in the heart vessels and blood vessels in the legs.
- f. The emergence of the addictive effects and nicotine dependence

### 2.4 Secondhand smoker

Cigarette smoke is a major pollutant. The smoke produced by burning tobacco and inhaled directly by the smoker, and residual the smoke will be removed through the mouth and nose. The residual the smoke will be inhaled by others who do not smoke but are near smokers. Some conditions may cause a person inhale cigarette smoke easily, such as living with a spouse who smoked, have parents who smoke, or adjacent to those who smoke. Cigarette smoke not only can lead to serious health problems for the smoker, but also for the second hand smoker.

Health effect to the secondhandsmoker:

- a. Irritation of the eyes, nose, and throat
- b. Acute respiratory disorders, chronic cough, chronic ear infections, lung cancer
- c. Decreased lung function and reduced lung development in children
- d. Increased risk of coronary heart disease (30%)
- e. Increased risk of cancer (20% -50%)
- f. For pregnant women, it also adversely affects the unborn child such as Short gestation / low birth weight, respiratory distress syndrome, other respiratory conditions, and Sudden infant death syndrome.

Smoking behavior is dangerous and should be avoided as early as possible. Smoking is not only harmful to the smoker, but also to the people who are not smoking. The healthy adolescents and smoke free is a next smart generation for better future.

### **Activity 3**

Stress management for Teenager

- Topic:
1. Overview about stress, emotion experience and psychological stressor
  2. Strategies to handling stress situation
  3. Strategy to create positive mood and to reduce stress in daily activity

### **Expected outcomes**

1. The participants develop understanding about stress, emotion experience and psychological stressor
2. The participants develop strategy to handling stress situation
3. The participants develop strategy to create positive mood and reduce stress in daily activity



### Stress management for Teenager

Objective	<ol style="list-style-type: none"> <li>1. The participants develop understanding about stress, emotion experience and psychological stressor</li> <li>2. The participants develop strategy to handling stress</li> <li>3. The participants develop strategy to create positive mood and reduce stress in daily activity</li> </ol>
Materials	Handout
Time	45 – 60 minutes
Process	<ol style="list-style-type: none"> <li>1. Describing the activities to be carried out and the objectives of the activity</li> <li>2. Describing the mechanism of activities</li> <li>3. Explaining about the meaning of stress and stress situation               <ol style="list-style-type: none"> <li>a) Definition of stress</li> <li>b) The causes and sources of stress that may be experienced by school-age adolescents</li> <li>c) Signs of stress</li> </ol> </li> <li>4. Asking the participants the way that they deal with the stress</li> <li>5. Teaching relaxation technique to handle stress situation</li> <li>6. Demonstrating the relaxation technique to handle stress situation</li> <li>7. Giving participants the opportunity to practice relaxation techniques.</li> <li>8. Explaining some methods to create positive mood in daily live               <ol style="list-style-type: none"> <li>a) Doing regular exercise such as yoga, running, bicycling, sport, and physical activity</li> <li>b) Consuming nutritious food regularly</li> <li>c) Avoiding consumption of caffeine, such as coffee, tea, soft drinks, and energy drinks</li> <li>d) Avoiding the use of illegal substances such as drugs, alcohol, and tobacco</li> <li>e) Learning the assertiveness skills, such as how polite but firmly to</li> </ol> </li> </ol>

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- say "no," or to state about own feeling
- f) Positive self-talk
  - g) Spending time to do the hobbies
  - h) Building a network of friends who can help one to cope
  - i) Keeping relationship with faith spirit (the God)
9. Asking the experience of participant about the strategy.
10. Summarizing the material
- 

#### **Activity 4**

Assertive communication and smoking refusal skill

#### **Expected outcomes**

1. The participants are able to handle the situation of social pressure related smoking
2. The participants develop assertive communication and smoking refusal skill from the model
3. The participants perform the similarity of skill with the model

Assertive communication and smoking refusal skill

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Objective	<ol style="list-style-type: none"> <li>1. Handling the situation of social pressure related smoking</li> <li>2. Developing assertive communication and smoking refusal skill from the model</li> <li>3. Performing the similarity of skill with the model</li> </ol>
Materials	Video interactive, case scenario
Time	45 – 60 minutes
Process	<ol style="list-style-type: none"> <li>1. Describing the activities to be carried out and the objectives of the activity</li> <li>2. Describing the mechanism of activities</li> <li>3. Asking the participants' experiences when they are offered a cigarette by someone</li> <li>4. Describing the conditions and situations that may occur when</li> </ol>

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adolescents are offered cigarette.

