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Typologies of teachers in Florida tobacco use prevention education (tupe) programs

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TYPOLOGIES OF TEACHERS IN FLORIDA TOBACCO USE PREVENTION EDUCATION (TUPE) PROGRAMS

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To: Dean Arthur W. Herriott
College of Arts and Sciences

This thesis, written by Jessica E. Barr, and entitled Typologies of Teachers in Florida Tobacco Use Prevention Education (TUPE) Programs, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this thesis and recommend that it be approved.

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ABSTRACT OF THE THESIS

TYPOLOGIES OF TEACHERS IN FLORIDA

TOBACCO USE PREVENTION EDUCATION (TUPE) PROGRAMS

by

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This study described teacher perceptions of TUPE program effectiveness in Florida in an attempt to determine whether teacher training or teachers' perceptions of tobacco norms may predict teacher amenability. A statewide survey provided information about how teachers' perceptions of program effectiveness are affected by variables such as: tobacco use norms, training variables, and classroom activities. Data were obtained from a telephone survey conducted in Florida as part of the Tobacco Pilot Project (TPP). The sample included 296 middle school teachers and 282 high school teachers as well as 193 middle school principals and 190 high school principals. Correlational and hierarchical regression analyses identified correlates and predictors of teachers' ratings of effectiveness. Results suggest that the more teachers support TUPE and believe it to be valuable and effective, the more likely those teachers are to implement TUPE classroom activities. In conclusion, higher amenability appears to be associated with more effective implementation of TUPE.

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Chapter 1: Statement of the problem

Adolescence is commonly viewed as an impressionable stage of life. It is a period during which an increase is seen typically in risk-taking behaviors including substance use, reckless driving, and sexual behavior (Irwin, Igra, Eyre, & Millstein, 1997). Considering the greater propensity toward risk-taking behaviors during this segment of the life span, combined with the influence of peer pressure and the ready availability of tobacco products, tobacco use is a salient risk-taking behavior among adolescents. Given the appeal of tobacco and their own curiosity, many adolescents begin using tobacco without being aware of its addictiveness (U.S. Dept. of Health and Human Resources, 1997). Each day the United States gains 3,000 regular smokers under the age of 18. In fact, 80% of current adult smokers began smoking before the age of 18 (CDC, 1998).

Prevention programs are essential to reduce levels of tobacco use (Brink, Simons-Morton, Harvey, Parcel, & Tiernan, 1988; Stanton, Lowe, & Gillespie, 1996). Given the susceptibility of youth to peer pressure and the appeal of many risk behaviors, these programs should be implemented prior to adolescence in order to instill the skills necessary to refuse tobacco use (CDC, 1994; Warren, Kann, Small, Santelli, Collins, & Kolbe, 1997). The growing threat to the health of the nation's youth has prompted the development of change-producing procedures to be delivered within school-based prevention or intervention programs to target these risk behaviors among youth (Bruvold, 1993; Cleary, Hitchcock, Semmer, Finchbaugh, & Pinney, 1988; Dent, Sussman, Stacy, Craig, Burton, & Flay, 1995; Hansen, 1992).

Approaches to Prevention Education

Prevention programs vary in orientation, approach, and focus. Each program may be categorized in orientation as rational, developmental, social norms, or social reinforcement (Bruvold, 1993). The rational orientation uses an informational approach such as the Health Belief Model. This approach focuses on the presentation of factual information about drugs as well as the effects and consequences of drugs (e.g., Ajzen & Fishbein, 1980). The developmental orientation uses an approach known as affective education which focuses on the strengthening of protective factors such as self-esteem, self-reliance, decision-making skills, and interpersonal skills (Rosenberg, 1979). The social norms orientation attempts to reduce alienation and increase self-esteem while reducing boredom as implemented using the Problem Behavior Theory (e.g., Jessor & Jessor, 1977). Finally, the social reinforcement orientation is derived from Social Learning Theory, an approach focusing on development of the ability to recognize social pressures, the ability to identify consequences of drug use, and refusal skills (Bandura, 1988). While each of these programs have strengths and weaknesses, the overarching message throughout the literature seems to be that multifaceted prevention programs (e.g., programs combining more than one of the above approaches) are most effective.

Program Efficacy

There has been some debate as to what constitute effective prevention programs. However, one fact stands out among all others: a crucial aspect of a successful program is an adequately trained teacher who not only adheres to the principles of the program, but supports it as well. Since teachers are at the most proximal level of interaction

with the students, an effective school-based prevention program may only be as good as the participating teachers. Teacher amenability may depend on: (1) being pleased with the prevention program selected by school administrators (Glynn, 1989); (2) being confident with new teaching methods (Dewit, Timney, Silverman, & Stevens-Lavigne, 1996); (3) having personal beliefs congruent with the fundamentals of the prevention program (Galli et al., 1987); (4) believing drug education is an important responsibility of an educator (Dewit et al., 1996); (5) feeling supported by administrators, parents, and the community (Tubman, Soza, Barr, & Langer, under review); and, (6) perceiving the program as effective (Tubman et al., under review). However, the influences of broader social environments on teacher amenability are largely unknown.

