

The Effectiveness of Tobacco Prevention & Cessation Programs: A Focused-Analysis of
the Virginia Tobacco Settlement Foundation Programs

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The Effectiveness of Tobacco Prevention

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(ABSTRACT)

The purpose of this research was to determine if one program funded by the Virginia Tobacco Settlement Foundation produces a more effective result in increasing student knowledge about the harmful effects of tobacco use than another program. Of particular interest is whether there is a difference in effectiveness based on the environment or settings in which these programs are presented. According to the CDC (2006), approximately 4,000 people between the ages of 12 to 17 will initiate smoking. In Virginia, a tobacco-growing state, there are 88,500 high school smokers. The health costs to Virginia are approximately 2.08 billion dollars per year with an estimated cost of 2.42 billion (Campaign for Tobacco-free Kids, n.d.). By providing the VTSF an analysis of their programs, they will be better equipped at making an informed decision on which programs to support financially. The research questions that were posed are: 1) is there a difference between school-based programs, faith-based programs, and community-based programs in increasing knowledge about tobacco's harmful effects? 2) is there a difference between programs in increasing knowledge and the location in which they are presented, urban versus rural?, and 3) is there a difference between programs implemented in middle schools in increasing knowledge about tobacco?

From the focused analysis, the following conclusions can be drawn: 1) given the current evaluation and reporting process of the VTSF, no determination of whether there is a difference between program settings in increasing knowledge can be made, 2) in addition, no determination can be made in regards to whether there is a difference in increasing knowledge in regards to

program location-urban versus rural, and 3) no conclusion can be drawn about middle school program effectiveness. What one can conclude is that the evaluation process used by the VTSPF needs to be reformed so that a more consistent method is utilized by all parties so that a comparison can be made about the effectiveness of implemented programs. Also, long-term studies on programs need to be conducted since there are so few available. Studies to determine whether knowledge acquisition actually translates into behavior change also need to be performed. The key to tobacco prevention and cessation must be a multi-faceted approach. Educational programs, anti-tobacco media messages, tobacco taxation, and restriction of tobacco sales are all important in the prevention of tobacco use by the youth of Virginia. Each plays an important piece to the puzzle.

DEDICATION

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CHAPTER I

INTRODUCTION

The use of tobacco products by adolescents is still relatively high in spite of anti-tobacco advertising, tobacco prevention education, and tobacco-free policies. According to the 2005 Youth Risk Behavior Survey, the percentage of students that smoked in the past month increased to 23% up from the 21.9% for 2003 (Centers for Disease Control & Prevention, *YRBSS*, n.d.). In the United States, approximately 4,000 people between the ages of 12 to 17 will initiate smoking. Of those, over 1100 will be daily cigarette smokers (CDC, 2006).

In addition, other tobacco products are still being used at percentages that are too high. For cigar use, 18% of male high school students are current cigar smokers, and 5% of all middle school students are cigar smokers. For smokeless tobacco use, approximately 10% of high school males are users and 4% of males in middle school are current users (CDC, 2006).

In Virginia, there are approximately 88,500 high school students that smoke. A massive 18 million packs of cigarettes are purchased or smoked by kids each year. It is estimated that over a 150,000 kids under age 18 will eventually die due to premature smoking. Health costs in Virginia, due to smoking, are approximately 2.08 billion dollars per year with an estimated cost of 2.42 billion of smoking-caused productivity losses in the state (Campaign for Tobacco-free Kids, n.d.).

Reasons for adolescent tobacco use have been the subject of numerous studies. Peer pressure, parental tobacco use, low self-esteem, low school achievement, and low socioeconomic status have all been mentioned as potential contributing factors. Several

studies have also indicated that tobacco use can lead to other risky health behaviors such as alcohol use and illicit drug use. Because of these factors, attempts to limit tobacco use should be continued. In addition, one of *Healthy People 2010*'s goals is to reduce the prevalence of use of any tobacco product to less than or equal to 21% and the current cigarette use among high school students to less than or equal to 16% (CDC, n.d.).

On November 23, 1998, Virginia was one of 45 states, along with Puerto Rico, the U.S. Virgin Islands, the Northern Mariana Islands, Guam, American Samoa, and the District of Columbia that signed an agreement with the five largest tobacco manufacturers-Brown & Williamson Tobacco Corporation, Phillip Morris Incorporated, R. J. Reynolds Tobacco Company, Commonwealth Tobacco, Lorillard Tobacco Company, and Liggett & Myers. Based on this agreement, five components were addressed: public health/youth access, changing corporate culture, enforcement, attorney fees, and financial provisions. In accordance with the settlement, tobacco companies would prohibit targeting of youth in advertising by 1) banning cartoon characters in advertising, 2) restrict brand-name sponsorship of events for youth, 3) ban outdoor advertising, 4) ban youth access to free samples, and 5) setting a minimum cigarette pack at 20. In addition, the tobacco giants would contribute \$250 million over the next 10 years to a national foundation and \$1.45 billion to a public education fund. The industry is also required to reduce youth access and consumption of tobacco products (National Conference of State Legislatures, n.d.).

In response to the Master Settlement Agreement (MSA), in 1999, the General Assembly of Virginia created the Virginia Tobacco Settlement Foundation and allocated 10% of the MSA monies to go to the VTSF. Virginia is expected to receive \$4 billion

dollars from the MSA and the VTSF is charged with leading the way in preventing the youth of Virginia from engaging in tobacco use. According to Section 32.1-355 of the Code of Virginia,

The Foundation is established for the purposes of determining the appropriate recipients of moneys...to assist in financing efforts to restrict the use of tobacco products by minors through such means as educational and awareness programs on the health effects of tobacco use on minors and enforcement of laws restricting the distribution of tobacco products to minors (Virginia Tobacco Settlement Foundation History, n.d.).

The VTSF has 16 programs listed in their Compendium Programs. These programs have been recognized organizations both on the national level and state level as effective tobacco prevention programs. These programs can be utilized by schools, community organizations, or faith-based organizations and includes information on tobacco prevention and cessation and can be targeted for audiences from ages 5-18 depending on the program selected (Virginia Tobacco Settlement Foundation Compendium of Programs, n.d.). Although these programs have been evaluated at various levels, their impact on Virginia youth has yet to be analyzed. A closer examination of these programs and venues will serve the state well.

Statement of the Problem

A reduction in the use of tobacco products by adolescents will not only add years of life to these individuals but also alleviate some of the financial burden incurred by the state of Virginia for medical costs and productivity losses. If the VTSF is to be successful in fulfilling its charge, the Compendium Programs must be deemed valuable.

Most program evaluations have only examined the program itself. Few evaluations have examined whether or not the location of program implementation, rural versus urban, and faith/community versus school have had an effect on the acquisition of knowledge. A focused analysis of these aspects may yield a program that may be superior in reducing tobacco use in the youth of Virginians.

Purpose

The purpose of this study was to determine if one program funded by the Virginia Tobacco Settlement Foundation produces a more effective result than another program in increasing student knowledge about the harmful effects of tobacco use.

Research Questions

1. Is there a difference between school-based programs, faith-based programs, and community-based programs in increasing knowledge about tobacco's harmful effects?
2. Is there a difference between programs in increasing knowledge and the location in which they are presented, urban versus rural?
3. Is there a difference between programs implemented in middle schools in increasing knowledge about tobacco?

Significance of the Study

This study will furnish the Virginia Tobacco Settlement Foundation with essential information regarding their Compendium Programs. With this additional analyses, the VTSF can make a more informed decision on what programs it will support financially, thus potentially spending the millions of dollars it has received much more wisely based on research-driven data.

Definition of Terms

1. Adolescent-a youth between the ages of 12-18.
2. ATOD-alcohol, tobacco, and other drugs.
3. Attitude (towards smoking)- the degree of favorable evaluation or appraisal of smoking.
3. Current smoker- one who has smoked within the past 30 days.
4. Experimental smoker-smoked more than once in 30 days but did not smoke every day.
5. Excessive cigarette use-smoking more than 1 pack of cigarettes per day.
6. Fidelity-using the full curriculum and adhering to the lesson as written.
7. Intervention-according to the CDC, an intervention is a policy or service that is intended to change behavior or the environment.
8. Program-according to the CDC, a program can mean a comprehensive effort that involves multiple components or the organization responsible for these efforts.
9. Self-efficacy- refers to the youth's confidence in their ability to become and/or stay nonsmokers and in their confidence that they could refuse a cigarette when one is offered.

Limitations of this Study

The limitations of this research are: 1) that this study focuses only on students in Virginia; hence this may limit generalizing to other states. Others conducted the evaluations so this limits design, proper implementation, and analysis; 2) the evaluations are based on a non-experimental design with no random assignment or control group, and 3) since many students may realize that they will be tested/re-tested, a regression towards the mean could occur as well as the Hawthorne effect and maturation.

CHAPTER II

REVIEW OF THE LITERATURE

The 2005 National Youth Behavior Survey conducted by the Center for Disease Control and Prevention, found that the percentage of 9th through 12th graders that used tobacco products in 2005, increased to 23%, which is up from the 21% reported in 2003. If youth can be prevented from starting to use tobacco products, it is likely that they will remain tobacco free through adulthood since 80% of all smokers had their first cigarette before the age of 18 and 90% of all smokers initiated smoking before reaching the age of 20 according to Mowery et al. (as cited in Muilenburg, Johnson, Annang, & Strasser, 2006). In fact, the study by Mowery et al., revealed that approximately one third of all smokers began smoking before the age of 14 (as cited by Muilenburg et al, 2006).

“Cigarette smoke has many harmful effects and may lead to premature death especially when exposure begins in adolescence and continues into adulthood for many years” (Muilenburg et al., 2006, p. 195). Finding the appropriate mechanism for prevention has been challenging. Because individuals are motivated to begin risky behaviors based on a multitude of reasons, prevention and cessation programs targeted for youth and adolescents must encompass several factors.

For the purpose of this study, the review of literature has been divided into subsections that focus on the pertinent research of this study. The sections are:

1. Theoretical framework for programs
2. Stages of smoking
3. Community-based programs
4. Faith-based programs

5. School-based programs in middle school
6. Rural program implementation versus urban program implementation
7. VTSF Compendium programs
8. Supplemental programs
9. Long term effects

Theoretical Framework

A program that has been effective in one school district will not necessarily be useful in all school districts. To improve the probability of success, a close match is required between the theoretical change processes that serve as the foundation of the prevention program or intervention and the needs of the target population (Sobeck et al. 2006). “Without a clear theory to guide interventions, we have very little information about the success of the treatment” (Andersen & Keller, 2002, p.285).

Several programs for tobacco prevention and cessation are based on Bandura’s social learning theory. This theory describes how individuals study and mimic the behaviors and attitudes of others. The idea that others will imitate actions modeled by those they admire is the basis for much of modern advertising as well as behavior modification programs (Lawrence, Graber, Mills, Meissner, & Warnecke, 2003). “This theoretical perspective has informed smoking cessation programs where highly respected members of ethnic communities or subcultures model behaviors or reinforce such behaviors in others through rewards or positive feedbacks” (Lawrence et. al, 2003, p. 207).

Another study conducted by Jason, Pokoryn, Sanem, and Adams (2006), suggests that Bandura’s theory is the framework for why fewer youth will be encouraged to

participate in using tobacco products if there is reduced exposure to smoking in public, particularly among their peers. The theory of social modeling provides an interpretation for the fact that as the prevalence of smoking in older students at a school increases, it is likely that smoking would seem within acceptable limits (Cleveland & Wiebe; Unger & Rohrbach; Ennet et al.; as cited by Leatherdale, Cameron, Brown, & McDonald, 2005), the popularity or social prestige associated with being a smoker would increase (Alexander et al., as cited by Leatherdale, et al., 2005). “These desirable outcomes being modeled by older smokers make a younger nonsmoking student more apt to experiment with smoking” (Leatherdale, et al., 2005, p. 856). Jackson and Henriksen’s study (as cited by Lewis, Harrell, Bradley, & Deng, 2001) found “that parental modeling of smoking increased the risk of early onset of experimental smoking for third and fifth graders, as well as increasing the perception of easy access to cigarettes and increasing the risk of intending to smoke in the future” (p.29).

The Self-efficacy Theory of behavior change originates from the Bandura’s Social Learning Theory. This theory emphasizes that human behavior is affected by efficacy expectation and outcome expectation (Chen & Yeh, 2006; Ellickson, McCaffrey, Ghosh-Dastidar, & Longshore, 2003). Efficacy expectation is self-confidence in how an individual interprets his or her own ability to perform a particular behavior. It is how a person determines how to handle a troublesome situation. If an individual is lacking in efficacy expectation or self-efficacy; frustration, fear, and doubt will no doubt take over (Chen & Yeh, 2006). The study by Garcia et al. (as cited by Chen & Yeh, 2006), stated that individuals with the necessary means to overcome the temptation to use tobacco will have higher self-efficacy and less tobacco use.

Jessor's Problem-behavior Theory has also been used to explain the concurrence of risky behaviors. This theory suggests that a single common factor contributes to the coexistence of multiple risky behaviors, including sexual intercourse, alcohol use, and delinquency (Botvin & Kantor, 2000; Camenga, Klein, & Roy, 2006). Basically, smoking along with other troublesome behaviors may coexist because they stem from a shared underlying source, such as having a risk-taking or rebellious personality (Conrad, Flay, & Hill as cited by Ellickson, Tucker, & Kelin, 2001). "Smoking may be accompanied by other behaviors because they serve a common purpose, such as conveying an image of toughness or maturity to one's peers" (Aloise-Young, Hennigan, & Graham; Leary, Tchividjian, & Kraxberger as cited by Ellickson et al., 2001, p. 465).

According to the Problem-behavior Theory (PBT), individual programs are not indicated to combat every behavioral problem. Instead, a program that addresses the core of these problems should be effective for numerous behaviors. "In fact, programs that enhance social and personal competence skills have demonstrated effectiveness for the prevention of drug abuse, depression, delinquency, and aggression among adolescents" (Nichols, Graber, Brooks-Gunn, & Botvin, 2006, p. 227).

The Transtheoretical Model (TM), developed by Prochaska and DiClemente in the early 1980's, was created from psychotherapeutic smoking-cessation research. "Transtheoretical means that multiple theories have been combined for application to similar change processes across populations dealing with various problem behaviors including smoking, psychological distress, exercise, and obesity" (Prochaska & DiClemente as cited by Andersen & Keller, 2002, p.283). This theory was once thought

to be linear but now the stages are thought to be components of a cyclical process that varies for each person (Colorado State University, n.d.).

One of the constructs of the Transtheoretical Model is the Stage of Change. The stage represents a temporal facet that provides a means to understand when a difference in attitude towards a problem behavior occurs (Andersen & Keller, 2002). The specific stages of TM are: precontemplation, contemplation, preparation, action, and maintenance. Hollister and Anema (2004) included an additional sixth stage-termination.

Another key construct is the process of change, which provides a means of understanding how changes occur according to Prochaska and DiClemente (as cited by Andersen & Keller, 2002). There are five behavioral and five cognitive processes totaling 10 processes of change. All 10 processes are used to various extents as individuals move through the stages of change. The link between the stage and each process of change varies per stage (Andersen & Keller, 2002).

Often, a disparity occurs between the stage and treatment. This has been shown to produce an unsuccessful change. Accurately determining which stage a person is in will greatly assist in developing interventions that are appropriate for that individual (Hollister & Anema, 2004).

The Health Belief Model has also been synthesized into tobacco curricula. This theory centers on cognitive factors that motivate healthy behaviors (Ellickson et al., 2003). The Health Belief model (HBM) attempts to not only describe but to predict health behaviors using the attitudes and beliefs toward disease, especially apparent barriers, perceived profit, and perceived susceptibility (Colorado State University, n.d.).

The HBM is a staged theory with each step in the decision-making process dependent on the previous decision or belief.

According to this theory, an individual must believe that he/she is susceptible to a condition; the condition is serious; there is a successful intervention for the condition; and can overcome all the barriers to using the intervention. Each step is dependent on the previous belief (Holliser & Anema, 2004, p. 2).

Additionally, social ecology has also been introduced as a theoretical framework for addressing the trend of early tobacco use. Based on work by Green, Stokols, Corbett, and Levesque (as cited by Corbett, 2001), this theory comprises a scalar framework of levels of authority, not only on the beginning of tobacco use, addiction, and maintenance; but it is also helpful for developing prevention programs. The social ecology theory acknowledges that environmental cues, cultural norms, and infrastructural constraints are crucial for intervention. These social forces can make the beginning of tobacco use not only possible but normative for many youth.

The work by Orleans and Cummings (as cited by Corbett, 2001) revealed the following:

Social ecology suggests that ‘upstream’ action at the community of population level-controlling the industry, reducing positive marketing images associated with access, increasing the price of tobacco products, and reducing population-wide rates of use-is likely to have a larger, systemic effect for the prevention dollar than ‘downstream’ approaches directed at specific individuals (p. 104).

The social ecology approach can supply an overarching structure for approaches that by themselves would under value the importance of political, economic, and

sociocultural factors to tobacco use by youth. Within this approach, prevention focuses on the individual, the group and network, organizations, the community, and the population (Corbett, 2001).

The Theory of Reasoned Action links the person's attitudes, beliefs, and intentions (Colorado State University, n.d.). This theory aids in clarifying an individual's perceptions of normal and expected behavior. The person's intent to execute an action is the most relevant predictor of carrying out the action. The theory seems to be most useful in predicting behaviors that are entirely within the individual's control and in which intentions remain steady. When faced with an unexpected barrier, a person might alter his or her intentions and fail to carry out the originally intended behavior. One more limitation of this theory is that intentions must be coordinated very closely to the behavior to have predictive power (Hollister & Anema, 2004).

Based on Azjen's work (as cited by Harakeh, Scholte, Vermulst, de Vries, & Engels, 2004), the Theory of Planned Behavior is intended to predict and describe human behavior in specific contexts. In regards to smoking and tobacco use, this theory postulates that smoking-related cognitions predict intention to start smoking, and the intention in its turn predict actual smoking onset. (Harakeh et al., 2004).

The Elaboration Likelihood Model was developed by Petty and Cacioppo as an influential theory. This model focuses on the premise that there are two basic paths or routes that affect a change in attitude. These paths are the peripheral route and the central route. The central route requires message elaboration. The message must contain all necessary information and be very specific (Ross, n.d.). The change stemming from the central route tends to be more resistant to counter-argument and is relatively permanent

since the individuals tend to be highly motivated. Whereas, the peripheral route tends to be less stable than the central route since individuals are less motivated (Colorado State University, n.d.). One tends to make quick decisions based on cues that he or she already feels positively towards (Ross, n.d.).

Further studies have shown that prevention curricula have used the “theoretical premise that substance abuse prevention is best achieved through a holistic approach to health promotion in which the full range of health issues is integrated and each year’s lessons build on those of earlier years” (Sobeck, Abbey, & Agius, 2006, p. 81). Other theories that are mentioned include the sensation-seeking theory that is characterized by seeking novel or extreme experiences and has been used to describe adolescents who engage in several risky behaviors. The consistency theory discussed in Towberman and McDonald’s research (as cited by Thorton, Douglas, & Houghton, 1999) contends that adolescents only partake in behaviors that are consistent with their self-concept and rebuff behaviors that are unrelated. The containment theory, as discussed by Reckless and cited by Thorton et al. (1999), has also been used to explain the relationship between adolescent substance use and self-concept. The significant aspect here is that behavior can be understood as a response of either conformance to, or rejection of, external control agents or development of adherence to one’s own internal control (Thorton et al., 1999). The gateway behavior theory explains multiple substance use by describing a succession of use. An individual may begin using tobacco and alcohol, proceed to marijuana and then to more illicit drugs (Camenga et al., 2006). Flay, Hu, and Richardson’s work (as cited by Leatherdale, Cameron, Brown, Jolin, & Kroeker, 2006) discussed the theory of triadic influence (TTI). This theory proposes that components from three separate levels

of context can influence the onset of tobacco use. The first level is specific characteristics of the individual such as gender or age. The second level is the social environment encompassing the person for example, family and friends. The third level is also environmental but on a much broader basis. The school community would be included in this level (Leatherdale et al., 2006).