5. Playing the video on the condition that commonly occurs when adolescents are offered cigarette.
  6. Discussing about the situation and the model on video
  7. Explaining the steps to do when someone offered a cigarette:
    - a) State "no" explicitly, simple and confident posture
    - b) Answer with polished and not overdone.
    - c) Stay performs firm conviction to resist when the offer is stated repeatedly.
    - d) State feelings toward the suppression situation. Stress yourself with the word "I" when expressing feelings.
    - e) Emphasize the good relations of friendship and the importance of friendship than anything. State for help requested negotiations with the emphasis on the situation. Expressing a desire to remain refuse cigarettes.
    - f) If negotiations are not successful, ask questions about the reason for the forced behavior. Ask the reason why should do the smoking behavior.
    - g) Doing other techniques such as humor to divert a stressful situation. Sometimes humor can dilute the atmosphere and make the opponent more relaxed. It can be an opportunity to get well negotiations and stay refusing.
    - h) Providing rational reason about true friendship is not linked to risky behavior such as smoking.
    - i) Providing the right reasons and the real evidence of the bad effects of smoking.
  8. Playing video the way to refuse cigarettes with assertive technique
  9. Invited participants to ask questions or give opinions about video
  10. Providing scenario about the situation offers.
  11. Giving the participants the opportunity to practice on their own for 10 minutes.
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12. Telling the participants to demonstrate the technique refuse cigarettes.
  13. Giving appreciation, support and reinforcement of the techniques that participant sex hibited
  14. Asking the feelings and opinions of participant after the activity.
  15. Summarizing the material
- 

### **Activity 5**

#### **Inspiring seminar**

#### **Expected outcomes**

1. The participants develop the knowledge from the model's experience
2. The participants learn coping from the model
3. The participants have enhancing in awareness o refuse smoking
4. The participants have enhancing in motivation to refuse cigarette

#### **Inspiring seminar**

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Objective	<ol style="list-style-type: none"> <li>1. Developing knowledge from the model's experience</li> <li>2. Learning coping modeling</li> <li>3. Enhancing awareness o refuse smoking</li> <li>4. Enhancing motivation to refuse cigarettes</li> </ol>
Materials	sound system
Time	40 minute
Process	<ol style="list-style-type: none"> <li>1. Describing the activities to be carried out and the objectives</li> <li>2. Describing the mechanism of activity</li> <li>3. Introducing the guest speakers to the participants</li> <li>4. Guest speaker1 (patient chronic illness) shared the experience about cigarette               <ul style="list-style-type: none"> <li>• Process of smoking in first time</li> <li>• The reason to smoke</li> </ul> </li> </ol>

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- The feeling about smoking
  - The benefits and the losses incurred as a smoker
  - The most valuable experience thing that makes the speaker realize and finally quit smoking
  - Messages and motivational from speaker for the participants to avoid cigarettes.
5. Guest speaker2 (junior high school student) shared the experience about cigarette
    - First experience related smoking cigarette
    - How the way to refuse cigarette regarding the experience
    - The benefit of stay smoke free
    - Trick and tips to be stay smoke free and be friend.
    - Messages and motivational from speaker for the participants to avoid cigarettes
  6. Opening question and answering the sessions and opening the discussion between two speakers with participants
  7. Concluding the discussion
- 

## **Activities6**

### **Decision making skill**

#### **Expected outcomes**

1. The participants develop the knowledge and ability of decision making skill in refusing cigarette
2. The participants are able to make decision in difficult situation of cigarette smoking offers



### Decision making skill

Objective	<ol style="list-style-type: none"> <li>1. The participants develop the knowledge and ability of decision making skill in refusing cigarette</li> <li>2. The participants are able to make decision in difficult situation of cigarette smoking offers</li> </ol>
Materials	-
Time	45-60 minutes
Process	<ol style="list-style-type: none"> <li>1. Describing the activities to be carried out and the objectives of the activity</li> <li>2. Asking questions to the participants about decision making, sampling the participant 2-4 person without giving the correct answer.</li> <li>3. Describing the stages of decision-making.               <ol style="list-style-type: none"> <li>a) Identifying possible existing decision</li> <li>b) Identification of the possible consequences that could result from that decision, including the risks and benefits.</li> <li>c) Evaluating the preferred of each consequence</li> <li>d) Identifying possible other things that might happen if such a decision must be made</li> <li>e) Incorporating all information using decision rules, thus identifying the best choice or action</li> </ol> </li> <li>4. Dividing the participants into some groups</li> <li>5. Providing case scenario related cigarette offers situation</li> <li>6. Providing time to the participant to discuss in group and making decision and result</li> <li>7. Discussing the result of discussion.</li> <li>8. Giving appreciation, support and strengthening of the results and decision of the participants</li> <li>9. Summarizing the activity</li> </ol>

## Activity 7

### Project group

#### Expected outcomes

1. The participants develop ability to perform refusal cigarette message
2. The participants increase their confidence to perform refusal cigarette message to the social environment
3. The participants increase the motivation to promote self efficacy in refusing smoking in group.