Stages of Tobacco Use

In Flay's study (as cited by Tye, et al., 2004), he found that the use of tobacco products progresses through a series of stages from receptivity of smoking to dependence on tobacco. Since a transition through one stage of tobacco use must precede a transition to the next, and because this can often take an extended period of time, from months to years, it is paramount that these transitions be examined (Bricker, et al. , 2006). "The uptake of cigarette smoking by an individual has been shown to be the first stage in a process of transition through a number of stages before becoming a regular smoker" (Thornton et al., 1999, p. 285). The stages go from not thinking about smoking, to beginning to think about smoking initiation, experimenting, then regular smoking, and finally established daily smoking (Baade & Stanton, 2006). "This initiation contemplation ladder has been used to investigate where students are at in their contemplation of smoking, and the determinants of that contemplation" (Baade & Stanton, 2006, p. 144).

The Centers for Disease Control and Prevention, in their guide *Youth Tobacco Cessation: A Guide for Making Informed Decisions* developed by Milton et al. (2004), listed five stages in which an individual moves towards addiction. These stages are 1) the preparatory stage is where the person's beliefs, knowledge, and expectations about

tobacco are developed; 2) the initial or trying stage is when the individual first tries tobacco; 3) the experimentation stage is when the individual may repeat use during specific situations, although the use is normally irregular; 4) regular use is when the individual develops a pattern of use; 5) addiction is when there is a need for the nicotine in the tobacco and use is often daily. During the regular use stage, a youth may not be using daily but only on weekends.

Based on the study of 12th graders completed by Bricker et al. (2006), 66% of the participants had made the first transition, 56% had made the second transition from having tried to smoking monthly, and 69% had made the third transition from monthly to daily smoker.

Additional studies have altered this sequence or stages to fit the needs of their research. Thornton et al. (1999) cites the work of Rowe, Chassin, Presson, et al. discussing the transition-based epidemic model. This model later was coined as the contagion model, in which smoking behavior moves through four stages: nonsmoker, trier, regular, and former stage. In the nonsmoker stage, this includes youth that are immune to experimentation and those that are susceptible, but have not yet experimented with tobacco. The trier stage, also known as the exposed stage, consists of individuals who have smoked a few cigarettes but were not yet established smokers. The regular smoker stage is also known as the infected group. The former stage is made up of adolescents that were former smokers but had quit using tobacco products (Thornton et al, 1999). “All forms of self-concept except peer appeared to decrease as the participants initiated smoking, and all forms of self-concept appeared to increase upon quitting the habit” (Thornton et al, 1999, p. 288).

The findings based on the contagion model and Thorton et al.'s research has key implications for education.

First, campaigns most likely need to be two-tiered in their approach to adolescent smoking: incorporating cessation programs and prevention programs. Cessation programs need to be aimed at encouraging past smokers to retain their former smoking status, as well as to motivate regular smokers to quit, while prevention programs need to include adolescents, not just adults; otherwise, the health programs will have diminished effectiveness (Thorton et al., 1999, p. 288).

The application of the transtheoretical model to substance use prevention is discussed by Stern, Prochaska, Velicer, & Elder (as cited by Johnson, Evers, Paiva, et al., 2006). From the TTM came the development and examination of the Stages of Acquisition, which differentiate individuals' intentions to start a risky behavior. Further work in this area reveals that the vast number of adolescents have no intentions of beginning the risk behavior and are in the Acquisition Precontemplation stage (aPC). For example, Pallonen, Prochaska, Velicer, Prokhorov, and Smith (as cited by Johnson et al., 2006) found that 93.2% of non-smokers were in aPC. Additional studies by Hollis et al. and Plummer et al. (as cited by Velicer, Redding, Anatchkova, Fava, & Prochaska, 2007) also state that 90% of youth that are not smoking are in the aPC stage (Johnson et al., 2006). The study by Velicer et al. (2007) suggests that since most adolescents classify themselves in the aPC stage this is the logical reason that most non-smokers will not view interventions about smoking as personally relevant. Because they are not currently using tobacco, they will more than likely ignore information that is aimed at preventing smoking (Velicer et al., 2007). Yet, given the rise in the rates of substance use during

adolescence, we know that most non-users will have to emerge from this large group who are in the Precontemplation stage for using. More suitable methods are required for identifying youth who are not using substances but who may be at a greater risk for becoming users. Preferably, these methods would employ variables that can be modified and that can be used for customizing interventions for prevention (Johnson et al., 2006).

The other two stages of smoking acquisition include acquisition contemplation (aC) and acquisition preparation (aP). Those individuals in the acquisition contemplation stage include those that are considering trying smoking within the next 6 months; those in the acquisition preparation stage include persons that are thinking about trying smoking within the next 30 days (Huang, Hollis, Polen, Lapidus, & Austin, 2005). In a study by Kremers, Mudde, and de Vries (as cited by Huang et al, 2005), “described the presence of three subtypes within the precontemplation stage: progressives, immotives, committers” (p.1185).

The progressives encompassed a subset of precontemplators ready to move to contemplation stage. The immotives were those with no plans to move to contemplation, due to a lack of a strong commitment not to smoke. The committers were adolescents firmly committed to nonsmoking. Thus, the concept of susceptibility distinguishes the committers from the immotives and progressives. Kremers et al. found that adolescents in the three subgroups of precontemplation differed from each other on every cognitive determinant tested (attitudes toward smoking, perceived social influences, and self-efficacy to remain a nonsmoker). In addition, they found that progressives were more likely to start smoking than immotives, who were more likely to start smoking than

committees. While individuals who are contemplating or preparing for acquisition may deserve special prevention efforts, based on Pallonen's work, the findings of Kremers et al. and Prokhorov et al. suggest that a subtype within the precontemplation stage of acquisition may also be at risk for smoking onset (Huang et al., 2005, p. 1185).

Information from Huang et al.'s study (2005), revealed that susceptibility to smoking increased the risk of being a smoker two to three times that of being non-susceptible at the two year follow-up. The estimate of risk was also true even when susceptibility and the stages of acquisition were combined into a single measure. The contemplation stage of acquisition increased the risk of being a smoker from three to almost five times that of being in the precontemplation stage at the two year follow-up. The preparation stage of smoking acquisition increased the risk from five to eight times that of being in precontemplation. The stages of acquisition appeared to be more predictive of smoking inception for whites than any other group based on Huang et al.'s study (2005). "According to this study, white contemplators and white preparers have a four to seven times the risk of smoking initiation compared to white precontemplators. The nonwhite contemplators/preparers were at 1.5-2.5 times the risk for smoking than the nonwhite precontemplators" (Huang et al., 2005, 1192).

Community-based Programs

Community-based programs can reduce or impede the frequency of drug use among youths (Johnson et al., 1998). Various types of community organizations engage their membership in the prevention of ATOD. Businesses, churches, health organizations, and human service agencies are a few of the typical community

organizations that are presently involved in prevention (Johnson, Noe, Collins, Strader, & Bucholtz, 2000). Faith-based partnerships, such as churches, will be discussed separately.

Initially, community-based interventions served in the capacity of advisor only. “The second-generation of community-based interventions that emerged in the 1990s moved toward an emancipatory tradition of community participation” (Holden, Messeri, Evans, Crankshaw, & Ben-Davies, 2004, p. 550).

“Community-based participatory research (CBPR) is increasingly recognized as an effective strategy to eliminate health disparities, promote community change, and improve health indicators” (Minkler & Wallerstein as cited by Suleiman, Soleimanpour, & London, 2006, p. 128). By providing youth with tools through CBPR, this helps to develop their expertise and increases their sense of responsibility, power, and control over their own health (Meucci & Schwab; Schensul as cited by Suleiman, et al. 2006). “Growing evidence suggests that young people who take active roles in organizations and communities have fewer problems, are better skilled and tend to be lifelong citizens (Irby et al., as cited by Suleiman, et al., 2006).

Schools can also serve in the capacity of “community”. This originated from the Project Toward No Drug Abuse (Sussman, Galaif, et al. as cited by Sussman, Dent, & Lichtman, 2001). This component is commonly referred to as SAC. Through the Associated Student Body, as guided by teacher supervision, expressions of anti-tobacco use were permitted at school. Achievement of these expressions occurred through project newsletters, recreational services, and job training functions. This “extra” factor was thought to enhance the school-based efforts of tobacco prevention and cessation by

promoting the school environment while extending outwards to the larger community.

“This component represents a social climate/interpersonal source of motivation to facilitate tobacco users to quit” (Sussman et al., 2001, p. 429).

In a case study titled *The Woodridge Collaboration* (Jason et al., as cited by Jason, Pokorny, Ji, & Kunz, 2005), Officer Talbot and Leonard Jason served in assisting the city officials of Woodridge, Illinois to draft and enforce the city’s tobacco laws. Retailers were required to obtain a license to sell tobacco in addition to prohibiting the sale of tobacco to minors. If there were repeated violations for tobacco sales to minors, the retailers would lose their license to sell tobacco. Also, minors were prohibited from using and possessing tobacco products. If caught doing so, there would be a civil charge, a fine, and notification of parents. “Rates of illegal sales of tobacco to minors were reduced dramatically, from 70% to 5%. In addition, the smoking rate among seventh and eighth graders decreased from 16% to 5% after 2 years of enforcement using compliance checks and fining minors for tobacco possession” (Jason et al., as cited by Jason, Pokorny, Ji, & Kunz, 2005, p. 204).

In another case study detailing an effectiveness trial, *The Youth Access-to-Tobacco Project*, the 3-year project was a multi-community trial intervention. This study was “designed to examine the effectiveness of both sales and possession enforcement strategies to reduce youth access to tobacco” (Jason, et al., 2005, p. 205). Eight communities were randomly assigned to control or experimental conditions and the smoking behaviors of sixth graders in 1999, seventh graders in 2000, and eighth graders in 2001 were analyzed. Results indicated that occasional cigarette use increased for those

youth in the control condition by 15.6 percentile points, while the rates for the youth in the experimental groups only increased by 4.1 percentile points (Jason, et al., 2005).

Faith-based Partnerships

Based on the 1994 General Social Survey (Davis & Smith as cited by Matthews et al., 2006), 55% of adults in the U.S. attend religious services monthly with 67% of African American adults attending. This creates a great venue for additional, beneficial programs to be offered.

The ‘charitable choice’ provision of the Welfare Reform Act of 1996 allowed religious organizations to receive money for social programs without censoring their religious identity. Prior to 1996, faith-based organizations and churches could not receive money without creating a non-profit subsidiary (Small, 2002). The church and faith-based organizations have the ability to influence numerous individuals with their prevention activities. Approximately 1/3 of the volunteer activities in the United States are church-related, with \$6.6 billion coming from church congregations while only \$6.5 billion comes from corporations (Johnson et al., 2000). “At least one in five organizations serving youth across the United States is a religious institution. Indeed, outside of the public schools, religious institutions serve more young people than any other community institution” (Religious Institute on Sexual Morality, Justice, and Healing, 2003, p.1).

Churches and faith-based organizations (FBOs), are becoming increasingly popular because they provide personal vehicles for health promotion. FBOs offer many advantages in the promotion of health. First, FBOs have youth groups and view part of their calling as influencing and encouraging this group of adolescents. Secondly, FBOs

can reach many segments of the population in terms of age, education, income, and race. In particular, church-based programs can significantly impact those populations that often go underserved, such as the African American population, by providing a channel of communication (Duan et al., 2000).

The church has been the site for various health programs such as smoking cessation, cardiovascular disease prevention, mammography, as well as several others (Matthews et al., 2006). The social programs that churches offer are presented in a logical and systematic order because congregations focus more on relationships than on their geographic location (Johnson, Noe, Collins, Strader, & Bucholtz, 2000).

Church-based interventions are likely to be effective in African American communities because they capitalize on four important principles (Kotecki, 2002): the central role of the church in the African American community (Hatch & Derthick, 1992); the strong link between faith and health in the African American community (Stoeely & Koenig, 1997); the acceptability of addressing educational, physical, and social issues in a church setting (Braithwaite, & Lythcott, 1989; Olson, Reis, Murphy, & Gehm, 1988); and the increased efficacy of bringing health education to people within their belief context (Kotecki, 2002). In addition, health education volunteers from within the church organization have been shown to effectively deliver behavior change programming while also providing a social support system for adopting and maintaining new behaviors (Lasater et al., 1997 as cited by Matthews et al., 2006, p. 645).

In a case study focusing on an initiative in the Bronx, New York, Kaplan and

colleagues concentrated on three aspects of the initiative. A total of 14 churches, including Baptist, Evangelical, Catholic, Episcopalian, and Seventh Day Adventist, were used in the qualitative study. The lessons learned from this study include: 1) faith-based leaders are valued and respected resources, 2) the pastors and volunteers need to be involved in the shaping and direction of the program, and 3) the recruitment of a trusted leader to drive the program is essential. It is important to note that different partnerships with organizations may internalize different components of the mission (Kaplan et al., 2006).

Middle School Programs

In a study by VanDyke and Riesenber (2002), a school-based intervention program was implemented in two rural schools in Pennsylvania. The schools served as a convenience sample. One school received the intervention entitled Doc, which consisted of 45 minute classes implementing five modules. Questionnaires were completed initially in 1997 and then subsequently in 1999. The results revealed that following the intervention program the percentage of smokers at the treatment school decreased from 42% to 31%. However, this reduction was not statistically significant.

One of the earlier studies on whether or not program effects continue from middle to high school was conducted by Bell, Ellickson, and Harrison (1993). In this study, 30 schools from 8 different school districts in Oregon and California were randomly assigned to three different conditions: a control, a treatment condition using teachers as program leaders, and another treatment condition incorporating teens as assistants to teacher. In the baseline sample, 6527 students in the seventh grade completed a questionnaire. The schools in both treatment conditions received Project Alert. “During

seventh and eighth grades, Project Alert produced significant effects in each of the four cognitive domains that it targeted—perceived consequences, normative beliefs, resistance self-efficacy, and expectations of future use (Ellickson, Bell, & Harrison as cited by Bell, Ellickson, & Harrison, 1993, p.464). Two years following the prevention program, schools/students were retested. Approximately 72% and 76% of the baseline sample were eligible for retesting. Unfortunately, the results were not promising. Regardless of who implemented the prevention program, all of the earlier effect on actual use had disappeared.

Skara and Sussman (2003) performed an in-depth analysis of adolescent prevention program studies. Their results revealed that of the 25 published studies the majority used adolescents ages 12-13 years old and in the 7th grade. “The length of follow-up for all 25 studies was a minimum of 24 months, providing a range of 24 to 180 months and a mean of approximately 69 months” (Skara & Sussman, 2003, p. 458). However, a problem did exist with these studies. Retention rates differed greatly in the studies. At final follow-up, 22 of the 25 reported attrition information. Half of the studies lost 25%, 3 lost 50%, and 1 lost over 75% (Skara & Sussman, 2003). “Less than half of the studies that tracked subjects indicated specifically that attrition analyses were performed to determine whether high-risk individuals were more likely to be excluded from the overall follow-up samples”(Skara & Sussman, 2003, p. 460). Fifteen of the 25 studies found one significant positive main effect for long-term smoking outcomes for experimental conditions over control conditions. Long-term, in this case, is at least 24 months. The most utilized treatment design analyzed during this review was the quasi-experimental nonequivalent group with a pretest-posttest design.

Program Implementation Environments

According to Fahs, Smith, and Atav (as cited in Atav and Spencer, 2002), the literature on risky behaviors for adolescent populations has primarily focused on urban areas. In fact, the majority of theories on youth tobacco use stemmed from research on children in urban areas (VanDyke & Riesenber, 2002). Although alcohol remains the substance of choice among adolescents in rural areas, students who drink heavily are more likely to smoke daily in addition to other risky behaviors (Atav & Spencer, 2006). The rural environment was previously thought to be a tranquil setting equated with the lack of stressors for rural adolescents, resulting in a need for research on this population (Atav & Spencer, 2006).

Based on the study by Dent et al. (1995), 60% of rural students were more likely to try tobacco than urban students (52%). Also, at ninth grade, there were 12% of rural students versus 9% of urban students that had tried smokeless tobacco according to the previously mentioned study. Results from Atav and Spencer's study (2006) revealed that 28% of rural students reported frequent tobacco use compared to only 17.6% of suburban students and 15.4% of urban adolescents. This pattern indicated that rural students were at most risk for use of tobacco, alcohol, and other drugs over their suburban and urban counterparts. According to Brown, daily substance use among 8th, 10th, and 12th graders in the past 30 days is substantially higher in rural youth than with urban youth (2001). "The findings of this study reinforce the need to gather data from representative samples of adolescents with a specific focus on location of residence and health risk behaviors. Only then can intervention programs be developed to target the specific needs of rural, suburban, and urban adolescents" (Atav and Spencer, 2006, p. 60).

Pearson and Lewis's study (as cited by Muilenburg, Johnson, Annang, & Strasser, 2006) indicates that there is a higher prevalence of chronic diseases such as cardiovascular disease and cancer in rural areas. This could be in part to the higher usage of tobacco products. The National Center on Addiction and Substance Abuse (as cited by Muilenburg et al., 2006) report that rural eighth graders are twice as likely to smoke cigarettes as urban eighth graders. In addition, adolescents in rural areas are more likely to have fewer smoking restrictions in the home, and they are more likely to witness smoking by adults according to McMillen, Breen, and Cosby's study (as cited by Muilenburg et al., 2006).

Johnston, O'Malley, and Bachman's study, as cited by Cronk and Sarvela (1997), stated that "the prevalence for daily smoking and for smoking more than a half pack daily in the 8th, 10th, and 12th grades is substantially greater for areas that are not listed by the Standard Metropolitan Statistical Area, and the increase for these two prevalence rates from the 8th through the 12th grade is also greater for these areas. In addition, rural males had the highest rate for smoking a pack or more of cigarettes per day (Cronk & Sarvela, 1997). Stevens, Youells, Whaley, and Linsey's study (as cited by Sarvela, Monge, Shannon, & Nawrot, 1999) of 4th, 5th, and 6th grade students in a rural community in New Hampshire discovered that 18% of students had already tried smoking.

Higher rates of smoking in rural communities may be associated or rooted to a combination of factors. The cigarette tax is typically lower in the South than in other parts of the country. A study by Thomas, Fisher, and Winickoff (as cited by Muilenburg et al., 2006) reveals that traditionally when taxes on tobacco products increase this leads to a decrease in use by adolescents. The study by Tauras (as cited by Muilenburg et al.,

2006) demonstrated that restrictions on cigarette use tend to reduce cigarette uptake in young adults, as well as lessen the frequency of progression to more habitual smoking. The higher prevalence of tobacco use indicates the necessity to increase prevention along with cessation practices in rural environments. These attempts should also try to incorporate higher tobacco taxes as well as more restrictive bans on use (Muilenburg et al., 2006).

The use of smokeless tobacco products in the United States is also a problem that needs to be addressed. The frequency of smokeless tobacco use by adolescents, or ST, is highest in states that are more rural (Prokhorov, Wetter, Padgett, de Moor, Le, & Kitzman, 2002). The study by Nelson, Mowery, Tomar, and Marcus (2006) revealed that the prevalence of smokeless tobacco use is also substantially higher for males in more rural areas than for those in urban areas.

“Sarvela et al. examined data from the Monitoring the Future study to assess teens’ use of tobacco by race, gender, and region. Their findings indicated that rural males and females smoked tobacco considerably more than their urban counterparts. In addition, rural white males smoked more often than any other group, with a 30-day prevalence rate of 34%, while urban black males had the lowest prevalence rate of only 10%” (Sarvela, Monge, Shannon, & Nawrot, 1999, p. 388).

Policy specialists must concentrate on the needs of rural population and create policy that enhances positive health behaviors. Policymakers must recognize that the use of tobacco, alcohol, and other drugs is a problem for both urban youth and their rural

counterparts. Policy and guidelines, particularly focusing on tobacco and alcohol use, must be developed for rural populations (Cronk & Sarvela, 1997).

Smoking prevention and cessation research should focus on an effort to determine the needs of rural communities and aid this segment of the population to the fullest extent possible. Consideration should be given to the attitudes and perceptions unique to rural communities because they may influence behaviors of adolescents differently compared to the prevailing attitudes and perceptions among urban dwellers (Muilenburg et al., 2006). “Cessation programs tailored for rural youths may need to consider topics such as tobacco-growing economies, favorable tobacco environments, favorable norms about use, geographic isolation and lack of access to services, cultural and traditional values and customs, poverty, and stress and coping” (Horn, Dino, Kalsekar, & Fernandes, 2004, p. 183).

VTSF Programs

In 2007, the VTSF will provide over \$3.6 million dollars in funds to 75 grant programs. The recipients of the grants include schools, faith-based organizations, community groups, and non-profit organizations. The organizations first write their grant applications and select the program that best fits their needs from the VTSF’s Compendium Programs. There are 16 programs under the Compendium Program list that have been recognized by national, state, or other organizations as being a model, promising, or effective tobacco programs. The programs concentrate on subjects related to prevention of tobacco use, tobacco cessation, early tobacco intervention and reduction, advocacy, social skills building, and youth empowerment. The programs that focus on prevention include: All Stars, Al’s Pals, Creating Lasting Families, Know Your Body,

Life Skills Training, Positive Action, Project Alert, Project Toward No Tobacco Use, Skills for Adolescence, and Too Good For Drugs. The cessation programs include: Ending Nicotine Dependence, Intervening With Teen Tobacco Users, Helping Teens Stop Using Tobacco, Not On Tobacco, and Project EX (Virginia Tobacco Settlement Foundation community programs & education; VTSF Compendium Programs). Below is a brief description of the programs related to this study along with any pertinent literature found on the program.

All Stars (Prevention)

The All Stars program is recognized as a model program by the Substance Abuse and Mental Health Services Administration of the U.S. Department of Health and Human Services and as a Promising Program by the U.S. Department of Education. The curriculum can be utilized in either a school or community-based group. The program was created by Dr. Hansen, began in 1993, and is “designed to delay the onset of and prevent high-risk behaviors in middle school adolescents 11 to 14 years of age through the development of positive personal characteristics in young adolescents” (U.S. Dept. of Health & Human Services, n.d., p. 1). The program can be implemented by using either a classroom teacher or a program specialist. The curriculum works by reinforcing positive qualities and by strengthening specific qualities that are essential in developing positive effects. These qualities include: 1) establishing positive norms, 2) developing positive ideals and future aspirations, 3) creating strong personal commitments, 4) promoting positive parental attentiveness, and 5) promoting bonding with community and school groups (All Stars, 2006).

A team from the University of Kentucky conducted a randomized field trial of the program. The results from this trial demonstrated some evidence of program effectiveness on changing targeted mediators and reducing the onset of substance abuse, particularly when delivered by classroom teachers. An additional study by McNeal, Hansen, Harrington, and Giles (2004), used 2,289 students attending 14 middle schools in Lexington, Kentucky for baseline data. The final sample consisted of 1,822 students between the ages of 11-13. Of the 14 schools, six served as controls, five schools received the All Stars program delivered by program specialists, and three schools received the curriculum via classroom teachers. The program specialists were complete strangers to the school. In the fall, students were surveyed prior to program implementation. The students were then surveyed upon completion of All Stars. The teacher-led version of the program reduced the rate of growth in 30-day use of cigarettes 7.4 to 7.8% versus the specialist group at 11% to 13.8%, and the control group at 15.1% to 17.9%. The results by McNeal et al. demonstrate that the onset of substance use is moderately slowed by the program (2004).

One study conducted by Harrington, Giles, Hoyle, Feeney, and Yungbluth using a single-cohort longitudinal design involved 1,655 students from 14 middle schools in two large cities in a midwestern state. In this study, the specialist condition consisted of 629 students, 739 in the control condition, and 287 in the teacher condition. A pretest, posttest, and a one-year follow-up was conducted and analyzed. "Results indicate that the All Stars program, when administered by teachers, had an immediate effect on mediating variables that did not persist over time" (Harrington et al, 2004, p. 533).

Al's Pals (Prevention)

Al's Pals is a prevention program targeted for children between the ages of 3 to 8 years old. The program can be implemented in schools, faith-based settings, community settings, and child care centers. The specific tobacco control outcomes the program addresses include:

to prevent the initiation of tobacco use by youth, to promote the attitudes that favor healthy lifestyles, avoiding harmful substances such as tobacco products, and to develop prosocial skills that help children resist peer pressure and risky decision-making connect to tobacco use (VTSF compendium program information worksheet-program information-Al's Pals: Kids Making Healthy Choices, 2007, para. 5).

The pilot study on Al's Pals was conducted in 1994-1994 using ten classrooms in Virginia serving four-year old children. Four additional classrooms served as the control. Using ANOVA repeated measures, behavior outcomes were measured. The Child Behavior Rating Scale-20 (CBRS-20) was utilized. This 20-item scale is used to measure components of a child's behavior that reflects social-emotional competence. "A significant group by time effect was found, such that intervention children made greater gains on the CBRS-20 and received higher post-ratings than the comparison children [$F(1, 217)=14.13, p<.001$]" (Lynch, Geller, & Schmidt, 2004, p.344).

A follow-up study in 1995-1996, again in Virginia, used 16 interventions and 7 comparison classrooms during the 7 month program study. "As in 1994-1995, the CBRS-20 results showed a statistically significant group by time effect in favor of the intervention children, who made greater gains on the CBRS-20 and received higher post-

ratings than the comparison children” (Lynch, Geller, & Schmidt, 2004, p.344). Long-term studies of whether the effects were carried over into the risky adolescent years have not been implemented.

Creating Lasting Family Connections-CLFC (Cessation)

The Creating Lasting Family Connections, or CLFC, is a structured curriculum developed by the Council on Prevention and Education: Substances, Incorporated for youth ages 9-17, their parents, guardians, and other family members to enhance their capability to provide a nurturing environment for each other in a very effective and meaningful way.

Participants are encouraged to improve their personal growth by increasing self-awareness, expression of feelings, interpersonal communication, and self-disclosure. Participants are taught social skills, refusal skills, and appropriate alcohol and drug knowledge and healthy beliefs, which provide a strong defense against environmental risk factors that can lead to negative outcomes for youth (Council on Prevention Education: Substances, Inc. [COPES], n.d.).

The program also provides parents and adults with family enhancement, family management, and skills in communication. Participants are given opportunities to develop and practice these new skills in a peer-group setting (Council on Prevention Education: Substances, Inc. [COPES], n.d.).

The specific goals of the program include 1) delay the onset and reduce the frequency of drug and alcohol use among youth; 2) increase the knowledge and use of community services, which includes treatment and rehabilitation services, among participants when needed; 3) improve the communication skills along with refusal skills

of the youth; 4) increase community engagement through implementing a successful family recruitment strategy, empowering participants to successfully implement the program and its evaluation; and 5) improve the knowledge and attitudes of parents regarding drug matters as well as enhance their family management skills (Strader, n.d.). The program is intended to be executed through a community network such as churches, recreation centers, court-referred settings, and schools. Jaker (as cited by Johnson et al., 1996) stated that CLCF's program contains elements of the four basic prevention models: affective education, social competencies, information, and alternative. The instruction is modular by design (There are three modules with the first being on substance abuse knowledge and issues, the second being a 16-20 hour enrichment training program for parents, and the third is for both youth and parents (Johnson et al., 1998).

The CLFC program was evaluated by Dr. Knowlton Johnson, of Community Systems Research Division of the Pacific Institute for Research and Evaluation. The evaluation was over a 1-year period and consisted of a true experimental design. A few of the statistically significant findings included short-term effects of the program on parent and youth resiliency outcomes including increasing parents' alcohol and other drug beliefs and knowledge, increasing youth involvement in setting rules regarding alcohol and other drug use, increasing family communication, and increasing bonding between the youth and their mothers (Council on Prevention Education: Substances, Inc. [COPES], n.d.).

Ending Nicotine Dependence-END (Cessation)

The Ending Nicotine Dependence Program, or END, was originally developed in Utah with the duration of the program being from one to eight weeks, with 3.3 weeks

being the average. The program is now implemented in an eight-session format to 7th to 12th graders. The instruction is modular with each module building upon each other (VTSF Compendium Program Fidelity Requirements).

The curriculum's framework is based on Prochaska and DiClemente's Transtheoretical Model. The specific outcomes that the course addresses includes the following: 1) increase the knowledge of short and long term health and social effects of tobacco; 2) enhance skills to help youth quit tobacco and remain tobacco free; 3) increase the number of attempts teens make to quit tobacco; 4) increase the number of teens that lessen their tobacco use; 5) increase the number of teens that quit using tobacco completely; 6) diminish the intentions of teens to use tobacco; 7) by developing skills in the areas of stress management, problem solving, goal setting, communication, seeking social support, and refusal skills thus enhancing the life skill functioning of the youth; and 8) assist teens in increasing their readiness to quit tobacco (VTSF Compendium Program Information Worksheet-Program Information-Ending Nicotine Dependence).

In 2004, the Utah Department of Health completed their program evaluation of END. The study was based on the original format of the program with sessions ranging from one to eight. There was also no control group for a comparison. The Program Evaluation revealed that approximately 61% of the participants involved with the program reduced their tobacco use and 13.2 % quit completely. The program yielded higher quit rates for smokeless tobacco and cigar use, with 35.7% of chewers and 40.5% of cigar users quitting. The majority of the participants were also not in the program by their own accord. Instead, most were there by referral of the judicial system for illegal, underage possession of tobacco. The students that were there on a voluntary basis were

more likely to reduce their tobacco use than those not, however, they were not more likely to completely quit. The results demonstrate that when cigarettes used per day and age were controlled, students who initially started the class with these attributes were more likely to quit: 1) those with high self-confidence that they could quit were four times more likely to quit than those without confidence, 2) participants in the preparation stage of change were twice as likely to quit as those in precontemplation, and 3) those that were pleased to be in the class were 1 ½ times more likely to quit than those that were not.

The highest proportion of tobacco reduction occurred in the classes with at least six or more sessions. Two of the health departments offered a six and seven course version which produced the highest improvement rates. Those health departments offering only a three to five session program had significantly lower improvement rates. From this study came the recommendation of a six session course as the minimum.

There were 11% of students that demonstrated no improvement in their smoking status. However, these students did refer positively to the course, particularly the support received from their teachers, peers, and just support in general. Overall, 66% of the participants would recommend the program to their friends that use tobacco, specifically for the information the program gave on the effects of tobacco (Utah Department of Health; 2004).

Helping Teens Stop Using Tobacco-TAP (Cessation)

Helping Teens Stop Using Tobacco: The Tobacco Awareness Program, or TAP as it is more commonly known, is a cessation or reduction program that is to be implemented in schools, community settings, or faith-based settings. The program is

designed for children of all cultures in grades seven through twelve. The curriculum is based on Prochaska and DiClemente's stages of change. There are also elements of the risk reduction model, cognitive behavior approach, and the social influences model as well. The participants are involved in a peer group setting that is led by adults. The curriculum is delivered in eight sessions. "The program is designed to help participants reduce and/or quit tobacco use; move through the stages of change to the action stage of quitting; increase awareness of short- and long-term effects of tobacco use; identify cessation methods including cold turkey, tapering, and postponing; increase healthy choices such as improved nutrition and exercise; and improve skills to manage triggers to use, withdrawal symptoms and cravings" (VTSF compendium program information worksheet-program information-helping teens stop using tobacco, 2007, para. 4).

TAP and the TEG programs were created for those students at various stages of change in tobacco use and provide social pressure or peer pressure to quit tobacco use. The developers created these programs based on the needs of young tobacco users who are in the various stages of change. The logic behind this is that someone not thinking of quitting has a low readiness to change. "Participants in the preparation, action, or maintenance stages of change should receive the TAP cessation program" (Coleman-Wallace, Lee, Montgomery, Blix, & Wang, 1999, p. 315).

The data for the study by Coleman-Wallace et al. was collected over from 1996 to 1998. The subjects were six Southern California high schools. The level of confidentiality was maintained so students were free to volunteer for the program without the added fear of consequences from parents or guardians. There were 128 total participants in the TAP program with 101 who voluntarily participated. The average age

for the participants was 15 ½ years. A pretest and posttest survey was conducted along with saliva samples. Facilitators used the URICA form, which was adapted for use with adolescents, to determine the stages of change. The Fagerstroem two-item question was used to determine level of addiction (Heatherton, Kozlowski, Frecker, & Fagerstroem as cited by Coleman-Wallace et al., 1999).

The results of the Coleman-Wallace (1999) research revealed that 16% of the voluntary TAP participants quit using tobacco and 9% of the mandatory participants quit. Also, 24% reduced daily tobacco use. Random saliva samples were collected to determine the level of cotinine. The results confirmed the validity of the posttest survey for tobacco use. Based on the stages of change instrument, TAP students decreased in precontemplation, increased in action, and increased in the maintenance stage.

Additional information on the TAP program stems from the Community Intervention Annual Survey. This survey is administered annually to over 5,000 trained TAP and TEG facilitators across the country. The 2003-2004 survey found that 47% of the students that completed TAP reduced their tobacco use and 40% of those that completed the program quit using tobacco altogether (TAP and TEG Program Evaluation, 2006).

A survey conducted by the respiratory therapists at St. Luke's Hospital in Ohio, for the year 2003-2004, found that of the 57 students that completed the TAP program, 28.5% quit tobacco and 47% reduced their tobacco use by at least 50%. Approximately 24.5% did not show a change in tobacco use (TAP and TEG Program Evaluation, 2006).

Intervening With Teen Tobacco Users-TEG (Cessation)

Intervening With Teen Tobacco Users: Tobacco Education Group, or TEG, is also promoted as a cessation and reduction program to be implemented in schools and communities. The curriculum is geared towards grades 7-12 with students of all cultures. This program also has its theoretical structure based on Prochaska and DiClemente's work on the Stages of Change. Similar to TAP, this program also includes various elements of the risk reduction model, cognitive behavior approach, and social influences model. TEG is often used by the juvenile courts as well as schools using the program as an alternative for teens that violate the tobacco policies.

The eight-session program is designed to address the following outcomes: moves the participants through the stages of change from precontemplation or contemplation to preparation or action; increases knowledge of the consequences of tobacco use; motivates participants to adopt a healthier lifestyle and/or join a smoking cessation group; and provides an alternative to suspension for schools and a diversion program for juvenile courts (VTSF compendium program information worksheet-program information-TEG, para.4).

The same study conducted by Coleman-Wallace also included research on TEG. The same schools in Southern California were used to test TEG. Participants to TEG were those assigned by school administrators for violating the tobacco-free policies of the school. Overall, there were 201 students that attended the TEG program. Upon completion of the program, 12% of TEG participants reported quitting with another 18% reporting a reduction of tobacco use. Analysis of the stages of change instrument revealed that TEG did not decrease precontemplation among participants. TEG

participants increased in the maintenance stage. The TEG students also showed a significant difference in gender for the action stage with females increasing more than males. The TEG program also appeared to increase the self-efficacy of the students.

The Community Intervention Annual Survey for 2003-2004 showed that 37% of TEG students reduced their tobacco use with 16% of those that completed the program quit using tobacco completely. The survey conducted by St. Luke's of their 99 student participants of TEG, 22% quit and 53% reduced their use of tobacco, including those that quit (TAP and TEG program evaluation).

Know Your Body

Know Your Body is a prevention program that can be implemented in school, community, or faith-based settings. The program is for grades K-6. The framework for this program includes the social learning theory, communications theory, Piaget's theory of intellectual development, and the Tylerian theory. In addition, the precede model and the health belief model are also incorporated.

The Know Your Body program has been used largely to assist in promoting healthy diets to decrease blood pressure and cholesterol risks beginning in early adolescence. Resnicow, Cross, and Wynder (1993) conducted an evaluation of three studies on the Know Your Body program. "Across the three studies, at 3-year follow-up, consistent positive intervention effects were reported for systolic blood pressure, diastolic blood pressure, smoking, HDL-cholesterol, and health knowledge" (p. 188). At the 5-year follow-up, significant treatment effects were noted on only 7 of the 36 variables (Resnicow et al., 1993).

Life Skills Training-LST (Prevention)

Life Skills Training is a prevention curriculum that can be implemented in a school, community, or faith-based setting to elementary, middle, and high school students. To date, it is probably the most researched tobacco prevention program available. The program's theoretical foundation stems from Bandura's social learning theory and Jessor's problem behavior theory (VTSF compendium program information worksheet-Life Skills Training). The program is recognized as an exemplary Safe, Disciplined, and Drug-Free School program by the U. S. Department of Education (Exemplary & Promising Safe, Disciplined, & Drug-Free Schools Programs, 2007).

Specific outcomes that the program addresses

includes a focus on the short-term consequences of smoking, increasing knowledge about the actual levels of smoking among adolescents and adults in order to correct normative expectations about smoking, reinforcing anti-smoking attitudes and the declining social acceptability of cigarette smoking, information and class exercises demonstrating the immediate physiological effects of cigarette smoking, and material concerning peer and media pressures to smoke and techniques for resisting these pressures (VTSF compendium program information worksheet-Life Skills Training, 2004, p. 5).

In one study, 170 Thai students in grades 7-12 were randomly selected to participate. The treatment group and control group both had 85 students. The students in the control group received their normal tobacco and drug education curriculum, while the treatment group received 10 class periods of LST. Following program implementation, LST had a positive effect on attitudes, life skills, knowledge, and frequency of tobacco

use. “In addition, the students in the intervention group had significantly higher mean scores for health consequences knowledge ($P < 0.01$) at post-test compared with those in the control group...and reported more positive attitudes toward tobacco and drug use prevention ($P < 0.01$) at post-test compared with those in the control group” (Seal, 2006, p. 166).