#### Project group

Objective	<ol style="list-style-type: none"> <li>1. The participants develop ability to perform refusal cigarette message</li> <li>2. The participants increase their confidence to perform refusal cigarette message to the social environment</li> <li>3. The participants increase the motivation to promote self efficacy in refusing smoking in group.</li> </ol>
Materials	-
Time	10-15 minutes
Process	<ol style="list-style-type: none"> <li>1. Describing the activities and the objectives of activity</li> <li>2. Explaining the rules of the group</li> <li>3. Dividing the participants into group with 7 member each group.</li> <li>4. Giving each group a chance to brainstorm and designing a project idea.</li> <li>5. Giving an opportunity for each group to present the group project plan</li> <li>6. Giving feedback and input to respond the idea of a group project</li> <li>7. Providing consultation, support and discussion during the project</li> </ol>

## Activity 8

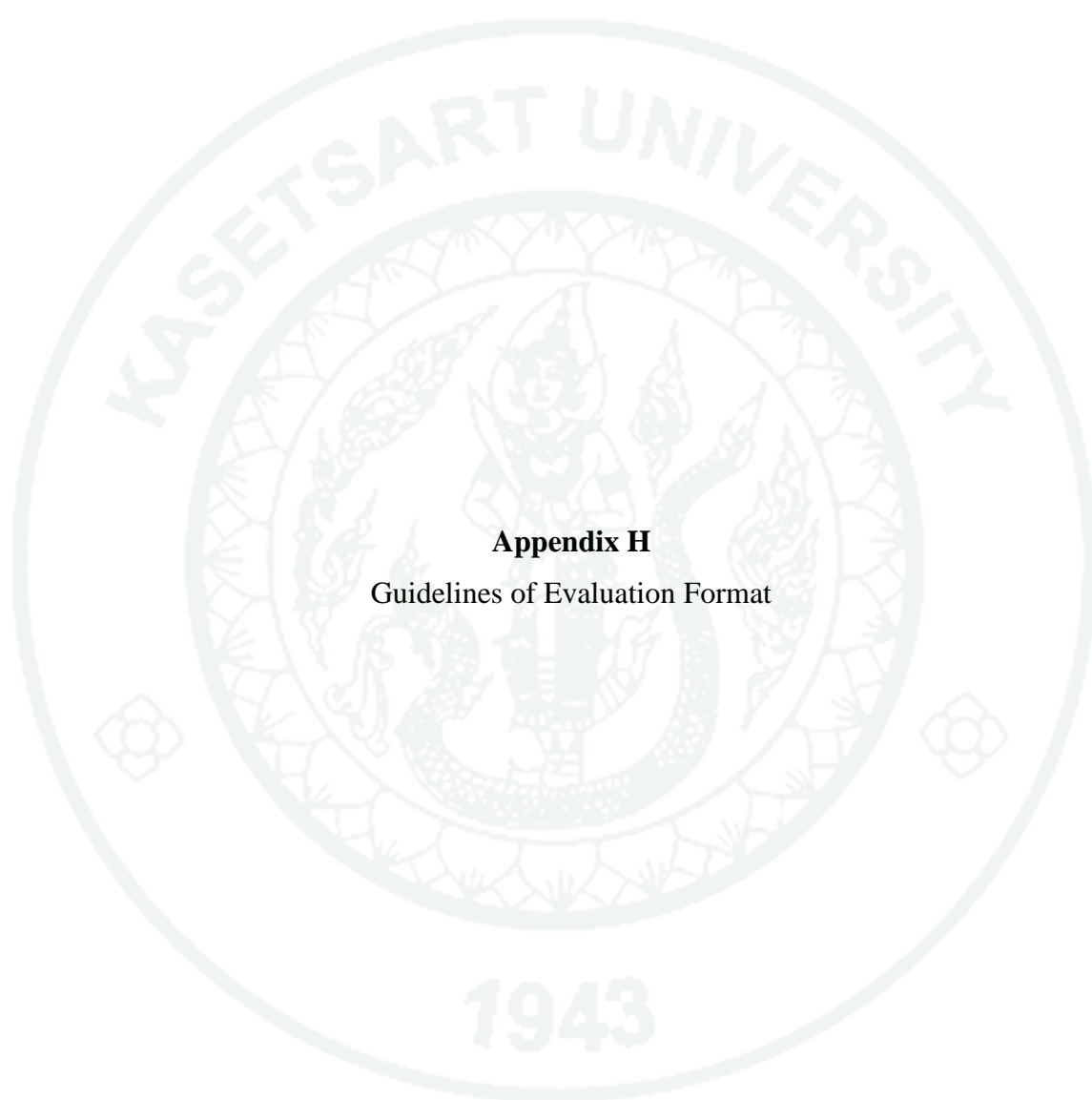
### Appreciation from school

#### Expected outcomes

1. The participants receive a positive feedback to the participant's project activity
2. The participants receive and realize social persuasion on participant's project activity

#### Appreciation from the School

Objective	<ol style="list-style-type: none"> <li>1. Providing positive feedback to the participant's project activity</li> <li>2. Developing social persuasion on participant's project activity</li> </ol>
Materials	Certificates
Time	30 minutes
Process	<ol style="list-style-type: none"> <li>1. Designing activities. Activities run at flag ceremony at school on monday morning</li> <li>2. Coordinating with principals and other school authorities.</li> <li>3. Arranging the presentation of the award as follows:               <ol style="list-style-type: none"> <li>a) The principal reads a brief foreword to the theme of cigarettes, youth and schools.</li> <li>b) Master of ceremonies invites the participant to come to the front podium</li> <li>c) The principal gives a certificate as a symbol of "the courage of the youth in the fight against cigarettes"</li> <li>d) The principal expresses his respect to the participants for their participation and activeness in smoking prevention programs which conducted in the study.</li> </ol> </li> <li>4. Speech principals closed with motivation words to other students to actively resist the influence of cigarette.</li> </ol>



## **Appendix H**

### **Guidelines of Evaluation Format**

## GUIDELINES OF EVALUATION FORMAT

### PART 1. Evaluation Question of Knowledge Related Smoking

1. What is the name of the substance in cigarette smoke that can cause addiction?
  - a) **Nicotine**
  - b) Oxygen
  - c) Tar
  - d) Carbon monoxide
  - e) Carbon Dioxide
2. What is the name of the substance in cigarette smoke that can cause lung cancer?
  - a) Carbon monoxide
  - b) Nicotine