Not On Tobacco-NOT (Cessation)

Not on Tobacco, or NOT, is a 10-session curriculum with four booster sessions developed by the American Lung Association designed to assist students stop smoking, decrease the number of cigarettes smoked, increase healthy lifestyle behaviors, and improve life management skills (Not on Tobacco (N-O-T): Fact Sheet). The program is grounded in the social cognitive theory (Massey, Dino, Horn, Lacey-McCracken, et al., 2003). NOT is designed for teenagers who are already regular tobacco users. It is a voluntary program that is delivered in same-gender groups by facilitators that are of the same-gender. NOT concentrates on a total health. (Dino, Horn, Goldcamp, Fernandes, Kalsekar, & Massey, 2001). It is delivered at the high school level (Gingiss, Boerm, & Roberts-Gray, 2006). It can be used during or after school to provide voluntary cessation for those adolescents that have violated tobacco policy (Hahn, Rayens, Rasnake, York, Okoli, & Riker, 2005).

The study by Dino et al. (2001) compared NOT with a brief intervention in a matched design of two Florida high schools. The study revealed that the program had a significant overall impact on smoking and the cessation rates were better than the brief intervention. In fact, the following was concluded:

Among NOT youth who continued to smoker, over ½ reduced smoking during the

week—cutting their cigarette consumption by $\geq 50\%$ (mean percentage reduction) from baseline. Also, significantly more NOT youth than BI youth reduced weekend smoking. Almost $\frac{3}{4}$ of NOT youth who did not quit reduced weekend smoking-again, reducing by 50%. Comparatively, less than $\frac{1}{2}$ of BI youth reduced weekend smoking (Dino et al, 2001, p. 603).

Research by Horn, Fernandes, Dino, Massey, and Kalsekar included subjects from West Virginia (128) and Florida (237). Of the 365 participants, 180 were in the BI and 185 were in the NOT group. The two groups were not significantly different on dependence scores at baseline. The average age of smoking onset for the subjects was age 12 and the majority had been smoking 5 years. Results indicate that subjects with a high dependence to nicotine were able to quit, unlike those in the BI with a high dependence. These results are immediately following the program. There are no long-term results for this particular study.

Additional studies conducted by Horn, Dino, Kalsekar, and Fernandes (2004), included students from West Virginia and North Carolina. There were 136 youth from West Virginia with 63 in the 5 NOT schools and 73 in the 5 Brief Intervention schools. There were 122 from North Carolina with 61 in the 5 NOT schools and 61 in the 5 BI schools. A modified version of the Fagerstrom Tolerance Questionnaire was utilized to determine nicotine addiction. The participants in the study smoked on average a half a pack of cigarettes on weekdays and a pack on weekends (Horn et al., 2004). “At the 15-month follow-up, N-O-T youths demonstrated higher quit rates overall, although the difference was not significant for West Virginia” (p.183).

The American Lung Association of Virginia provided NOT to 926 teenagers throughout the Commonwealth of Virginia for the 2005-2006 school year. The Virginia Department of Health's analysis (2006) of the program revealed the following results: 47% of teens stopped smoking; 80% of participants, including those that quit, reduced the amount of cigarettes smoked; and 65% felt that the program was beneficial and assisted them in reducing or quitting their smoking.

Positive Action-PA (Prevention)

Dr. Carol Gerber Allred developed Positive Action, or PA, in 1977. Positive Action's theoretical framework combines multiple theories of learning, development, education, social relations, and behavior development and change (Flay & Allred, 2002). Instead of relying on extrinsic motivation, PA concentrates on intrinsic motivation for creating and maintaining positive behavioral patterns (Flay and Slagel, n.d.). "The program teaches children what actions are positive, that they feel good when they do positive actions, and that they then have more positive thoughts and future actions" (Flay, Allred, & Ordway, 2001, p. 75). The notion that you feel good about yourself when you do positive actions is represented by the symbol "Thoughts-Actions-Feelings" Circle (Flay & Slagel, n.d.).

The program, although primarily for prevention, has also been used as a reduction program. The course can be implemented in schools, communities, or faith-based settings. Even though Positive Action has been mainly used for elementary children, "the program is used by all ages, populations, ethnicities, cultures, and socio-economic levels in rural, suburban, or urban areas" (VTSF compendium program information worksheet-program information-Positive Action, para. 8).

Positive Action has been recognized as a promising, Safe, Disciplined, and Drug-free School Program by the U.S. Department of Education. The comprehensive program for grades K-6 includes a 15-20 minute lesson delivered daily or almost daily. Included in the lessons are various activities such as role-playing, modeling games, stories, and question and answer sessions. The course also incorporates science, math, and social studies into the activities. “The middle school curriculum continues with the same concepts as the elementary curriculum and focuses on middle school students’ independence emerging recognition of their responsibility for themselves. Lessons are taught two or three days a week” (U.S. Dept. of Education, 2001, p. 102).

Studies on the program have yielded positive results. “After 2 years of PA, students in the PA school scored 33% higher on self-concept than at pretest compared to a 23% improvement in the control school” (Flay, Allred, & Ordway, 2001, p.78). However, few studies on PA involved their effect on drug use and tobacco use. One such study, though, was conducted by Flay during the 1999-2000 school year in a rural Title I school in northern Florida. The school had 534 children in grades K-5. The program was fully implemented in 11 classrooms, partially presented in 7 classrooms, and sporadically or not implemented in 7 classrooms. The results yielded a 38% less initiation of drug and tobacco use (Flay & Allred, 2002). “The more teachers implemented the program, the more their attitudes about and perceptions of other teachers, students and parents improved” (Flay, 2000, p. 9). In another study by Flay and Allred (2003), middle school and high school follow-up revealed a 37% and 71% decrease in drug use and tobacco use respectively in middle schools. A 27% and 49% decrease in drug use and tobacco use was noted in high schools.

Project ALERT (Prevention)

Project ALERT is a prevention curriculum geared towards middle school students. The Center for Substance Abuse Prevention recognized the program as a model program in 1999, and the U.S. Department of Education, in 2001, recognized Project ALERT as an exemplary program and the (Rand Corporation, n.d.; Ellickson, McCaffrey, Ghosh-Dashidar, & Longshore, 2003).

Project ALERT is based on 3 theories of behavioral change, which are: (a) the social learning model, (b) the self-efficacy theory of behavior change, and (c) the health belief model. According to Tobler (as cited by Ellickson et al., 2003), Project ALERT uses 2 primary methods in the curriculum. These methods include small-group activities and interactive teaching methods (i.e. question-and-answer). “The Project ALERT curriculum seeks to help adolescents recognize that most people do not use drugs or approve of doing so, understand the benefits of not using, develop reasons not to use, and understand the immediate and long-term consequences of drug use. It also seeks to build resistance self-efficacy by helping adolescents identify and resist both internal and external pressures to use drugs, and by providing role models for non-use” (Orlando, Ellickson, McCaffrey, & Longshore, 2005, p. 36-37).

In the initial evaluation of Project ALERT, which was conducted by Ellickson and Bell, the program was found to reduce cigarette and marijuana use among 8th grade students, but it was not useful for those students that were committed smokers (Ellickson, McCaffrey, Ghosh-Dashidar, & Longshore, 2003). The curriculum for Project Alert was revised and evaluated over an 18 month period by Ellickson et al. (2003).

The revised Project ALERT yielded positive results for all 3 risk groups-baseline nonusers, experimenters, and users. . . ., it curbed current use among the high-risk experimenters and the even higher-risk baseline smokers (users) by about 20% ($P<.03$). It also cut regular (weekly) cigarette use across all 3 groups by anywhere from 19% ($P<.06$) to 39% ($P<.02$) (Ellickson et al., 2003, p. 1833).

A study by Orlando et al. using 4277 middle-school students from South Dakota measured cigarette and alcohol use at baseline and then again one year later. The results indicate that the hypothesized mediating variables were significant mediators of ALERT's effect on past monthly cigarette use and intentions to smoke. The peer influence construct was the strongest mediator in the cigarette model (Orlando et al., 2005).

Project Towards No Tobacco-TNT (Prevention)

Project Towards No Tobacco, referred to as Project TNT or TNT, focuses solely on tobacco use. "TNT is a 10-day social program that examines media celebrity, and peer portrayal of tobacco use in 10 core lessons and two booster sessions one year later" (Mandel, Bialous, & Glantz, 2006, p. 869).

Normative and informational social influences are the two main types of social influence that may contribute to adolescent tobacco use. Normative social influence is when a group of peers applies pressure to another adolescent in an attempt to make them respond a particular way. The adolescent feels that the group may accept him or her if they yield to offers of tobacco. On the other hand, they may feel that the group will reject them if they don't accept the offers. The informational social influence is pressure that is more covert. This pressure tries to make adolescents adopt social values that favor

tobacco use. Statements from other peers, parents, movies, or tobacco advertising can contribute to these values, and make the youth feel that tobacco use is more widespread or will assist the user to achieve a desired social image (Sussman, Dent, Stacy, Sun, et al., 1993). To counteract the normative social influence, there must be a manipulation of peer disapproval of tobacco use and not to instruction in refusal assertion skills according to MacKinnon, Johnson, Pentz, et al. and Hansen and Graham (as cited by Sussman, Dent, Stacy, Sun, et al., 1993).

The rationale behind TNT is that adolescents will be able to avoid tobacco if they are aware of the deceptive social information that facilitates tobacco use, if they understand the physical cost of tobacco on their own lives, and if they have skills to offset the social pressures to receive approval by using tobacco (Mandel, Bialous, & Glantz, 2006). There are four basic curricula developed for TNT. The first prevention component contains activities that counteract the normative social influence, the second consists of activities that deal with the informational social influences, the third deals with activities designed to handle the lack of knowledge regarding the physical aspects of tobacco use, and finally, the fourth was created to focus on the effects of the combination of social and physical consequences –related influences (Sussman, Dent, Stacy, Sun, et al., 1993).

Project EX (Cessation)

Project EX stems from Project Towards No Tobacco Use. The curriculum is a cessation or reduction program to be implemented in schools for students of all ethnicities between the ages of 14-19 years old. There are two specific outcomes that the program addresses: 1) reduce or quit cigarette smoking and 2) state the effects of tobacco

use on all levels: social, environmental, physiological, and emotional (VTSF compendium program information worksheet-program information-Project EX).

According to Pallonen, Prochaska, Velicer, Prokhorov, and Smith (as cited by Sun, Miyano, Rohrbach, Dent, & Sussman, 2007), “while 53% of adolescent smokers report an interest in quitting tobacco use in the next 6 months, only approximately 18% of adolescent smokers are ready to take action and try to quit in the next 30 days” (p. 343). The goal of Project EX’s developers was to incorporate motivating and enjoyable activities into the TNT program in hopes of reaching more adolescents who are attempting to quit tobacco at the present time (Sussman, Dent, Burton, Stacy, & Flay as cited by Sussman, McCuller, Zheng, Pfingston, Miyano, & Dent, 2004).

One of the largest studies conducted to date on teen smoking cessation was conducted by Sussman, Dent, and Lichtman. This study used a three-group experimental design using clinic-only, clinic plus school-as-community (SAC) component, and a standard control. Using a randomized block design, 18 continuation schools were assigned to the three conditions. “To be eligible for study participation, a student must have used tobacco in the last 30 days prior to the first session, and had to join the clinic in the first 2 of the 6 weeks (on or before Session 4)” (Sussman et al., 2001, p. 429). Data was collected at baseline, immediately following the program conclusion, and at a three-month follow-up. The study yielded the following results:

...28% said that the class helped them quit tobacco use completely, 42% said it helped them reduce their tobacco use with the intention of quitting completely, 10% said it helped them reduce, but without the intention of quitting, 14% said they had not reduced, but the class helped them decide to quit in the near future,

and 6% said it helped them to maintain a quit attempt they had started at the beginning of class. There were no differences in reported stages of quitting at immediate posttest between the clinic plus SAC condition and the clinic-only condition ($\chi^2(5)=8.87, P>.05$) (Sussman et al., 2001, p. 432).

Approximately 3.7 months after the program concluded, additional assessments were made. Forty-nine percent of the 259 clinic participants were available for follow-up along with 44 of the 76 controls, giving a 51% follow-up rate. “The follow-up rate did not vary significantly between the three conditions ($\chi^2(2)=5.00, P > .05$)” (Sussman et al., 2001, p. 433). Interestingly, the addition of the school-as-community component did not improve the cessation rates over the clinic alone (odds ratio=0.48, $P> .05$) (Sussman et al., 2001).

In 2001, a pilot of Project EX was presented in Wuhan, China. The curriculum was first translated to Chinese by two certified translators. The subjects were 46 10th graders that either attended regular high school or a vocational school. Pretest and posttest questionnaires were administered at the beginning and at the end of the sessions. Four months following the last session, a follow-up assessment was collected. In addition to the paper-and-pencil questionnaires, saliva samples were collected for analysis. At the initial session, participants were smoking on average 5.7 cigarettes per day. The NicoMeter strip was used to determine cotinine levels in saliva. By utilizing this technique, a 4.5% of over-reporting of tobacco quitting was observed. After adjusting for this bias, a 10.5% adjusted 30-day abstinence and a 14.3% adjusted past-week abstinence were reported. Based on these results, this is a 3.5-4.8 times the quit-

rate achieved prior to the start of clinic (Sussman, McCuller, Zheng, Pfingston, Miyano, & Dent, 2004).

Project EX-3 is another study incorporating additional elements such as the use of tobacco substitutes to compare nicotine and non-nicotine containing gum in a two-condition experimental design. The primary research sites were sixteen high schools in Humboldt County. Potential participants had to be currently using tobacco at least once per week, and also they had to have used tobacco at least 100 times in their lifetime. A total of 117 subjects were randomly assigned to receive either the nicotine gum, Nicorette®, or the herbal gum control, CigArrest. Of the 117, 59% were from regular high schools and 41% were from alternative high schools. The subjects all lived in rural areas. There were 8 sessions in all with the first four being the same for all groups. At session 5, the nicotine replacement or substitution phase began for those that were eligible. At baseline, subjects were comparable. “At two-month follow-up, the intent-to-treat 30-day quit rates for all tobacco products were 11% in the Nicorette condition and 13% in the CigArrest condition. At six-month follow-up, the intent-to-treat 30-day quit-rates were 16% in the Nicorette condition and 15% in the CigArrest condition” (Sussman, et al., 2004, p.129).

One of the more recent studies on Project Ex was conducted by Sun, MIyano, Rohrbach, Dent, and Sussman (2006). A convenience sample of twelve continuation high schools from three counties-Los Angeles, Orange, and Ventura- was selected for participation. The conditions included treatment or control, and the schools were randomly assigned to one condition. In the treatment school, students received the curriculum. While in the control, students received tobacco prevention and cessation

activities provided by the school. A pretest and posttest questionnaire was administered. “Compared with the students in the control condition, students in the program condition showed a greater change in correct knowledge responses from pretest to posttest ($\beta=+5.5\%$, $p=0.0003$). Students in the program condition also experienced a greater reduction in weekly smoking ($\beta=-6.9\%$, $p=0.038$), and intention for smoking in the next 12 months ($\beta= -0.21$ in 5-level scale, $p=0.023$).

The short-term results are promising. Long-term research on the effects has not been conducted.

Project Towards No Drug Abuse-TND (Prevention)

Project Towards No Drug Abuse is a school-based program designed for 14-19 year olds. The program focuses on prevention of drug use by high school students by concentrating on drug use, avoidance and resistance skills, and cessation strategies. The original version of the program contained only nine sessions, but three were added to the curriculum. One of the three added sessions deals with marijuana use prevention, one on tobacco use cessation, and one on self-control for drug abuse and prevention (Sussman, Sun, McCuller, & Dent, 2003). The curriculum provides an approach to drug prevention by using a health motivation-social skills-decision-making model (*Guide to effective programs for children and youth*, n.d.). The sessions are based on a series of three, with each incorporating a specific aspect of the program to develop particular skills.

In Project TND, the school serves as the community. The assumption is that by providing students with drug abuse information and materials outside the classroom through extra curricular activities that would then move outward to the community this would enhance the effectiveness of the program. Therefore, the utilization of more

environments for drug prevention efforts will broaden the temporal and spatial range of anti-drug influence thereby increasing the value of the program (Sussman, Galaif, et al., 1997 as cited by Sussman, Dent, Stacy, & Craig, 1998).

In the first experimental study by Sussman, Dent, Stacy and Craig (1998), the original nine-session program was delivered to 1,074 students in 21 continuation high schools during October to May of 1994-1995. The students had various ethnic backgrounds. The one-year follow up results revealed significant reductions in hard drug use and alcohol. However, there were no reductions in marijuana or tobacco use. An additional study was conducted by Dent, Sussman, and Stacy (as cited by *Guide to effective programs for children and youth project towards no drug*, n.d.) using 1,208 students in 26 classrooms from three Los Angeles schools. These subjects also received the initial versus of TND. A one-year follow up was completed with 679 of the original 1,208 students. The results demonstrated significant program effects for alcohol and hard drug use. Again, there was not a significant program effect for marijuana and cigarettes.

With the addition of the three sessions to the curriculum, Sussman, Dent, and Stacy (2002) initiated another study.

This experimental field trial involved 18 continuation high schools. A randomized block design was used to assign these schools to 1 of 3 conditions: standard care control condition, a 12-session classroom program, or a 12-session self-instructional version of the program. There were 6 continuation high schools in each condition (p.357).

The results of this study revealed a 27% relative reduction in cigarette smoking

and a 22% relative reduction for marijuana use for the health educator-led condition (2002).

Sun, Skara, Sun, Dent, and Sussman (2006) also conducted a long-term follow-up of the first trial of TND. The study lasted from 1994 to 1999. One year was considered as short-term, two-three years as middle-term, and four to five years as long-term. The data at years two and three were combined and the data for years four and five were combined. Of the original subjects, at middle-term, 66% were available and for long-term, 46% were available for follow-up. “A total of 530 subjects (34%) had complete data at all 4 time points: pretest, short-term, middle-term, and long-term” (p.189). Phone surveys were used to conduct the follow-up analysis. The results indicated positive long-term effects for hard drug use ($F=4.71, p=0.02$), but no significant reductions were noted for 30-day use of cigarettes, marijuana, or alcohol.

Skills for Adolescence (Prevention)

Lions-Quest Skills for Adolescence is a prevention program geared for adolescents between the ages of 12-14 in grades 6-8. The program can be implemented in a school, community, or faith-based setting. Quest’s conceptual model stems from such theories as social learning, information-rational, social bonding, as well as others (VTSF compendium programs-program information worksheet-Lion-Quest’s Skills for Adolescents, 2004).

The U.S. Department of Education has recognized the program as a promising Safe, Disciplined, and Drug-Free Schools program (U.S. Dept. of Ed, 2001).

The program comprises five key components that address different aspects of young people’s lives: 1) school curriculum, 2) parent involvement, 3) positive

school climate, 4) community involvement, and 5) school staff training and follow-up support (U.S. Dept. of Ed, 2001, p. 78).

Eisen, Zellman, Massett, and Murray (2002) conducted a study using 34 schools from four school districts in three metropolitan areas during the school years 1997-1998. The initial sample consisted of 7426 sixth graders. The schools were matched on prevalence of drug use within the past 30 days and then randomized to treatment conditions. The comparison schools, 17 in number, were given their regular drug education curriculum and the 17 treatment schools were presented with Skills for Adolescence. One-year follow-up data was collected from 84% of the original 7426 students. Cigarette smoking was lower in the treatment group (2.9%) than in the control group (3.9%, $F=4.37$, $p < .05$) (Eisen et al., 2002).

A follow-up study by Eisen, Zellman, and Murray (2003) examined second-year behavior outcomes of Skills for Adolescence. This study was conducted using the same sample as Eisen's original study. Of the original number of students, data was collected from 5691 students, now eighth graders. "No significant main effects were found for lifetime or recent use of alcohol, cigarettes, or other illicit substances" (Eisen et al., 2003, p.893).

One other study starting in April 2001 was conducted in Japan. There were 493 students from Shiba-Higashi junior high school in Kawaguchi city. The SFA program was translated to fit the needs of the school. During the first school year, students took the SKA program for 19 hours. In the second year, students completed between 41-45 hours. Questionnaires were completed in March 2003. There was a significant difference in smoking behavior in the past month ($p < .05$) based on a comparison of

mean scores. However, no control group was included in this study so it is impossible to get direct evidence that the program did alter behavior (Japan Initiative for Youth Development, 2004). Again, long-term effects in this study were not evaluated.

An early study by Botvin and colleagues in 1983 targeted seventh-graders from suburban New York schools. In this study students were randomly assigned to three conditions: treatment once per week for 15 weeks, treatment several times per week for 5 weeks, and a control. The treatment conditions were similar in effectiveness (Botvin & Kantor, 2000). The interesting result from this study showed that “groups receiving additional booster sessions had one-half as many regular (i.e., weekly or daily) smokers as groups not receiving booster sessions” (Botvin & Kantor, 2004, p. 253-254).

Too Good For Drugs-TGFD (Prevention)

Too Good For Drugs is a prevention program geared for grades K-12. The program can be implemented in a school, community, or faith-based setting. The theoretical framework for the program has elements of the following theories: social learning, social development, and problem behavior (VTSF compendium program-program information worksheet, 2007).

In August 2003, Dr. Tina Bacon, an Evaluation and Research Consultant, conducted an evaluation of TGFD. The program was implemented during the 2002-2003 school year in the district of Lake County in Florida. Six elementary schools were randomly selected from the district. There were 52 teachers that participated with 26 being in the treatment group and 26 in the control group. Of the 1142 students that participated, 49% were third graders and 51% were fourth graders. Prior to the implementation of TGFD, teachers in both groups completed evaluations of student

behaviors. Upon program completion and then again four months following program delivery, the teachers assessed the student behaviors again. The students, both in treatment and control groups, completed pre-, post-, and four-month follow-up questionnaires. “The following risk protective factors were examined in the study: Socially Appropriate and Inappropriate Behaviors; Emotional Competency Skills; Social and Resistance Skills; Goal Setting and Decision Making Skills; Perceptions of the Harmful Effects of Drugs; and Attitudes Towards Drugs” (Bacon, 2003, p. 3). The subsequent results are: those students involved with the program had statistically significant higher scores or higher levels of emotional competency skills, social and resistance skills, perceptions of the harmful effects of drug use, and goal setting and decision making skills than those in the control group. The results for teachers’ observations and judgments include: students involved with TGFD had statistically significant higher scores or levels of personal and social skills, prosocial behaviors, and fewer inappropriate social behaviors than those students in the control group.

In summary, the *TGFD* prevention program evidenced a positive effect on third and fourth graders’ behaviors in the classroom up to four months following program delivery. The prevention program was also successful in impacting four of the five protective factors associated with strengthening children’s abilities to make positive, healthy decisions—emotional competency skills; social and resistance skills; goal setting and decision making skills; and perceptions of harmful effects of drug use (Bacon, 2003, p. 5).

In another study involving the implementation of TGFD II in middle schools, six middle schools were randomly selected from a school district in Florida. The district

serves an area that is urban, suburban, and rural. The subjects (1318) for the study were of various ethnicities in sixth grade. Three of the schools received the treatment and three served as controls. Students in both groups demonstrated similar levels of intentions to use tobacco and to not use tobacco over the course of the next year. Upon completion of the TGFD II program, students receiving the treatment had positive effects versus the control group. These effects continued up to 20 weeks later. Additional observations to determine long-term effects were not conducted (Research summary, 2000).

Supplemental Programs

Additional programs that are offered by the VTSF include the following: 1) Anti-Tobacco Media Blitz, 2) Coole School, 3) Keep A Clear Mind, 4) NICoteen, 5) Skills for Action, 6) Smokeless School Days, 7) Tar Wars, 8) Teens Tackle Tobacco, and 9) Youth Media Network. The only information that was found in regards to these programs came from the Virginia Tobacco Settlement Foundation's website at www.VTSF.org unless otherwise stated.

The Anti-Tobacco Media Blitz

The ATMB is a prevention program for high school students and uses the social influence model of prevention. The program focuses on advertising and social marketing. Starting in early part of the school year, anti-tobacco messages are kept in front of the students and this continues throughout the school year. The campaign, itself, is designed by and for students. The students develop messages with the assistance of both educators and media professionals. "The ATMB combines the principles of youth development, or the asset-building approach, with media literacy" (VTSF compendium

program information worksheet-The Anti-Tobacco Media Blitz program description, 2007). There is also a middle school version of this program.

Coole School

Coole School is a program that can be implemented in either a school or community site. Grades 2-12 are the target audience. The framework for this program includes interactive daily planners that are designed for in-class teacher led discussions. The outcomes for the program includes: 1) prevents tobacco use by students, 2) raises protective factors, 3) increases refusal skills, and 4) lowers particular risk factors. According to the VTSP website, students in this program reported that they were 18 times less likely to use tobacco products than the control group. The specific study regarding this statistic was not reported on the website.

Keep A Clear Mind

Keep A Clear Mind is a prevention program that has been tested in grades four through six with both girls and boys. This program can be implemented in schools, community, or faith-based settings. The social learning theory is the foundation for this program which addresses peer pressure, self-efficacy, knowledge, family expectations, perceived use by peers, actual use, intended use, family communication regarding tobacco, and motivation for nonuse. The program has four lessons on the following: tobacco, alcohol, marijuana, and tools to say no. The program also includes five parent newsletters and incentives for students. Very little school time is needed for this program since students do the lessons at home with the assistance of a parent or guardian. “Students and parents participating in the program report increased communication about drugs. Students report a change in their perception of peer norms and increased belief in

their ability to resist peer pressure to use drugs” (VTSF compendium program information worksheet-Keep A Clear Mind, 2007).

The NICoteen Program

The NICoteen Program is designed for students between the ages of 12-15, specifically middle school-aged children. The program is a prevention program that utilized the theory of planned behavior. The program can be implemented in schools, community, or faith-based settings.

There are five basic facts that the program is suppose to assist adolescents in understanding. These facts include: 1) smoking is expensive, 2) smoking affects health, 3) smoking takes away independence, 4) the addiction to smoking is demanding, and 5) smoking consumes a large amount of time. The program is an addiction simulation program that helps students understand the physical, mental, financial, and social costs of tobacco addiction. It is a hands-on program that is to be used in addition to the present tobacco curricula (VTSF Compendium Programs Information Worksheet Program Information-The NICoteen Program, 2007).

Skills for Action

Skills for Action can be implemented in grades 9-12 in school, community, or faith-based settings. This prevention program is

based on the rationale that older adolescents are at the developmental stage in life when they need to be active, contributing participants in the world around them.

The program is designed to empower young people to identify and work to address pressing needs in their schools and communities and, in so doing, develop a wide range of skills personal, intellectual, academic, and social-that will help

them become healthy and drug-free employees, citizens, and leaders” (VTSF Compendium Programs Information Worksheet Program Information-Lions-Quest Skills for Action, 2007, p.1).

There are three main components to Skills for Action that assist schools in addressing both the risk and protective factors associated with promoting safe, healthy, and drug-free behaviors as well as reducing unhealthy behaviors. The components are: 1) a comprehensive school and classroom based service learning and life skills curriculum; 2) family and community involvement; and 3) training and follow-up support. The curriculum contains 26 skill-building sessions, 33 service-learning sessions, and a 15 session drug prevention supplement titled Teens-Alcohol and Other Drugs (VTSF Compendium Programs Information Worksheet Program Information-Lions-Quest Skills For Action, 2007).

According to the VTSF’s website Program Information, Skills for Action “has undergone extensive pilot testing and minor cultural adaptations and is being used in the United States, Canada, New Zealand, and Australia, demonstrating its usefulness and applicability in diverse cultures and student populations” (p. 5). However, no literature could be obtained that mentioned this program by name in the tobacco prevention studies.

Smokeless SchoolDays

Smokeless School Days is promoted as a prevention and cessation/reduction program for middle and high school students from grades 7-12. The program is designed to be implemented in a community setting. The program is actually five programs geared towards the higher-risk youth and uses the Prochaska and DiClemente’s Ladder of Cessation. The programs are usually only one day and are supposed to bring the students

one step closer to ending their tobacco addiction using a student friendly non-punitive approach (VTSF Compendium Program Information Worksheet Program Information-Smokeless SchoolDays, 2007).

Tar Wars

Tar Wars is a prevention program that was developed by Dr. Jeffrey Cain and Glenna Pember. In 1993, the American Academy of Family Physicians (AAFP) endorsed the program; in 1997, the AAFP became in charge of the operation of the Tar Wars Program. By the year 2000, the AAFP acquired full ownership of the program (Program History).

The program is for children ages 10-12 in grades 4 and 5. The program is also designed to be implemented in a school, community, or faith-based setting. “The Tar Wars lesson plan is designed to increase the student’s knowledge of the short-term effects of tobacco use, help the students identify the reasons why people use tobacco, teach students about the financial implications of tobacco use, and prompt students to think critically about tobacco advertising” (VTSF Compendium Program Information Worksheet Program Information-Tar Wars, 2007, para. 3).

Teens Tackle Tobacco

Teens Tackle Tobacco (TTT) is a prevention program that is school-based for middle and high school age students. The program, though, is typically implemented in the middle school setting. The health belief model, social learning theory, and resiliency and protective factor research is the basis for this particular program. Specific outcomes that the program addresses includes “increases student’s tobacco-related knowledge; provides students with means to communicate their knowledge and feelings to peers,

family, and community through their creative activities and health advocacy” (VTSF Compendium Program Information Worksheet Program Information-Teens Tackle Tobacco, 2007, para. 4).

Youth Media Network

The Youth Media Network is a prevention program for school implementation for youth between the ages of 8-18. The program’s theoretical framework stems from the social competency theories, including self-efficacy, the social learning theory, and resiliency and protective factor research. There are 12 lessons in the program that focus on social marketing, basic knowledge about tobacco, and advocacy. The specific outcomes the program is suppose to address include “increases youth’s knowledge of tobacco-related issues and health information; provides a means of communication with peers; increases skills and involvement in taking action to counter the tobacco industry’s influence” (VTSF Compendium Program Information Worksheet-Program Information-Youth Media Network, 2007, para. 4).

Long-term Effects

According to Flay (as cited by Sussman, Dent, Stacy, Sun, et al., 1993), behavioral effects among youth are evaluated at least one year following the program implementation. It usually takes a year or longer before changes in behavior can actually be detected. The research of Ellickson, Bell, & McGuigan as well as by Flay et al. (as cited by Dent et al. 1995) have revealed that school-based prevention programs that are implemented in junior high school have very little long-term success without follow-up reinforcement beginning in high school . However, the research of behavior outcomes on Project TNT by Dent et al. (1995) did demonstrate that school-based tobacco programs

can be effective at least two years following the program as students transition into high school. This indicates that the program must have a combined component to have a real impact on the higher levels of smoking.

For Project ALERT, a study by Ellickson et al. (as cited by Orlando et al., 2005) revealed that program effects on drug use diminished after students entered high school, but effects on cognitive risk factors lasted longer. Another study on Project Alert by Bell, Ellickson, and Harrison (1993) all of the previous effects on use that were seen in grade seven disappeared by grade nine.

Project Towards No Drug Abuse revealed that at the five-year follow-up the only significant reduction was for hard drug use (Sun et al., 2006). However, another study by Skara and Sussman (as cited by Sun et al., 2006) “found that, of the programs that provided booster sessions, the majority had maintained long-term reductions for cigarette, alcohol, and marijuana use at final follow-up testing (ranging from 2 to 15 years post-program)” (p. 192).

In the randomized trial of All Stars, the “long-term results were not promising for either group of interventions” (McNeal et al., 2004, p.167). Another study by Harrington et al. (2001) regarding the All Stars program, demonstrated similar results. “Results indicate that the All Stars program, when administered by teachers, had an immediate effect on mediating variables that did not persist over time” (p. 533). According to Glantz (2005), the Hutchinson Smoking Prevention Project, one of the largest studies, “failed to reach statistical significance” (p. 157). The results of Botvin’s Life Skills Training program “did not account for the multiplicity of outcome variables that were measured. Based on the results of their published report, it appears that applying a 2-tailed analysis

that accounts for multiple comparisons would eliminate some of the statistically significant findings even in their study” (Glantz, 2005, p. 157). In another review of the evaluations of the Life Skills Training, Gorman also showed that there was little consistency. “The use of such a variety of smoking outcomes across the published LST evaluations raises questions as to whether the positive program effects reported are in fact measurement dependent” (Gorman, 2005, p. 485).

Summary

Based on the literature review, there have been few long-term studies to examine the longevity of the effects of tobacco prevention and cessation programs. School-based programs are often limited by the academic school calendar and other constraints. The programs that are available all have shown short-term effects on increasing student knowledge about the harmful effects of tobacco and on immediate intentions to use tobacco. However, unless these programs continue from elementary to middle school and on into high school, the efforts may prove fruitless. In order to rectify the problem of youth tobacco use, there will have to be a comprehensive program that includes additional elements such as creating a smoke-free environment, more stringent policing of tobacco sales to minors, community and faith-based complimentary programs, anti-tobacco messages throughout the community and schools, and an increase in the price of tobacco. These will all need to be included along with the school-based programs. Additionally, policies regarding land use such as zoning, “may contribute to the reduction in smoking by essentially restricting the physical availability of tobacco products” (Peterson, Lowe, & Reid, 2005, p. 1631). These are all pieces to the puzzle that need to come together for the perfect fit if there is to be a decrease in tobacco use among our

youth. By incorporating all of these pieces, students will be bombarded with anti-tobacco messages. No stone will be left unturned. Only then, can we expect a change.

CHAPTER III

METHODOLOGY

Study Design

This research was a focused analysis of the Virginia Tobacco Settlement Foundation programs that were instituted in 2005-2006. This study did not focus on individuals, groups, or classes or people, only evaluation results. The evaluations were provided by the VTSF and will be used to compare implementation environments and settings as well as examine the results of those programs presented in the middle schools of Virginia.

The organizations that received funding from the VTSF must submit quarterly reports and a year-end analysis. This is a requirement of the VTSF. The quarterly reports include such information as program goals, objectives, program targets, program outputs, expected outcomes, and actual outcomes. In addition, there is a section on effective strategies, and recommendations for future activities. Refer to Appendix A for an example of the VTSF Report.

During the '05-'06 cycle, there were 31 organizations that received funding. The organizations include various public school systems, community services organizations, and faith-based groups. The organizations utilized several of the compendium programs offered by the VTSF. The programs with evaluation reports that were incorporated into the study included the prevention programs: All Stars, Al's Pals, Life Skills Training, Positive Action, Project Towards No Tobacco, Project Towards No Drugs, and Too Good For Drugs. The cessation programs included: Ending Nicotine Dependence, Intervening with Teen Tobacco Users, and the supplemental programs include Keep A Clear Mind

and the NICoteen® Program. Additionally, the following programs were utilized during the 2005-2006 cycle: Get Real About Tobacco, Families in Action, Here's Looking At You, Lion's Quest, and Families and Schools Together. Programs that were funded by the VTSP but were not utilized during this cycle include Skills for Adolescence, Creating Lasting Family Connections, Helping Teens Stop Using Tobacco, Not On Tobacco, and Project EX. These programs were not included in the analysis.

This study employed a comparative analysis using tables, charts, and a quantitative analysis to answer the research questions. Again, the VTSP provided all information utilized in this analysis.

Programs

This study focused on tobacco prevention and cessation programs that were funded by the VTSP. The programs were implemented in various demographic settings such as urban and rural and by such organizations as the YMCA, churches, and the public school systems. These programs were implemented during the 2005-2006 cycle throughout the state of Virginia. Prior to 2006, the VTSP had divided the state into 9 regions, which included: the North, North Central, Northeast, Northwest, East, Central, Southside, West, and Southwest. Following restructuring in 2006, 4 regions were created: North, Central, Southeast, and Southwest.

Instrumentation

The VTSP provided a total of 63 evaluations, mostly in the format of the VTSP Quarterly Report. Refer to Appendix A. Once the evaluations were obtained, they were reviewed thoroughly. A Microsoft Excel spreadsheet was compiled using the data obtained from the evaluations. Each individual evaluation was entered into the

spreadsheet with the following information: program name, location, geographic region-urban or rural, grade or age range, organization providing the program, type of evaluation, pre/post test if available, and the total number of individuals targeted. By entering this information into an Excel spreadsheet, specific cells were then selected and grouped for a comparison of programs. For example, a comparison was made between implementation settings, rural versus urban; faith and community versus school. Middle school programs were also examined in a similar manner.

Once the information was entered into the spreadsheet, cells were then grouped based on specific information and tables were then compiled noting frequencies and percentages based on the data from these cells. Since most programs did not provide pretest/posttest results, a more in depth statistical analysis was not applicable.

An overall synopsis of implemented programs was included to demonstrate the number of students targeted as well as illustrate the most popularly chosen programs. Further assessments of evaluation reports provided by the VTSP were reviewed along with a compilation of recommendations given by program facilitators. These recommendations were placed in a chart for easy review. This should give insight into activities and strategies that might be beneficial for future facilitators.

The research questions to be answered included: 1) is there a difference between school, faith-based, and community-based programs in increasing knowledge about the harmful effects of tobacco, 2) is there a difference between program settings urban versus rural in increasing knowledge and 3) is there a difference in middle school programs in increasing knowledge?

Data Collection

The data for this study was collected by sources other than the researcher. In many cases, the program facilitators served as the evaluators, which may have affected the results of this study. In addition, some evaluations were deemed inappropriate for inclusion in this study due to missing documentation. Also, some “grantees were given the option of submitting either a full report or a summary” (personal note from Terri-Ann Brown). Upon completion of all analyses, recommendations for future studies as well as recommendations to the VTSP were prepared.

CHAPTER IV

RESULTS

The purpose of this study was to determine if environmental settings have an impact on the knowledge acquired during implementation of tobacco prevention and cessation programs that are funded by the Virginia Tobacco Settlement Foundation as well as determine if one middle school program is more effective than another in increasing knowledge about the harmful effects of tobacco use. The following research questions for this study included: 1) is there a difference between school, faith-based, and community-based programs in increasing the knowledge about the harmful effects of tobacco, 2) is there a difference between program settings urban versus rural in increasing knowledge and 3) is there a difference in middle school programs in increasing knowledge? The VTSF provided all evaluations that were used for the analysis. Due to the inconsistency of some of the evaluations, the analysis is limited to reporting frequencies and percentages.

The VTSF provided a total of 63 evaluations. Out of the 63, one was deemed unusable based on a failure to provide complete data including the area where the program was implemented. A description of each program utilized during this cycle is provided for a better understanding of the programs that were available during this time period. The information provided comes from the VTSF Information Worksheet available from www.vtsf.org unless otherwise noted.