  - c) Oxygen
  - d) **Tar**
  - e) Carbon dioxide
3. Why carbon monoxide in cigarettes is harmful to the human body?
  - a) It can cause addiction
  - b) It can cause vomiting and headache
  - c) It can cause smelly mouth and body
  - d) **It can cause of heart disease**
  - e) Cause coughs and colds
4. What is directly-effect of smoking cigarette?
  - a) **Pulse rate and blood pressure increases.**
  - b) Cough
  - c) Paralyzing of the respiratory tract cleaning equipment and shortness of breath
  - d) Chronic bronchitis disease and respiratory infections, such as colds easily and pneumonia
  - e) Lung cancer, mouth cancer, larynx cancer, bladder cancer, pancreas cancer and kidney cancer.
5. According to the list below are the short-term effect of smoking, except?
  - a) Cough
  - b) Paralyzing of the respiratory tract cleaning equipment and shortness of breath.
  - c) Dizziness and headache.
  - d) **Tear out a lot.**
  - e) Teeth and fingers becomes brown or black.



6. According to the list below are the long-term effect of smoking, except?
  - a) Disruption of lung function potentially within the next few years
  - b) Hair, clothes, body smell like cigarette smoke**
  - c) chronic bronchitis disease and respiratory infections, such as colds easily and pneumonia
  - d) Lung cancer, mouth cancer, larynx cancer, bladder cancer, pancreas cancer and kidney cancer.
  - e) The emergence of the addiction effects and nicotine dependence
7. What is the impact of health problems which caused by smoking in people who do not smoke but inhale cigarette smoke?
  - a) Irritation of the eyes, nose, and throat
  - b) Acute respiratory disorders, chronic cough, chronic ear infections, lung cancer
  - c) Decreased lung function and reduced lung development in children
  - d) Increased risk of coronary heart disease and cancer
  - e) Cigarette addiction and nicotine dependence**
8. Who is meant by passive smokers?
  - a) People who smoke
  - b) Cigarette Seller
  - c) People who are near smokers and inhale cigarette smoke**
  - d) People who do not smoke
  - e) People who used to smoke but already quit smoking
9. Is cigarette smoke harmful if inhaled by pregnant women? Why??
  - a) Not dangerous, because the smoke only harmful to the smokers
  - b) Not dangerous, because smoking delicious and healthy
  - c) Not dangerous, because pregnant women strong
  - d) Dangerous, because the smoke inhaled can cause health problems for pregnant women and the baby**
  - e) Dangerous, because pregnant women can be addicted to cigarettes
10. Why family members who smoke at home could jeopardize other family members?
  - a) Because family members were inside the house come inhaling smoke which are harmful to health**
  - b) Because it can burn home
  - c) Because other family members will feel happy
  - d) Because it can lead to fights
  - e) Because make other family members stomachache

## PART II. Questions Related Smoking Attitudes

Direction: Please tick check (✓) on one the most appropriate column according to your understanding

Explanation of the description:

**Strongly agree** means you absolutely have the same opinion with that item

**Agree** means you have the same opinion with that item

**Not sure** means you doubt with the item

**Disagree** means you have different opinion with that item

**Strongly Disagree** means you absolutely have different opinion with that item

No	Question	Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1.	Smoking can help me to reduce stress and to solve my problem.					
2.	Smoking makes me fresh; therefore, it is worth to spend money for cigarette					
3.	Smoking represents the adulthood, maturity and independency.					
4.	Smoking makes people have interesting personality					
5.	Smoking helps people get involved with friends and society.					
6.	Smoking is the right of every person who cannot be contested by others.					
7.	Smoking makes me easier to concentrate and think.					
8.	Smoking with friends is a symbol of friendship that is unparalleled.					
9.	Smoking makes a male more attractive and famous in the eyes of female.					
10.	Smoking makes me confident					
11.	Smoking makes me alert all the times					
12.	Smoking can encourage the creativity					

### PART III. Checklist of Decision Making Step

Direction:

Please tick check (✓) regarding to the group discussion result

No	Step	Do	Not Do
1	Identifying possible existing decisions.		
2	Identifying possible consequences that could result from that decision, including the risks and benefits.		
3	Evaluating the preferred consequence.		
4	Identifying other possible things that might happen if such a decision must be made.		
5	Incorporating all information using decision rules, thus identifying the best choice or action.		

### PART IV. Questions Related Stress Management for Teenagers

Direction:

Please mention the strategies to reduce stress and create positive mood

1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	

### PART V. Checklist of Assertive Communication and Refusal Skill Technique

Direction: Please tick check (✓) regarding to performance of group' role play

No	Technique	Do Appropriate	Do Not appropriate	Not do
1	Say "no" explicitly, simply and confidently.			
2	Give a polished answer and not exaggerating.			
3	Show firm conviction to resist when the offer is stated repeatedly.			
4	State feelings toward the suppression situation. Stress yourself with the word "I" when expressing feelings.			

5	Emphasize the good relations of friendship and the importance of friendship more than anything. State for help requested negotiations with the emphasis on the situation. Express a desire to remain refusing cigarettes.			
6	Ask questions about the reason for the forced behavior. Ask the reason why you should do the smoking behavior.			
7	Do other techniques : make some humor			
8	Provide rational reasons about true friendship are not linked to smoking			
9	Provide the right reasons and the real evidence of the bad effects of smoking.			