Description of Utilized Programs

The **All Stars** program is a substance prevention program that targets tobacco, alcohol, marijuana, and inhalants. In addition to drug use, the program also focuses on

prevention of other risky behaviors such as school delinquency and premature sexual activity. The program contains 13 sessions and is designed for 6th and 7th graders. An extended version of the Core program is available which includes 8 supplemental activities. A booster session, utilizing 9 sessions, serves as an augmentation to the core program. The All Stars Plus has 13 more sessions and should be presented one-year post-Core program.

The All Stars program was presented in a community setting to 91 youth between 10-13 years of age and to 1347 students in a school setting to 4-6th graders for a total of 1,438 students served.

The **AI's Pals** program focuses on children ages 3 to 8 years of age. The program is an early childhood prevention program designed to prevent tobacco, alcohol, and drug use while promoting attitudes and prosocial skills that assist youth in peer pressure resistance. The total program is 46 lessons in length created to be teacher delivered twice a week. Of the 46 lessons, 4 are specific to tobacco prevention.

The VTSF sponsored 7 AI's Pals programs, all of which were presented in a school setting. Of the 7 programs, 6 were in urban areas and one in a rural setting. A total of 2,004 youth received the AI's Pals program.

The **AI's Pals Boosters** is a 9-lesson curriculum for use with children that have already gone through the AI's Pals program. Typically, these children are in the 2nd or 3rd grades. Two organizations utilized the booster program during the '05-'06 cycle with one in an urban area and one in a rural setting. Both programs were presented in the schools to 541 students.

Ending Nicotine Dependence is an 8-module teen tobacco cessation and reduction program. The program is designed to be implemented in one, one-hour session for eight weeks or two, one-hour sessions per week for four weeks. The program utilizes group counseling to create peer pressure for quitting. One school in a rural area presented the program in a school setting to 37 students between the ages of 11-17.

Families in Action is a prevention program that concentrates on families with children entering middle or junior high school. The program is designed to teach kids social resistance skills in an effort to prevent alcohol, tobacco, and other drug use. The curriculum is presented in six 2 ½ hour sessions over a period of 6 consecutive weeks (Families in Action-Community guide to helping America's youth, n.d.).

This program was implanted twice during the cycle, both by the same organization. A total of 247 youth in 8th grade in an urban, school setting received the program. An additional 57 adults received the program.

Families and Schools Together is a family-strengthening program designed to increase family involvement. The program was implemented once during the time period to 48 families of 4-9 year olds in an urban setting (Wisconsin Center for Education Research, 2007, ¶ 1).

Get Real About Tobacco is a prevention program designed for use for grades K-12. The program is based on recommendations made by the CDC. The goals of the program are to reduce the risk of students using tobacco, encourage students who do use to quit, and to aid students in promoting anti-tobacco messages.

This program was one of the more popularly chosen programs during the '05-'06 cycle. In all, the program was implemented 7 times with 6 being in a school setting and 1 in a faith-based setting. Six of the 7 were also in an urban setting and only 1 in a rural environment. A total of 1,737 students received the program.

Here, Now, and Down the Road is a parent education series to the Al's Pals program. It is designed to help parents support the same concepts at home with their children that are emphasized in the Al's Pals program.

This program was implemented only one time during the cycle in an urban area. Ten parents were in attendance.

Here's Looking At You aids students in gaining the information and knowledge to make healthy life choices. The program can be used in grades K-12. This program was implemented a total of 3 times to a total of 1,390 youth. All 3 programs were implemented in an urban, school setting; one to 481 students in 4th grade, one to 568 students in 6th grade, and the last one to 341 students in 4th and 5th grades and 9th grade.

Home Team Passport is the parent piece to Project Charlie. This component includes 4 storybook and activity packets to teach family members about drug and alcohol prevention (Crime Prevention Center, 1991).

During the '05-'06 cycle, this program was presented to a total of 18 families for parents of K-5 children in an urban setting.

Intervening with Teen Tobacco Users, or TEG, is a cessation and reduction program for grades 7-12. The 8-session program is designed to move participants through the stages of change. A total of 58 students received this program during the

cycle with 51 from an urban area in grades 6-12 and the remaining 7 from an urban school in grades 9-12.

Keep A Clear Mind is a prevention program geared towards grades 4-6. The program has 4 lessons, student incentives, and 5 parent newsletters. Students complete lessons at home with the supervision/assistance of a parent or guardian, return to school with a signed “tear-off” sheet from the parent, and then receive a token such as a sticker or pencil. The program addresses the use of tobacco, alcohol, and marijuana and tools to say no to these drugs. One rural school implemented the program to a total of 589 3rd graders.

Life Skills Training is a substance-abuse prevention and competency enhancement program. The program is designed to assist students in the development of skills necessary to avoid unhealthy, high-risk behaviors. The program uses a combination of peer interaction, provider intervention, and coaching.

During the '05-'06 cycle, 10 separate LST programs were presented. Nine of the ten were presented in a school setting and only 2 were in an urban area.

Living Free of Tobacco, or LIFT, is designed for peer leaders to teach 6th and 7th grade students. The peer leaders are high school students. The program discusses peer pressure, media influence, and short and long-term use of tobacco products. This program was presented to a total of 71 youth in 6th and 7th grades in an urban, community setting.

Lion's Quest Skills for Adolescence is targeted for adolescents in the grades 6-8 between the ages of 12-14. The program is school-based and is designed for adolescents

that come from various socio-economic backgrounds and ethnicities. The program is addresses problem behaviors, such as alcohol and drug use as well as help youth develop character, life and citizenship skills. Only one Lion's Quest program was implemented. The program was presented in an urban, school setting. A total of 407 youth were served.

The **NICoteen**® program is a prevention program for youth between 12-15 years of age. The program is an addiction simulation program that helps students understand the physical, mental, financial, and social costs of tobacco addiction. Two organizations provided the program. One presented to 176 students in grades 6-8 in a rural, school setting while the other organization presented to 75 students in 7th grade in a rural, school environment.

Positive Action is a prevention program for children between the ages of 5-18. The curriculum is designed to help youth develop positive thoughts and actions, improved behavior and self-concept. Three Positive Action programs were implemented during the '05-'06 year in Virginia with 2 being in an urban, community setting serving 1056 youth in grades K-8. The other one was implemented in a rural, school setting that served 1278 youth and their families.

Project Alert is a prevention program for students in grades 6-8. The 14 sessions are taught over a 2 year time period. The program concentrates on tobacco, alcohol, marijuana, and inhalants. Project Alert was delivered to 484 students in one urban school in grades 6-7.

Project Charlie is a prevention program for elementary school children. The program is centers around building self-esteem and teaching social competencies, while

discouraging drug use. There are 46 primary lessons and 70 intermediate lessons. The lessons are divided into 4 units (Crime Prevention Center, 1991).

Two programs of Project Charlie were presented in a rural, school setting to 667 students. Additionally, a faith-based organization provided the program to 40 more youth, in grades 6-8, in an urban setting for a total of 707 students targeted.

Project TND is a prevention program designed for youth between the ages of 14-19. The program has 12 sessions and incorporates the school as the community. Two schools utilized the program in '05-'06. One served 42 students, ages 13-17, in an urban, school environment and the other served 769 students, ages 13-15, in an urban, school environment.

Project TNT has 10 sessions in the core curriculum and 2 booster lessons. The lessons are 40-50 minutes in length and are designed for students in grades 5-9. All of the core and booster lessons focus on tobacco control and prevention. The 10 core sessions should occur over a 2-week period, but can be taught in 4 weeks if needed. The 2 boosters are presented in a 2-day period 1-year after the core sessions. Project TNT was delivered 2 times, once in an urban school setting to a total of 281 in the 9th grade and once to a total of 176 students in grades 8-9 in a rural, school setting.

Science, Tobacco, & You is a prevention program that uses interactive activities that assist the students in understanding the harmful effects of tobacco use as well as the effects of second-hand smoke (Anne Arundel Healthy Kids,n.d).

This program was presented only once during the cycle to 206 children in grades 4-6 in a rural, school setting.

Strengthening Families has 2 versions. One is for children between the ages of 6-11 and the other is for those between the ages of 13-17. The curriculum consists of 3 life skill courses that address the youth's social or life skills, the parenting skills, and the family life skills. There are 14 weekly sessions for both parents and youth. There are youth and parent sessions with both attending a family session at the end. Two urban schools presented Strengthening Families. One school served a total of 59 students between the ages of 9-15, while the other served a total of 12 families.

Too Good for Drugs is a prevention program geared for grades K-12. Three organizations utilized the program. All 3 were provided in a school setting with 2 of the 3 in an urban area. A total of 1,841 youth and families were targeted.

Regions of the VTSE

The 9 regions include: the North, North Central, Northeast, Northwest, East, Central, Southside, Southwest, and West. A brief depiction of the regions is as follows: the North region covers Loudoun and Fairfax counties, the Northwest contains Bath and Rockbridge counties and upwards to Frederick county, Northcentral covers Nelson and eastward to Caroline, the Northeast contains James City to Westmoreland, the East has Southampton to Accomack, the Central has Sussex county and northward to Hanover, the Southside contains Halifax and east to Dinwiddie, the West encompasses Patrick and north to Alleghany, and the Southwest covers Lee county east to Floyd county. Refer to Figure 1. (personal email from VTSE Grants Management Director, Donna Gassie). These regions were later changed and expanded so that there were only 4 regions: the North, Central, Southwest, and Southeast.

Overwhelming, the majority of programs were presented in the Southwest region (n=24). The region with the next highest numbers of implemented programs was Northcentral. Refer to Table 1 and Figure 2.

Figure 1: Regions of the VTSF during 2005-2006

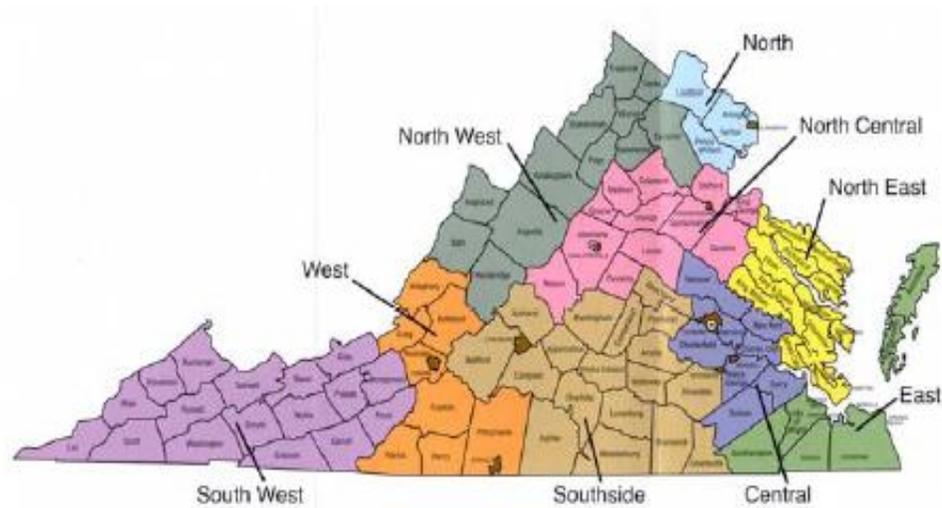
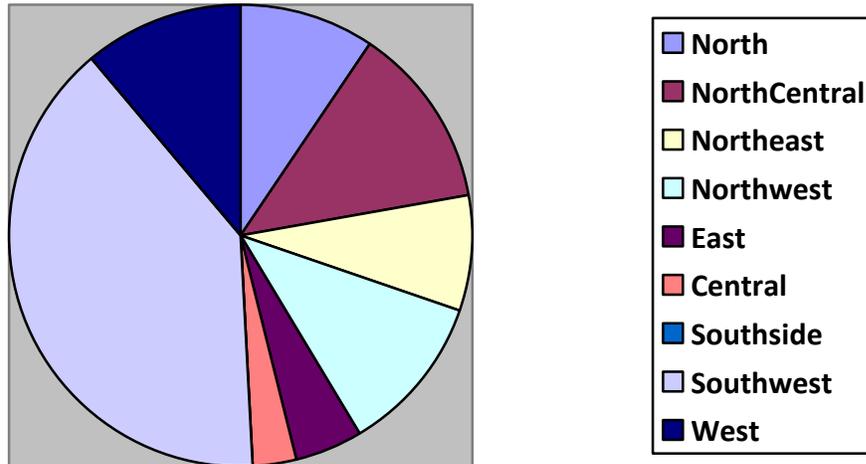


Table 1: Frequencies and Percentages of Programs Implemented Based on VTSF Regions during 2005-2006

Region	n	%
North	6	9.7
North Central	8	12.9
Northeast	5	8.1
Northwest	7	11.3
East	3	4.8
Central	2	3.2
Southside	0	0
Southwest	24	38.7
West	7	11.3
Total	62	100

Figure 2: Programs Implemented by Region



Program Environments

Of the 62 evaluations that were included in the analysis, 38.7% (n=24) were from areas considered rural due to the population and 61.3% (n= 38) were from urban areas. Refer to Table 2.

Overwhelmingly, programs were implemented in a school setting, 88.7% (n=55). A very small percentage, 8.1% (n=5), were implemented in community settings and an even smaller percentage, 3.2% (n=2), were provided in a faith-based atmosphere. Please refer to Table 3. Problems encountered in settings other than schools include failure to get partners for support of programming, absenteeism, and difficulty scheduling due to school conflicts.

The most frequently chosen programs in an urban area included Al’s Pals and Booster 18% (n=7) and Get Real About Tobacco 15.8% (n=6). For rural areas, the most frequently chosen program was Life Skills Training 33.3% (n=8). Following a distant second for rural areas, is Positive Action 8.3% (n=2). Refer to Table 4.

Overall, the most popularly chosen programs that were implemented in schools include Life Skills Training 16.4% (n=9), Al's Pals and Booster 16.4% (n=9), and Get Real About Tobacco 10.9% (n=6). For the community setting, organizers used Positive Action 40% (n=2), All Stars 20% (n=1), LIFT 20% (n=1), and Life Skills Training 20% (n=1). Faith-based organizers chose Project Charlie and Get Real About Tobacco equally at 50% (n=1). Refer to Tables 5.

Table 2: Frequencies and Percentages of Programs Implemented in Urban and Rural Settings

	Urban	Rural	Total
n	38	24	62
%	61.3	38.7	100

Table 3: Frequencies and Percentages of Programs Implemented in Schools, Communities or Faith-based Settings

	School	Community	Faith	Total
n	55	5	2	62
%	88.7	8.1	3.2	100

**Table 4: Frequencies and Percentages of the Most Popularly Chosen Programs
Based on the Environment-Urban versus Rural**

Program	n	%
Urban		
Al's Pals	7	18
Get Real About Tobacco	6	15.9
Rural		
Life Skills Training	8	33.3
Positive Action	2	8.3

**Table 5: Frequencies and Percentages of the Most Popularly Chosen Programs
Based on Settings-School, Community, or Faith-based**

Program	n	%
School		
Al's Pals	9	16.4
Life Skills Training	9	16.4
Get Real About Tobacco	6	10.9
Community		
Positive Action	2	40
All Stars	1	20
LIFT	1	20
Life Skills Training	1	20
Faith-Based		
Project Charlie	1	50
Get Real About Tobacco	1	50

Middle School Programs

A total of 29 programs were included in the middle school analysis. This number does not represent the total number of programs presented to this age group during this cycle. Because some evaluations were grouped together, an exact number could not be obtained from these evaluations to accurately depict presentation. For example, grades 4 through 6 would be grouped together and no separate data was presented for each individual grade.

Based on the 29 evaluations included, the Life Skills Training represented the highest percentage of programs at 24.1% (n=7), with Get Real About Tobacco following second at 13.8% (n=4). The programs targeted a total of 6684 students in this age group. The number of students targeted by these two particular programs is 2820 and 936, respectively. LST represents 42.2% (n=2820) of the total and GRAT 14% (n=936). Refer to Table 6.

Of the 29 programs utilized in middle schools, few gave pretest/posttest information in the evaluations. The following results were mentioned in the submission of the VTSF evaluation. Here's Looking at You, implemented to 6th graders yielded a 27.5% improvement in posttest scores over the pretest scores. Project Towards No Drugs presented to 8th graders stated that students knowledge of the harmful effects of tobacco and drugs was significant after the program ($t(86)=-6.24, p<.001$). The Life Skills Training Program, implemented to four 6th grade classes gave the following results regarding knowledge acquisition: using the paired *t*-test, knowledge scores were significant at the $p \leq .001$ level for all four classrooms. The Get Real About Tobacco implemented to 4th-6th grades yielded the following results: 1) regarding health risk

knowledge, 68% of students post-test scores improved at least 20% over pre-test scores and 2) 88.9% indicated the intent to remain tobacco free. The Ending Nicotine Dependence presented to youth between the ages of 11-17 stated the following: 91.3% of post-test scores showed improvement with an average improvement of 74% and 69.1% indicated their intent to remain tobacco free. No additional results regarding knowledge could be obtained. Refer to Table 6 for a complete listing of programs implemented in middle schools during the VTSF cycle.

Table 6: Middle School Programs Utilized during 2005-2006

Program	n	%	# of Students Targeted	%
Positive Action	1	3.5	324	4.9
Project Towards No Drugs	2	6.9	190	2.8
Intervening w/Teen Tobacco Use	3	10.3	88	1.3
Here's Looking At You	1	3.5	568	8.5
Life Skills Training	7	24.1	2820	42.2
Project Alert	1	3.5	484	7.2
Project Towards No Tobacco	2	6.9	457	6.8
Ending Nicotine Dependence	1	3.5	37	.6
Families in Action	1	3.5	247	3.7
Project Charlie	1	3.5	40	.6
Get Real About Tobacco	4	13.8	936	14.0
NICoteen®	2	6.9	251	3.8
All Stars	1	3.5	91	1.4
Science, Tobacco, & You	1	3.5	80	1.2
LIFT	1	3.5	71	1.1
Total	29	100.4	6684	100.1

Programs Utilized During 2005-2006 Cycle

Overall, agencies and various organizations selected 23 different programs during the 2005-2006 grant cycle. The most popularly chosen program was Life Skills Training

16.1% (n=10), followed by Al's Pals and/or Boosters 14.5% (n=9), and Get Real About Tobacco 11.3% (n=7).

When examining the number of students, families, and/or students and families, the top 3 are: Life Skills Training 21.7% (n=4064), Positive Action 12.5% (n=2,334 youth and families), and Al's Pals and/or Boosters at 10.6% (n=1,986). Refer to Table 7 for a complete listing of program utilization.

Table 7: Frequencies and Percentages of All Implemented Programs

Program	n	%	# of Students	%
All Stars	2	3.2	1438	7.7
Al's Pals & Boosters	9	14.5	1986	10.6
Know Your Body	0	0.0	0	0.0
Life Skills Training	10	16.1	4064	21.7
Positive Action	3	4.8	2334 y & f	12.5
Project Alert	1	1.6	484	2.6
Project TNT	2	3.2	457	2.4
Project TND	2	3.2	190	1.0
Too Good for Drugs	3	4.8	1841 y& f	9.8
Creating Lasting Family Connections	0	0.0	0	0.0
Ending Nicotine Dependence	1	1.6	37	.2
Helping Teens Stop Using Tobacco	0	0.0	0	0.0
Intervening w/Teen Tobacco Users	3	4.8	88	.5
Not On Tobacco	0	0.0	0	0.0

Project EX	0	0.0	0	0.0
Keep A Clear Mind	1	1.6	589	3.1
NICoteen®	2	3.2	251	1.3
Smokeless School Days	0	0.0	0	0.0
Anti-Tobacco Media Blitz	0	0.0	0	0.0
Coole School	0	0.0	0	0.0
Skills for Action	0	0.0	0	0.0
TarWars	0	0.0	0	0.0
Teens Tackle Tobacco	0	0.0	0	0.0
Youth Media Network	0	0.0	0	0.0
Here's Looking At You	3	4.8	1390	7.4
Get Real About Tobacco	7	11.3	1737	9.3
Families in Action	2	3.2	304	1.6
Project Charlie	3	4.8	707	3.8
Here, Now, & Down The Road	1	1.6	18	.1
LIFT	1	1.6	71	.4
Home Team Passport	1	1.6	18 families	.1
Strengthening Families	2	3.2	72 y & f	.4
Lion's Quest Skills for Adolescents	1	1.6	407	2.2
FAST	1	1.6	48	.3
Science, Tobacco , & You	1	1.6	206	1.1
Total	62	99.5	18,736	100.1

Note. Y & f refers to both youth and their families.