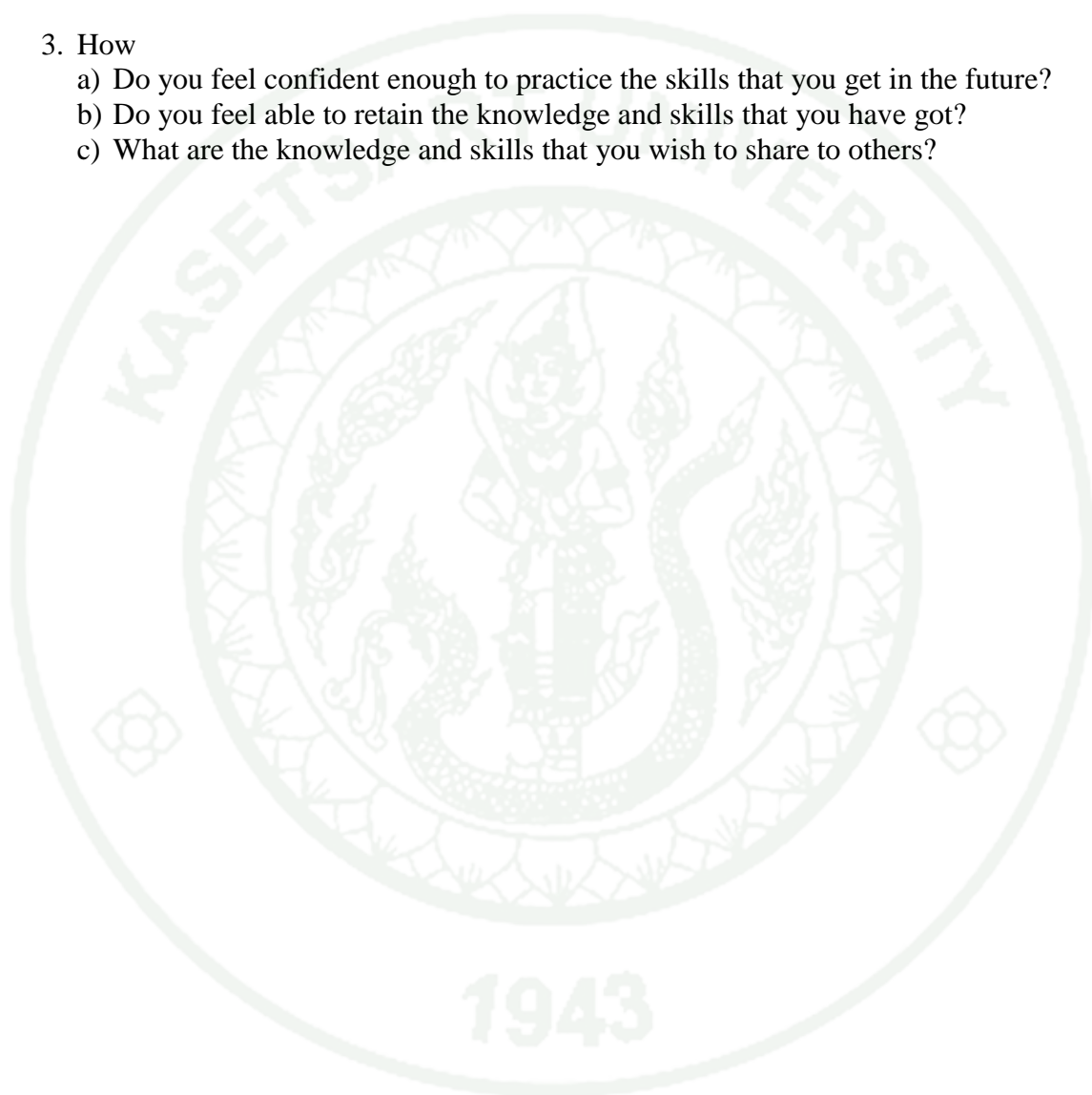
## PART VI. Questions for Guiding Self-Reflection

Direction:

Please answer the following question according to your opinion.  
Please take time and think carefully to answer each question

1. What?
  - a) What is experienced in a series of activities?
  - b) What is observed during a series of activity taking place?
  - c) What is the underlying problem of the series of activities?
  - d) What is the result of the series of activities?
  - e) What are the important things that are interesting from a series of activities?
  - f) What are the important things to keep in mind?
  - g) What is perceived as the important things?
2. So What
  - a) Individuals
    - Did you learn a new skill?
    - Did you find something shocking and completely new?
    - What is the experience that you feel in accordance with the expectations?
    - What things giving a deep impression on you?
    - What do you feel about the experience?
    - What bad experience do you feel from the activity?
    - What is the most memorable experience did you feel?

- b) When you work in group:
  - Whether all members of the group work well together?
  - In what ways are the members of the group can cooperate well?
  - Whether the group made a fair decision?
  - What suggestions do you have for the group?
  - Do you think, whether the results obtained by the group have been optimal?
- 3. How
  - a) Do you feel confident enough to practice the skills that you get in the future?
  - b) Do you feel able to retain the knowledge and skills that you have got?
  - c) What are the knowledge and skills that you wish to share to others?







## Appendix I

Item analysis of questionnaires

**Appendix Table I1** Reliability statistic of smoking self-efficacy scale and BDI-II Indonesia version

	N	%	Cronbach's Alpha	N of item
Case valid smoking self-efficacy scale	30	100	.912	34
Case valid self-efficacy emotion subscale	30	100	.808	9
Case valid self-efficacy friend influence subscale	30	100	.811	9
Case valid self-efficacy social opportunity subscale	30	100	.791	11
Case valid BDI-II Indonesia version	30	100	.918	21

**Appendix Table I2** Independent sample t-test of self-efficacy in refuse smoking between group before intervention

		Levene's test for Equality of Variance		t-test for Equality of Means						
				95 % Confidence Interval of the Differences						
		F	Sig.	t	Df	Sig (2- tailed)	Mean difference	Std. Error difference	Lower	Upper
Self-efficacy total	Equal variance assumed	34.893	.000	-8.188	98	.001	-17.460	2.132	-21.692	-13.228
	Equal variance not assumed			-8.188	59.497	.001	-17.460	2.132	-21.692	-13.194
Self-efficacy emotion subscale	Equal variance assumed	32.254	.864	1.362	102	.176	1.381	1.014	-.630	3.392
	Equal variance not assumed			1.408	61.676	.164	1.381	.981	-.580	3.341
Self-efficacy friend influence subscale	Equal variance assumed	21.853	.002	-.546	102	.586	-.527	.965	-2.442	1.388
	Equal variance not assumed			-.565	62.350	.574	-.572	.934	-2.395	1.340
Self-efficacy social opportunity subscale	Equal variance assumed	24.101	.000	-2.645	102	.009	-3.088	1.168	-5.404	-.772
	Equal variance not assumed			-2.734	61.734	.008	-3.088	1.129	-5.346	-.830

**Appendix Table I3** Independent sample t-test of self-efficacy in refuse smoking between group after intervention

		Levene's test for Equality of Variance		t-test for Equality of Means						
				95 % Confidence Interval of the Differences						
		F	Sig.	t	Df	Sig (2- tailed)	Mean difference	Std. Error difference	Lower	Upper
Self-efficacy total	Equal variance assumed	1.421	.238	18.479	98	.001	51.640	2.796	46.091	57.189
	Equal variance not assumed			18.479	93.724	.001	51.640	2.796	46.088	57.192
Self-efficacy emotion subscale	Equal variance assumed	2.250	.137	14.294	102	.001	17.734	1.241	15.273	20.195
	Equal variance not assumed			14.527	91.213	.001	17.734	1.221	15.309	20.159
Self-efficacy friend influence subscale	Equal variance assumed	.915	.341	13.069	102	.001	17.577	1.345	14.909	20.245
	Equal variance not assumed			13.153	101.192	.001	17.577	1.336	14.926	20.228
Self-efficacy social opportunity subscale	Equal variance assumed	6.625	.011	14.921	102	.001	20.636	1.383	17.892	23.379
	Equal variance not assumed			15.301	75.858	.001	20.636	1.349	17.949	23.322

**Appendix Table I4** Dependent sample test of self-efficacy in refuse smoking of intervention group

		Paired Differences					t	Df	Sig (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95 % Confidence Interval of the Differences				
					Lower	Upper			
Pair 1	Self-efficacy before-after	-79.660	15.828	2.238	-84.158	-75.162	35.558	49	.001
Pair 2	Self-efficacy emotion subscale before-after	-19.020	5.239	.741	-20.509	-17.531	-25.671	49	.001
Pair 3	Self-efficacy friend influence subscale before-after	-20.660	6.681	.945	-22.559	-18.761	-21.866	49	.001
Pair 4	Self-efficacy social opportunity subscale before-after	-27.520	4.306	.609	-28.744	-26.296	-45.193	49	.001