Recommendations to VTSF by Facilitators

As part of the VTSF evaluation form under section II, there are two questions that pertain to recommendations for future activities. One question in particular concentrates on suggestions for VTSF to further meet the needs of the youth of Virginia in preventing tobacco use. Table 8 provides a listing of all recommendations stated on the evaluation forms. Twenty-three different organizations provided a total of 32 comments. Some comments were not recommendations but statements acknowledging the work of the VTSF. Note-worthy recommendations include lobbying legislators to enact stricter access laws for youth, public awareness and advertising of programs, and to have the kids that have participated in the VTSF programs to serve in the capacity of ambassadors to their peers.

Table 8: Recommendations of Facilitators for VTSF about how to further meet the needs of Virginia’s youth as it relates to tobacco prevention:

<i>Agency</i>	<i>Recommendation(s)</i>
Northern Virginia Family Services	<p>The incentive items & the borrowing of educational materials through the Grants Program Administrators is a wonderful resource. NVFS will definitely take advantage of the educational materials in the upcoming grant period.</p> <p>The training workshops and the curriculum trainings are extremely helpful. The presenters provide current and relevant information which is</p>

	<p>extremely important in tobacco use prevention.</p> <p>Also, the informational flyer is another way to further meet the needs of Virginia's youth relating to tobacco use prevention.</p>
Giles County Partnerships for Excellence Foundation, Inc.	<p>We see a definite need for prevention and cessation programming for youth, particularly in rural areas such as Giles County. We have also found that implementing programming in an after-school setting is helpful to the youth, families, and schools. The programs that are sponsored by VTSF are very helpful to meet these needs.</p>
Alexandria Community Services Board	<p>The <i>Al's Pals</i> curriculum would benefit from additional lessons specific to tobacco use prevention, that include scenarios and photographs, similar to lessons on weapons and medications.</p> <p><i>Al's Pals</i> provides a means to practice Healthy Choices in the classroom, but there is no program for tobacco prevention in the home. There are</p>

	<p>parent letters that parallel the <i>Al's Pals</i> Lessons, but nothing that brings the experience into the home setting. Young children are highly influenced by what they see and experience in the home, so creating materials that parents can use to</p> <p>1) understand the influence their habits have on their children, and 2) strengthen healthy habits, or change unhealthy habits seems to be an important trust that is missing.</p>
<p>The Ethiopian Community Development Council, Inc. African Community Center</p>	<p>VTSF could offer more tobacco prevention materials and/or free giveaways. Oftentimes the ACC staff found that the teenage brothers and sisters of the youth enrolled in MAMBO were in need of additional tobacco prevention materials.</p>
<p>Fluvanna County Public Schools</p>	<p>Increase visibility of the advertising campaign. Consider funding youth-driven campaigns within schools/communities which foster and promote prevention messages.</p>
<p>Rockbridge Area Community Services</p>	<p>Continue to provide and support funding for excellent tobacco use prevention programs.</p>

Child & Family Services of Eastern Virginia	<p>Continue to keep Y-logo marketing program innovative so that kids will be exposed to new ideas and information.</p> <p>VTSF is doing a great job with educating our youth about the harmful effects of tobacco use. Although the FAST program was removed from the VTSF compendium because it was not a purely tobacco prevention program, FAST demands and has gained the respect of many youth, their peers and families. FAST participants seem to trust the FAST process and are more apt to follow what it stands for. The FAST program shares the same goals as VTSF and would love the opportunity to continue to share the message with youth and their peers through the support of this grant.</p>
Children, Youth & Family Services, Inc.	<p>Continue to expose youth to the anti-tobacco message by utilizing child friendly advertising (the current commercials and radio ads really grab the attention of youth) and the “Y Street Team”.</p> <p>Continue to fund programs that have shown</p>

<p>Boys & Girls Clubs of Southeast Virginia</p>	<p>positive results surrounding youth tobacco/substance abuse prevention and increase funding to those programs for expansion and serving additional children.</p>
<p>Piedmont Community Services</p>	<p>Youth love to celebrate and socialize and having regional opportunities to get together and be recognized for outstanding achievements and accomplishments-such as graduation or recognizing donors and partners in the programs-would be a lot of fun. Developing a book, like a year in review, to show off all special projects or events that took place during the grant cycle with small write up's describing successes and accomplishments.</p>
<p>Piedmont Community Services</p>	<p>This grant enabled us to deliver successful programming for tobacco prevention in Franklin County. We will continue to provide programming with the aid of VTSP for the next 3 years. This has made a critical impact on prevention work in the Franklin County area.</p>

Cumberland Mountain Community Services	It would be very helpful for the VTSF to general “generic” tobacco prevention media articles to offer to local papers to generate an on-going media campaign that would facilitate interest in the local media. Grantees could add local points of interest to personalize it.
Mt. Sinai Church	One suggestion is to involve kids who have participated in tobacco prevention programs funded by VTSF in promotional activities thereby becoming ambassadors for the message to youth their age. Also, make sure all training materials are age appropriate for the age group you’re targeting.
New River Valley Community Services	Add programs to the compendium that will engage middle-school age children, such as more interactive programs. Some of the participants complained that <i>LST</i> was boring. We have to find ways to engage youth who are used to the excitement and immediate positive reinforcement of video games, text messaging, etc.

Bristol Youth Services	<p>Offer programs for teachers and guidance counselors to educate them about how to incorporate some of the information from the programs we implement into the classroom to reinforce what our programs teach participants.</p> <p>Educate teachers about how to reinforce non-use attitudes in youth.</p> <p>Spend more money lobbying legislators to enact laws that make it harder for youth to access cigarettes.</p> <p>It is helpful to have any type of tobacco programming targeting rural communities, where tobacco use is not only condoned, but often accepted by friends and family members.</p> <p>We have used LifeSkills for the past 4 years and the program has been widely received. It would be great to see it implemented Statewide. Also, more use of the Y campaign. That is right on to what kids respond to.</p>
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Sentara Healthcare	Continue to support programs and education that helps youth build the skills to live a productive and fulfilling life.
Danville-Pittsylvania Community Services	I would like to see more choices for evidenced based tobacco programs targeting elementary and middle school students.
Historic Triangle Substance Abuse Coalition	Continue with public awareness and educational programming. Early prevention with an emphasis on parent education and parent involvement.
Fairfax-Falls Church CSB Prevention Services	<p>Several youth focus groups identified dangers of second hand smoke and the social and financial costs of smoking as information new to them.</p> <p>They also requested more information on health, social and financial effects of <u>alcohol</u> on users, their families and neighbors. One youth noted that he had attended three tobacco prevention programs and none in alcohol prevention, although alcohol use was much more common in their community.</p> <p>There was particular interest in why alcohol and tobacco can be used legally by those of age, as</p>

Blue Ridge Behavioral Healthcare	<p>opposed to other drugs, and why alcohol (particularly wine) is so favored on public television. A combined program on both tobacco and alcohol, the “legal” drugs, should be considered.</p> <p>Prevention education resources for parents in English, Spanish and other large language groups, are limited and needed. VTTSF should consider funding parent education programs in conjunction with compendium offerings.</p> <p>Another program providing services to high-risk youth in a group environment is needed. The youth receiving our services are truant, have a low attachment to school, poor grades and are more likely to drop out of school. All of these factors make the youth more at risk of smoking or using other tobacco products. Broad based classroom style prevention is good for the average student however; small groups reach the students who are less likely to gain the knowledge in the classroom.</p>
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Parkside Elementary School	<p>Keep getting the grants out to bring the programs to the kids. Keeping kids focused on what is healthy and productive is key to their continued success. Consistency of programming has proven to be a key element in our success.</p>
Mountain View Youth & Family Services Carroll County Offices on Youth	<p>The Virginia Tobacco Settlement Foundation will continue to have a positive influence on the health and futures of the youth in our community and the state of Virginia as long as the training and information provided for the programs are maintained at high standards.</p>
Bland County Public Schools	<p>It would be helpful to focus on projects that target youth during their most vulnerable times, like after school and weekends. It is also beneficial to continue funding prevention education for elementary and younger, due to the fact that younger children sometimes are already engaging in risky behaviors, and/or home environment produces a positive attitude towards substance use. These children will benefit from learning positive coping skills and learning that pro-tobacco</p>

<p>Total Action Against Poverty</p>	<p>attitudes are no the social norm.</p> <p>Have more youth events. If you can do something for the youth at least once a quarter. That gives them something to look forward to.</p>
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Research Questions

The purpose of this study was to answer the following research questions:

- 1) Is there a difference between school-based programs, faith-based programs, and community-based programs in increasing knowledge about tobacco’s harmful effects?
- 2) Is there a difference between programs increasing knowledge and the location in which they are presented, urban versus rural?
- 3) Is there a difference between programs implemented in middle schools in increasing knowledge about tobacco?

Based on the examination of the data and evaluations provided by the VTSP, the following can be ascertained. The evaluations from various organizations and agencies that utilized VTSP programs during 2005-2006 are too inconsistent to answer the questions. Although there were numerous evaluations, few provided any real statistical data that could be used to answer the questions with any degree of reliability and validity. Most evaluations make claims that program objectives were indeed met. However, it is difficult to try and interpret the results without any additional data to confirm or disprove these statements. Hopefully for future programs, the VTSP will require a more in-depth statistical evaluation.

CHAPTER V

SUMMARY, CONCLUSIONS, & RECOMMENDATIONS

Introduction

The purpose of this study was to determine if one program funded by the Virginia Tobacco Settlement Foundation produces a more effective result in increasing student knowledge about the harmful effects of tobacco use than another program. The following research questions were posed:

- 1) Is there a difference between school-based programs, faith-based programs, and community-based programs in increasing knowledge about tobacco's harmful effects?
- 2) Is there a difference between programs increasing knowledge and the location in which they are presented, urban versus rural?
- 3) Is there a difference between programs implemented in middle schools in increasing knowledge about tobacco?

The Virginia Tobacco Settlement Foundation provided the information and data to answer these questions in the form of evaluations. The VTSF requires that all grant recipients complete the evaluation, which is similar to the one in Appendix A. In addition, the VTSF's Grant Manual for FY 2004-2005 served as the guide for the grantees for the grant cycle 2005-2006 (Donna Gassie, personal communication, February 26, 2008). Refer to Appendix B.

The findings of this study are perhaps most significant to the Virginia Tobacco Settlement Foundation. The inability to compare programs from a statistical method indicates that a more consistent process should be incorporated by the VTSF. By developing a standard by which all programs are to be evaluated, this will assist the

VTSF with a means of comparison to determine if in fact one compendium program is more suitable for an organization based on setting and environment.

Summary

The VTSF provided a total of 63 program evaluations for the grant cycle 2005-2006. One evaluation was deemed unsuitable due to missing documentation. All 62 evaluations were included in the analysis for environments and settings. Twenty-nine evaluations came from programs implemented in middle schools and were used in a comparison of middle school programs.

Based on an analysis of the evaluations provided by the VTSF, the following conclusions can be made: the most popularly chosen program setting is the school. In addition, the majority of organizations or agencies that implemented VTSF programs were in an urban location.

Of the VTSF Compendium Programs that were offered during the 2005-2006 grant cycle, the most frequently chosen programs included Life Skills Training, Al's Pals and Booster, and Get Real About Tobacco. Of those three, only LST and Al's Pals remain on the current VTSF Compendium Program list.

Conclusions

Research Questions

Question 1: Is there a difference between school-based programs, faith-based programs, and community-based programs in increasing knowledge about tobacco's harmful effects?

To answer this question, all evaluations were reviewed. Due to the lack of consistent reporting and the few pre/post test scores available, this question could not be

answered with any degree of certainty. However, some conclusions can be drawn from the evaluations, review of literature, and comments/recommendations from the facilitators. The school setting is by far the most utilized for program implementation in Virginia at 88.71%. The community setting and faith-based setting fall well behind. This could be due to the difficulties encountered in other settings. These include inability to obtain partnership with other agencies, staffing, and conflicts with school schedules. In addition, the number of targeted individuals is often lower. The school setting offers an important advantage-consistency. Since programs are implemented during school time, attendance is required. The disadvantage to the school setting is because attendance is mandatory, ownership of the program and information is often not taken on by the students. The program may be viewed as yet another school “requirement”. Whereas with the community or faith-based programs, youth are more likely to feel that the programs are more about them than with school programs. Also, since community or faith-based programs are offered after school hours parents tend to be able to become more involved with the programs.

Question 2: Is there a difference between programs increasing knowledge and the location in which they are presented, urban versus rural?

From the evaluations provided by the VTSP, this question cannot be answered completely. The following conclusions can be ascertained from the information: in Virginia, the urban area received the greatest number of programs funded by the VTSP. In fact, 61.29% of the programs were implemented in an urban area. The rural areas received 38.71%. The most popularly chosen programs for each area differed. Urban

sites chose Al's Pals and Boosters and Get Real About Tobacco. The rural sites overwhelmingly chose Life Skills Training.

Question 3: Is there a difference between programs implemented in middle schools in increasing knowledge about tobacco?

Again, due to the inconsistent nature of the evaluations and the data obtained from them, this question could not be answered with any degree of certainty. Four of the 29 evaluations detailed specific statistical results for Life Skills Training, Project Towards No Drugs, Get Real About Tobacco, and Ending Nicotine Dependence. All four programs stated improvement in post-test scores over pre-test scores.

Any conclusions about program effectiveness based on settings/environments cannot be drawn due to the inconsistent evaluation methods submitted by the organizations or agencies awarded grant money by the VTSP. In addition, long-term effects can not be determined since no follow-up evaluations have been conducted.

Based on the literature review and the program evaluations, it is clear that prevention of tobacco use by our youth is still a difficult and multi-faceted problem. No one answer will serve as the solution. It will take continued efforts on the parts of all if a decrease in tobacco use and addiction is to occur. Educational programs should be used, but booster programs need to be provided to these students. Legislative efforts to restrict the sale of tobacco products to minors should be increased, and the sale should be strictly enforced. Saturating the students with anti-tobacco messages and peer pressure against tobacco use are also important to include in the effort. Finally, providing support for family members that use tobacco as well as training and educating of parents and

caregivers should be incorporated into the puzzle as well. Tobacco use is an intricate puzzle and all of the pieces need to be integrated if a solution is to occur

Recommendations to the VTSF

After a careful and painstakingly review of the VTSF evaluations, several recommendations can be made. The following recommendations are based on the analysis in accumulation with the literature review:

- 1) Require the agencies and organizations receiving funds to report quantitative results to the VTSF to allow for more of a comparison of programs
- 2) Group results on an individual grade or age level, for example do not allow results for grades 4-6 to be grouped in one category
- 3) If agencies also conduct their own evaluation, have the agency submit their results and the raw data as well for analysis by the VTSF
- 4) Continue to target high-risk areas
- 5) Continue to lobby for legislation that restricts the sale of tobacco to minors (Jason, et al., 2005)
- 6) Provide follow-up surveys to those youth that received programs to determine if programs have had an impact on actual tobacco use
- 7) Continue anti-tobacco media messages
- 8) Provide support for youth and their family members that use tobacco products

Recommendations for Future Research

Once the VTSF has established a streamlined and consistent method of program evaluation, this study should be re-examined to see if the answers to these research questions can be answered. Until the evaluation process is restructured, any real

comparison of programs may prove futile. In addition, programs that are implemented in middle schools should have a follow-up component that is administered to the youth during the high school years. This will provide insight into whether or not the programs are in fact deterring youth from engaging in risky health behaviors such as tobacco use. An analysis of these results would be beneficial not only to the VTSP, but also to other agencies and organizations that are attempting to reduce youth risk.

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Appendix A

				Grant Contract Number:	(1)		
				Grant Award Period:	(2)	July 1, 2007 through June 30, 2008	
				Grand Award Amount:	(3)		
(4) Quarterly Reporting Period (check one box)				Region:	(5)		
July 1, 2007-Sept. 30, 2007		Jan. 1, 2008-March 31, 2008					
Oct. 1, 2007-Dec. 31, 2007		April 1, 2008-June 30,					
Organization Information							
ORGANIZATION (6)		Organization's Address (7)		Grant Contact:	(8)		
				Title:	(9)		
				Phone Number:	(10)		
				E-Mail:	(11)		
UPCOMING EVENTS/IMPLEMENTATION DATES (ONGOING OR STARTING NEXT QUARTER)							
DATES (12)				EVENTS (13)			
PROGRAM TARGETS							
PROGRAM OUTPUTS							
Compendium/Other Program Used (15)	Targeted # of Sessions To be Implemented (15)	Targeted # Program Implementation Sites (16)	Targeted # of Participants Expected to be Served (17)	# of Participants Currently Enrolled in Program (18)	# of Participants Who Completed Program This Quarter (19)	Cumulative # of Participants Who Completed Program To Date (20)	Grade or Age of Targeted Participants (21)

VTSF Quarterly Progress Report

Program Goals, Objectives and Strategies						
Goal 1: (22)		To prevent the use of tobacco products among youth.				
Objective 1: (23)		By June 2008, statewide evaluation results will show a statistically significant improvement in at least one of the five VTSF core measures.				
Strategies/Activities (24)	Projected		Actual		Expected Outcome (29)	Actual Outcome (30)
	Start Date (25)	End Date (26)	Start Date (27)	End Date (28)		
1						
2.						
3						
4						
5.						

Appendix A

6.						
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VTSF Quarterly Progress Report

Program Goals, Objectives and Strategies						
Goal 2: (22)		To reduce the use of tobacco products among youth.				
Objective 1:	(23)	By June 2008, statewide evaluation results will show a statistically significant improvement in at least one of the five VTSF core measures.				
Strategies/Activities (24)	Projected		Actual		Expected Outcome (29)	Actual Outcome (30)
	Start Date (25)	End Date (26)	Start Date (27)	End Date (28)		
1						
2.						
3						
4						
5.						
6.						

VTSF Quarterly Progress Report

Program Summary	
(31). Accomplishments or Success Stories:	
(32). Implementation Barriers/Obstacles:	
(33). Steps for Overcoming Implementation Barriers/Obstacles:	
(34). CHRI and Local Evaluation Plan:	
(35). Requests for Staff Assistance or Program Implementation Visit:	
(36). Additional Comments:	
(37). Printed Name of Person Completing Report:	(38). Date Completed:

(37). Printed Name of Person Completing Report:	(38). Date Completed:

**VIRGINIA TOBACCO SETTLEMENT FOUNDATION
FINAL REPORT 2005-2006 GRANT YEAR**

*Please answer the following questions as they relate to the **entire** grant cycle.*

I. EFFECTIVE STRATEGIES FOR ACHIEVING OBJECTIVES
Describe the strategies that were effective in achieving the grant's objectives.
Include strategies that proved effective in overcoming implementation barriers that may have occurred.
Describe the unique lessons learned about implementing this grant (i.e. process, timing) that would be helpful for future grantees.
II. RECOMMENDATIONS FOR FUTURE ACTIVITIES

Appendix A

How can the results of this grant project be shared in order to have the greatest impact possible? What are your ideas for possible dissemination of the grant results?

As a result of this grant, do you have recommendations for VTSF about how to further meet the needs of Virginia’s youth as it relates to tobacco use prevention?
none

III. LOCAL EVALUATION RESULTS (if applicable)

Describe your local evaluation efforts (i.e. evaluation tools used, processes used, contractor used) and your results here. Please attach any supporting reports, final data analysis, conclusions and recommendations.

ADDITIONAL COMMENTS – Please provide VTSF with any additional observations or comments about the grant program and its implementation as well as feedback about the role of VTSF and its staff in the process.

Name of Person Completing Report

Date of Final Report:

Appendix B

Grants Administration Manual

FY 2004-2005

VTSF
VIRGINIA TOBACCO
SETTLEMENT FOUNDATION

701 E. Franklin Street
Suite 501
Richmond, VA 23219
www.vtsf.org

Appendix B

ACKNOWLEDGEMENT FORM

I, _____, with _____,
(print name) (name of organization)

acknowledge receipt of the Virginia Tobacco Settlement Foundation's **Grant Administration Manual, FY2004-2005**. I certify that I have read the contents of this manual and, by signing below, agree to the terms and conditions stated herein.

Signature

Date

Please return completed form to:

Donna Gassie
Director of Grants Management
VTSF
701 E. Franklin Street

Appendix B

Suite 501
Richmond, VA 23219

Appendix B

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Appendix B**I. Overview:**

In 1999, the Virginia General Assembly created the Virginia Tobacco Settlement Foundation (VTSF.) The VTSF mission is to restrict the use of tobacco products by minors through such means as educational and awareness programs on the health effects of tobacco use on minors. As well, VTSF funds enforcement of laws restricting the distribution of tobacco products to minors. One way VTSF allocates these funds is through a competitive grant process. All organizations awarded with a grant through VTSF are expected to adhere to the policies and procedures set forth in this Grants Administration Manual.

II. General Terms and Conditions:

The following provisions regarding funding conditions, assurances, and proposal submission apply to all VTSF Grant programs. All grant applicants are urged to read the general provisions set forth below.

- A. APPLICABLE LAWS AND COURTS: This contract shall be governed in all respects by the laws of the Commonwealth of Virginia and any litigation with respect thereto shall be brought in the courts of the Commonwealth. The Contractor (Grantee) shall comply with applicable federal, state and local laws and regulations.
- B. ANTI-DISCRIMINATION: The Contractor (Grantee) certifies to the Commonwealth that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Contracting Act of 1975, as amended, where applicable, the Virginians With Disabilities Act, the Americans With Disabilities Act and Section 11-51 of the *Virginia Public Procurement Act*:

If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the contract on the basis of the recipient's religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender or national origin and shall be subject to the same rules as other organizations that contract with public bodies to account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit by the public body. (*Code of Virginia 11.35.1E*).

Appendix B

In every contract over \$10,000 the provisions in 1. and 2. below apply:

1. During the performance of this contract, the Contractor (Grantee) agrees as follows:
 - a. The Contractor (Grantee) will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor (Grantee). The Contractor (Grantee) agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
 - b. The Contractor (Grantee), in all solicitations or advertisements for employees placed by or on behalf of the Contractor (Grantee), will state that such Contractor (Grantee) is an equal opportunity employer.
 - c. Notices, advertisements and solicitations placed in accordance with federal laws, rules or regulations shall be deemed sufficient for the purpose of meeting the requirements of this section.
 2. The Contractor (Grantee) will include the provisions of (1.) above in every subcontract or purchase order over \$10,000 so that the provisions will be binding upon each subContractor (Grantee) or vendor.
- C. IMMIGRATION REFORM AND CONTROL ACT OF 1986: Contractors (Grantees) certify that they do not and will not during the performance of this contract employ illegal alien workers or otherwise violate the provisions of the federal Immigration Reform and Control Act of 1986.
- D. DEBARMENT STATUS: By submitting their bids or proposals, Bidders or Offerors certify that they are not currently debarred by the Commonwealth of Virginia from submitting bids or proposals on contracts for goods and/or services covered by this solicitation, nor are they an agent of any person or entity that is currently so debarred.
- E. ANTITRUST: By entering into a contract, the Contractor (Grantee) conveys, sells, assigns, and transfers to VTsf all rights, title and interest in and to all causes of the action it may now have or hereafter acquire under the antitrust laws of the United States and the Commonwealth of Virginia, relating to the particular goods or services purchased or acquired by VTsf under said contract.
- F. MANDATORY TERMS AND CONDITIONS: Modification of or additions to the General Terms and Conditions of the solicitation may be cause for rejection of the

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proposal; however, VTSF reserves the right to decide, on a case by case basis, in its sole discretion, whether to reject such a proposal.

G. PAYMENT:**1. To Prime Contractor (Grantee):**

- a. Requests for reimbursement for items ordered, delivered and accepted and services rendered shall be submitted by the Contractor (Grantee) directly to a regional VTSF office as assigned, using a format provided by VTSF. (See Reimbursement Request form in appendices).
- b. Any payment terms requiring payment in less than 30 days will be regarded as requiring payment 30 days after invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment in less than 30 days, however.
- c. All goods or services provided under this contract or purchase order that are to be paid for with public funds shall be billed by the Contractor (Grantee) at the contract price, regardless of which public agency is being billed.
- d. The following shall be deemed to be the date of payment: the date of postmark in all cases where payment is made by mail, or the date of offset when offset proceedings have been instituted as authorized under the Virginia Debt Collection Act.

2. To SubContractors:

- a. A Contractor (Grantee) awarded a contract under this solicitation is hereby obligated:
 - i. To pay the subContractor(s) within seven (7) days of the Contractor's receipt of payment from the Commonwealth for the proportionate share of the payment received for work performed by the subContractor (s) under the Contractor (Grantee); or
 - ii. To notify the agency and the subContractor(s) in writing of the Contractor's (Grantee) intention to withhold payment and the reason.
- b. The Contractor (Grantee) is obligated to pay the subContractor(s) interest at the rate of one percent per month (unless otherwise provided for under the terms of the contract) on all amounts owed by the Contractor (Grantee)

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that remain unpaid seven (7) days following receipt of payment from the Commonwealth, except for amounts withheld as stated in (2) above. The date of mailing of any payment by U.S. Mail is deemed to be payment to the addressee. These provisions apply to each sub-tier Contractor (Grantee) performing under the primary contract. A Contractor's (Grantee's) obligation to pay an interest charge to a subContractor may not be construed to be an obligation of the Commonwealth.

- H. PRECEDENCE OF TERMS: Paragraphs A-G of these General Terms and Conditions shall apply in all instances. In the event there is a conflict between any of the other General Terms and Conditions and any Special Terms and Conditions in this manual, the Special Terms and Conditions shall apply.
- I. TESTING AND INSPECTION: VTSPF reserves the right to conduct any test/inspection it may deem advisable to assure that supplies and/or services conform to the specification.
- J. ASSIGNMENT OF CONTRACT: A contract shall not be assignable by the Contractor (Grantee) in whole or in part without the written consent of VTSPF.
- K. CHANGES TO THE CONTRACT: Changes can be made to the contract in any one of the following ways:
1. The Purchasing Agency (VTSPF) may order changes within the general scope of the contract at any time by written notice to the Contractor (Grantee). Changes within the scope of the contract include, but are not limited to, things such as services to be performed, the method of packing or shipment, and the place of delivery or installation. The Contractor (Grantee) shall comply with the notice upon receipt. The Contractor (Grantee) shall be compensated for any additional costs incurred as the result of such order and shall give the Purchasing Agency a credit for any savings. Said compensation shall be determined by one of the following methods:
 - a. By mutual agreement between the parties in writing; or
 - b. By agreeing upon a unit price or using a unit price set forth in the contract, if the work to be done can be expressed in units, and the Contractor (Grantee) accounts for the number of units of work performed, subject to the Purchasing Agency's right to audit the Contractor's (Grantee) records and/or to determine the correct number of units independently; or
 - c. By ordering the Contractor (Grantee) to proceed with the work and keep a record of all costs incurred and savings realized. A markup for overhead and profit may be allowed if provided by the contract. The same markup shall be used for determining a decrease in price as the result of savings realized. The

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Contractor (Grantee) shall present VTSF with all vouchers and records of expenses incurred and savings realized. VTSF shall have the right to audit the records of the Contractor (Grantee) as it deems necessary to determine costs or savings. Any claim for an adjustment in price under this provision must be asserted by written notice to VTSF within thirty (30) days from receipt of the written order from VTSF. If the parties fail to agree on an amount of adjustment, the question of an increase or decrease in the contract price or time for performance shall be resolved in accordance with the procedures for resolving disputes provided by the Disputes Clause of this contract or, if there is none, in accordance with the disputes provision of the Virginia Public Procurement Act. Neither the existence of a claim nor a dispute resolution process, litigation or any other provision of this contract shall excuse the Contractor (Grantee) from promptly complying with the changes ordered by VTSF or with the performance of the contract generally.

2. The parties may agree in writing to modify the scope of the contract. An increase or decrease in the price of the contract resulting from such modification shall be agreed to by the parties as a part of their written agreement to modify the scope of the contract.
3. The Contractor (Grantee) may request to modify line item budget amounts during the first three quarters of the grant period by shifting grant funds from one line item to another. All requests to do so must be in writing to the Grant Program Administrator and the requests must include an updated budget and a justification for the change. Contractors (Grantees) will be notified in writing by VTSF if the requested change is approved.

If a line item change is less than \$250.00, however, the Contractor (Grantee) may make such a change without prior approval by VTSF. The Contractor must notify the Grant Program Administrator immediately of such a change by submitting an updated budget to VTSF. This type of change may occur *only once* during the grant period.

Contractors (Grantees) are expected to closely monitor their grant funds throughout the grant period and requests to change line items should be few, if at all. *No requests to change line items in the last quarter of a grant period will be considered.*

- L. **DEFAULT:** In case of failure to deliver goods or services in accordance with the contract terms and conditions, VTSF, after due oral or written notice, may procure them from other sources and hold the Contractor (Grantee) responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other remedies that VTSF deems necessary.

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- M. **INSURANCE**: The Contractor (Grantee) certifies that the Contractor (Grantee) and any/all subContractors (Grantees) shall have at the time the contract is awarded and will maintain throughout the period of the contract the following insurance coverage and limits required.

INSURANCE COVERAGES AND LIMITS REQUIRED:

1. Worker's Compensation - Statutory requirements and benefits.
 2. Employers Liability - \$100,000.
 3. Commercial General Liability - \$1,000,000 combined single limit. Commercial General Liability is to include Premises/Operations Liability, Products and Completed Operations Coverage, Independent Contractor (Grantee)'s Liability, Owner's and Contractor (Grantee)'s Protective Liability and Personal Injury Liability. The Commonwealth of Virginia must be named as an additional insured when requiring a Contractor (Grantee) to obtain Commercial General Liability coverage.
 4. Automobile Liability - \$500,000.
- N. **DRUG FREE WORKPLACE**: The Contractor (Grantee) agrees to (i) provide a drug-free workplace for the Contractor (Grantee)'s employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor (Grantee)'s workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Contractor (Grantee) that the Contractor (Grantee) maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subContractor (Grantee) or vendor.
- O. **NONDISCRIMINATION OF CONTRACTOR (GRANTEE)**: A Contractor (Grantee) shall not be discriminated against in the award of this contract because of race, religion, color, sex, national origin, age, or disability or against faith-based organizations. If the award of this contract is made to a faith-based organization and an individual, who applies for or receives goods, services, or disbursements provided pursuant to this contract objects to the religious character of the faith-based organization from which the individual receives or would receive the goods, services or disbursements, the public body shall offer the individual, within a reasonable period of time after the date of this objection, access to equivalent goods, services, or disbursements from an alternative provider.

III. Special Terms and Conditions:

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1. AVAILABILITY OF FUNDS: It is understood and agreed between the parties herein that VTSP shall be bound hereunder only to the extent of the funds available or which may hereafter become available for the purpose of this agreement.
2. AUDIT: The Contractor (Grantee) hereby agrees to retain all books, records, and other documents relative to this contract for five (5) years after final payment, or until audited by VTSP or Commonwealth of Virginia, whichever is sooner. The agency, its authorized agents, and/or State auditors shall have full access to and the right to examine any of said materials during said period.
3. CANCELLATION OF CONTRACT: VTSP reserves the right to cancel and terminate any resulting contract, in part or in whole, without penalty, upon 30 days written notice to the Contractor (Grantee). Any contract cancellation notice shall not relieve the Contractor (Grantee) of the obligation to deliver and/or perform on all outstanding orders issued prior to the effective date of cancellation.
4. INDEPENDENT CONTRACTOR (GRANTEE): When providing the services specified under this contract the Contractor (Grantee) shall not be deemed an “employee” or “agent” of VTSP. The Contractor (Grantee) shall act as an independent Contractor (Grantee) and is responsible for obtaining and maintaining appropriate liability insurance, payment of all FICA, State and Federal taxes, and complying with other similar requirements, which are customary in the industry. In addition, the Contractor (Grantee) certifies that they are not an employee, nor do they currently employ employees of VTSP.
5. INDEMNIFICATION: Contractor (Grantee) agrees to indemnify, defend, and hold harmless the Commonwealth of Virginia and VTSP, its officers, agents, and employees from any claims, damages, and actions of any kind or nature, whether at law or in equity, arising from or caused by the use of the materials, goods, or equipment furnished of any kind or nature furnished by the Contractor (Grantee), any services of any kind or nature furnished by the Contractor (Grantee), provided that such liability is not attributable to the sole negligence of the using agency or to failure of the using agency to use the materials, goods, or equipment in the manner already and permanently described by the Contractor (Grantee) on the materials, goods, or equipment delivered.
6. SUBCONTRACTS: No portion of the work shall be subcontracted without prior written consent of the purchasing agency. In the event that the Contractor (Grantee) desires to subcontract some part of the work specified herein, the Contractor (Grantee) shall furnish the purchasing agency the names, qualifications and experience of their proposed subContractors. The Contractor (Grantee) shall,

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however, remain fully liable and responsible for the work to be done by its subContractor (s) and shall assure compliance with all requirements to the contract.

IV. Method of Payment:

The Contractor (Grantee) shall be paid the contract amount on the basis of invoices submitted for actual expenditures as a result of services performed under the terms of the contract based on the budget submitted by the Contractor (Grantee) and approved by VTSF. The Contractor (Grantee) shall invoice VTSF on a monthly basis. The Contractor (Grantee) shall use VTSF Invoice/Reimbursement Request form (see Appendices). Billing shall be due no later than 30 days following the end of each month in which expenditures are incurred. The Final Invoice/Reimbursement Request form is due by the 15th of the month following the end of the contract/grant period. Quarterly requests are allowable if approved by VTSF.

Invoices shall cite the contract number assigned to the contract and include the Employer Identification Number. Invoices shall be submitted to a regional VTSF office as assigned. The Contractor (Grantee) shall indicate when the reimbursement request is the final request for the grant period.

Failure of the Contractor (Grantee) to submit invoice(s) within the prescribed time frame may forfeit the Contractor (Grantee)'s right to payment from VTSF.

V. Grant Administration:

1. **PROGRAM REPORTING REQUIREMENTS:** Each Grantee is required to submit to VTSF a Quarterly Grant Progress Report detailing project status in relationship to expected outcomes, program activities, and accomplishment of outcome performance measures. The quarterly report is due in VTSF offices on the fifteenth of each month following the close of each state fiscal quarter. A copy should be sent to both the Grant Program Administrator for the grant. Outcome measures should be developed directly from the proposal for the grant and will be monitored by VTSF. The grantee will be expected to submit all quarterly program reports on the form provided by VTSF (See Appendices). In addition to the required reporting form, all additional materials developed under the grant and information pertinent to the public record of the project must be submitted to VTSF, including newspaper articles, brochures, bulletins, status reports, and evaluation results.

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Financial reimbursement requests may be submitted within 30 days following the end of the month expenditures are incurred. Quarterly requests are allowable if approved by VTSF.

2. **PROJECT MONITORING:** VTSF monitors grant projects through a variety of mechanisms including staff review of quarterly reporting forms, monthly financial reimbursement forms, site visits, and “program-in-action” visits. Both the Regional Grant Administrator and the Program Specialist assigned to the grant will provide follow-up and monitoring activities with the grantee. Project Monitoring is considered to be an opportunity for grantees to inform VTSF staff of accomplishments as well as to let them know if any barriers to project completion exist. *Grantees should contact VTSF staff when they experience any difficulties in the implementation of their grant programs and should not wait until contacted by staff for general monitoring activities.*
3. **EVALUATION:** All VTSF grantees will be required to provide a local evaluation of the chosen program implemented. These local evaluations will impart information regarding the implementation of the program, the overall administration/experience with the grant, and will provide opportunities to discuss changes and improvements for future execution. Evaluation data will be included in the grantee’s Final Report.

In addition to the local evaluations, grantees are required to participate in a statewide evaluation of VTSF funded programs. Statewide evaluators will communicate with grantees to collect data in an effort to provide an overall picture of the success of grant programs throughout Virginia. Grantees will notify VTSF of any changes regarding their involvement with the statewide evaluation.

4. **PROJECT CLOSEOUT:** All project final financial reports, final project evaluation reports, and final quarterly reports (See Appendices) must be submitted within fifteen days after the end of the project period.
 - a. **Final Financial Report** - The final financial report must be submitted on the same form as the monthly invoice/reimbursement request form, and the contractor should check the box indicating it is the final financial reimbursement request.
 - b. **Final Report** - The Final Report is outcome oriented and should be based on the goals and objectives articulated in the original proposal (or modification) for the project. The Final Report is in addition to the last quarterly report. Grantees should utilize the form provided when completing this requirement (see appendices). The Final

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Report Form must be submitted no later than the 15th day after the end of the grant period. The Final Report contains the following sections and provides information for *the entire life of the grant, not just the final quarter*.

- i. Purpose of the Grant - Provides an overall description of the grant project goal and its expected impact. What had the grantee hoped to achieve with this project?
- ii. Outcomes of the Grant - For each objective of the project, describe the outcomes in specific, measurable terms providing information about how the objectives were carried out, what barriers (if any) were encountered, and how such barriers were dealt with.
- iii. Effective Strategies for Achieving Objectives - Explain the strategies you would recommend as particularly effective in achieving objectives and overcoming the problems that were encountered as the project year progressed. Explain the lessons you learned about grant implementation such as process and timing, etc. that might help future grantees.
- iv. Local Evaluation Results – Describe your local evaluation efforts (ie: evaluation tools used, processes used, names of contractors). Provide evaluation results.
- v. Recommendations for Future Activities - What assistance is needed so that the results of the project can be shared in order to have the greatest impact possible? What agency or entity should be involved in this dissemination? As a result of the grant, are there recommendations for future action by VTSP or other agencies to better meet the needs of Virginia's youth?