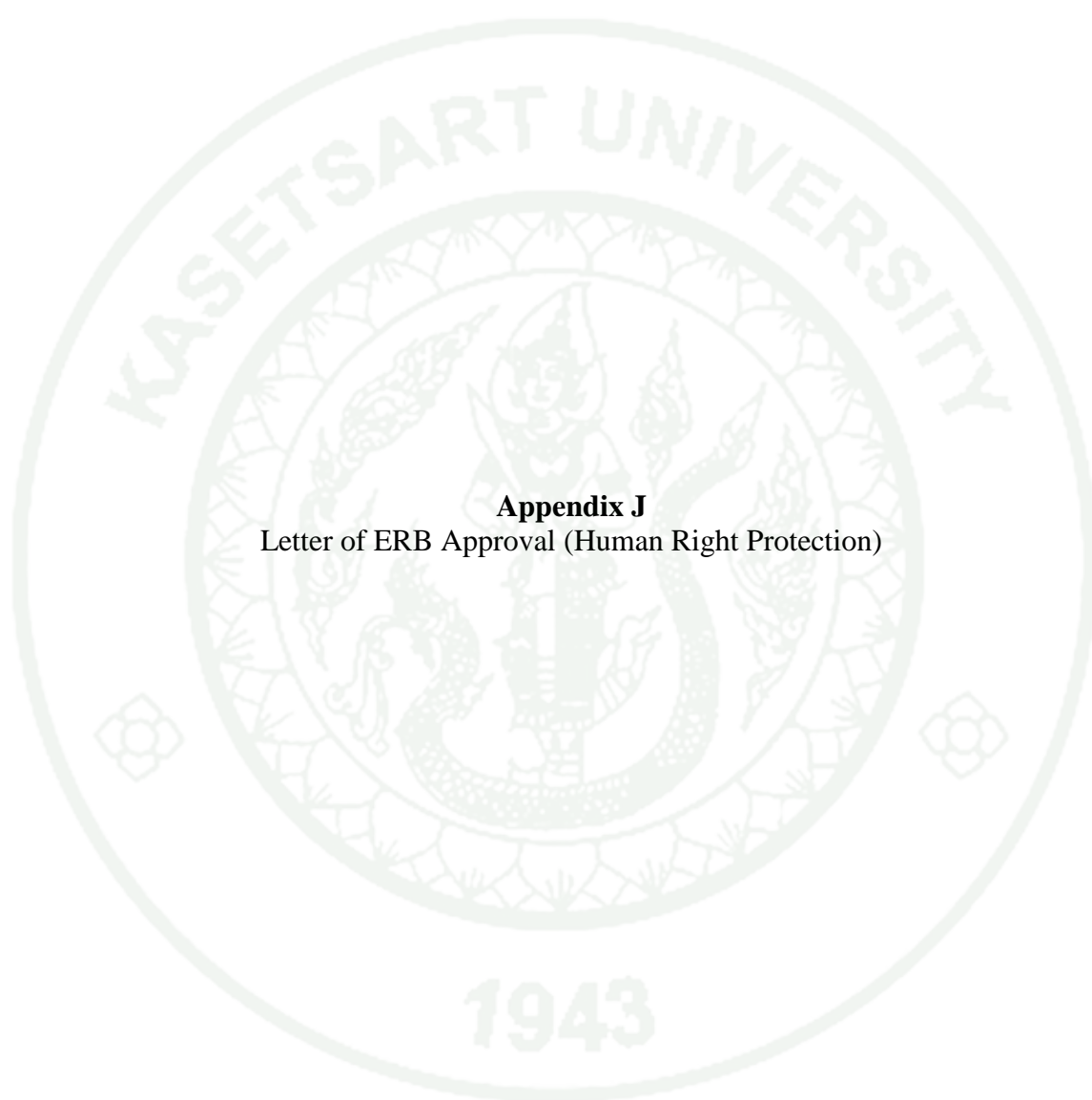


**Appendix Table I5** Dependent sample test of self-efficacy in refuse smoking of comparison group

		Paired Differences							
					95 % Confidence Interval of the Differences		t	Df	Sig (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Self-efficacy before-after	-10.640	6.636	.938	-12.526	-8.754	-11.338	49	.001
Pair 2	Self-efficacy emotion subscale before-after	-2.880	3.651	.516	-3.918	-1.842	-5.577	49	.001
Pair 3	Self-efficacy friend influence subscale before-after	-2.760	3.701	.523	-3.812	-1.708	-5.273	49	.001
Pair 4	Self-efficacy social opportunity subscale before-after	-4.100	3.327	.471	-5.046	-3.154	-8.713	49	.001

**Appendix Table I6** Dependent sample test of knowledge related smoking of intervention group

		Paired Differences					t	Df	Sig (2-tailed)
		95 % Confidence Interval of the Differences							
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Knowledge related smoking	-2.900	.763	.108	-3.117	-2.683	-26.888	49	.001



**Appendix J**  
Letter of ERB Approval (Human Right Protection)



COA No. 44 / 2014

## ETHICAL REVIEW BOARD

Baromrajonnani College of Nursing Nopparat Vajira

681 Ramintra Road, Khannayao, Bangkok 10230, Thailand, Tel. 02-540-6500 ext 222

Certificate of Approval The Institutional Review Board of the Baromrajonnani College of Nursing Nopparat Vajira 681 Ramintra Road, Khannayao, Bangkok Thailand, has approved the following study which is to be carried out in compliance with the international guidelines for human research protection as Declaration of Helsinki, The Belmont Report.

**Study Title:** Effect of The Self-Efficacy Program on Smoking Prevention Among Junior High School in Bengkulu city, Bengkulu Province, Indonesia

**Study Center:** Indonesia

**Principal Investigator:** Ms. Tita Septi Handayani

**Document Reviewed:**

1. Principal Investigator (PI)
2. Proposal Version 1
3. Patient Information Sheet Version 3

The principal investigator (PI) must report the status of the project and apply for the continued approval annually before the anniversary date of approval through out study period

Signature.....

(BENJAMAS SRIKAMONSATHAN)

Chairperson of Ethical Review Board

Signature.....

(NITTIYA NOYSOORN)

Secretary of Ethical Review Board

Date of Approval: 18 July 2014

Approval Expire Date: 17 July 2015

## CURRICULUM VITAE

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