The Current Study

The current study serves three main purposes. First, this study describes associations among teachers' receptivity to TUPE, their program training experiences, and their perceptions of tobacco use norms in their communities. Specifically, this study examines differences in teachers' TUPE training experiences and their perceptions of tobacco use norms on the basis of their levels of amenability to TUPE. The second aim of this study is to empirically classify TUPE teachers into distinct and meaningful groups on the basis of their TUPE-related perceptions and to identify differences between middle and high school teachers based on these empirical classifications. The third aim of the study is to determine if perceived norms for adolescent tobacco use and teacher training experiences are significant independent predictors of amenability to

TUPE. Specifically, do training or tobacco norms predict amenability to TUPE?

It is hypothesized that there are significant associations among teacher receptivity to TUPE, their TUPE training experiences, and their perceptions of local tobacco use norms. It is hypothesized that distinct and meaningful subgroups of teachers can be identified based on their reported levels of support for, or the value of TUPE, as well as the perceived effectiveness of these programs. It is hypothesized that teacher training will account for significant variance in amenability (i.e., higher training predicts higher amenability). It is also believed that teachers' perceptions of tolerance for tobacco use will predict significant variance in amenability (i.e., higher tolerance predicts lower amenability).

Two sets (one for principals and one for teachers) of telephone survey instruments were designed, constructed, pilot tested, and revised. A 75-item (middle school) or 78-item (high school) telephone survey was used as the primary method to secure data addressing the research questions. A total of 383 principals were interviewed for the current study, 193 from middle schools and 190 from high schools. In addition, 578 teacher interviews were completed (296 middle school teachers and 282 high school teachers).

Chapter 2: Literature Review

Scope and Significance. Adolescence is commonly viewed as an impressionable stage of life. It is a time in the life cycle during which major changes in biological, cognitive, psychological, social, and environmental transitions occur (Irwin, 1987; Irwin & Vaughan, 1988). It is a period during which an increase is typically seen in risk-taking behaviors, including substance use, reckless driving, and sexual behavior (Irwin, Igra, Eyre, & Millstein, 1997). These exploratory behaviors are viewed as being essential to normal adolescent development (Baumrind, 1987) and are thought to serve a wide range of purposes. It is speculated these behaviors foster the transition to adulthood (Jessor, 1982) by increasing independence, autonomy from the family, greater peer affiliation and importance, sexual awareness, identity formation, and physiological and cognitive maturation (Igra & Irwin, 1996). Adolescents often engage in these potentially destructive behaviors with the expectation of some benefit, but without comprehending any immediate or long-term consequences (Irwin & Millstein, 1992).

Considering the greater propensity toward risk-taking behaviors during this segment of the life span, combined with the influence of peer pressure and the vast availability of tobacco products, tobacco use is a salient risk-taking behavior among adolescents. Given the appeal of tobacco and their own curiosity, many adolescents have begun using tobacco without being aware of its addictiveness (U.S. Dept. of Health and Human Resources, 1997). Experimentation often leads to addiction. Each day the United States gains 3,000 regular smokers under the age of 18. In fact, 80% of current adult smokers began smoking before the age of 18 (CDC, 1998).

Possibly the single most often cited fact about tobacco is that tobacco use is the most preventable cause of death in the United States (e.g., CDC, 1994, 1998; Glynn, 1989). There are numerous ill effects caused by tobacco use in adolescents and adults. These include impaired lung growth as well as impaired lung functioning, negative effects on blood lipid levels, increased number and severity of respiratory illnesses, and potential development of cardiovascular diseases (CDC, 1994). Despite these health-related consequences, tobacco use remains an indicator of social status among adolescents due to the strength of peer pressure. The 1997 Youth Risk Behavior Survey found that 51.5% of white male high school students and 40.8% of white female students reported using some form of tobacco in the previous month (U.S. Dept. of Health and Human Resources, 1997).

According to the *Morbidity Mortality Weekly Report (MMWR)* for April 3, 1998, from 1991 to 1997, prevalence rates for smoking among high school students had increased from 30.9% to 39.7% among white students, 12.6% to 22.7% among African American students, and from 25.3% to 34% among Hispanic students (U.S. Dept. of Health and Human Resources, 1997). Thus, while smoking prevalence was highest among white students, the rate of increase in smoking prevalence was higher among minorities. During the 1970s and 1980s smoking rates had decreased among African American youth (CDC, 1998). However, these prevalence rates have risen in the 1990s among all ethnic groups.

Smoking habits are commonly initiated in adolescence and maintained throughout the life span, as is the perception that tobacco use is an indicator of social status. Thus, tobacco use has become an established trend in the United States. Twenty-five percent of the adult population in the United States is smokers. Among minority

populations, 40% of the adult population of American Indians and Native Alaskans is comprised of people who smoke regularly. African American and Southeast Asian men are not far behind, with proportions of regular smokers ranging between 34 and 43 percent (CDC, 1998). Given these statistics, the scope of the problem is clear: tobacco use is the leading preventable cause of death in the United States across groups defined by age, race/ethnicity, creed, and culture.

Prevention programs are essential to reduce levels of tobacco use (Brink, Simons-Morton, Harvey, Parcel, & Tiernan, 1988; Stanton, Lowe, & Gillespie, 1996). Three main factors suggest that prevention programs targeting children and adolescents are the most effective tools with which to reduce tobacco use. These factors include: the susceptibility of adolescents to tobacco use and social influence, the recent prevalence rates indicating growth in the size of the adolescent smoking population, and the continuity in smoking behavior from adolescence to adulthood. Given the susceptibility of youth to peer pressure and the appeal of risk behaviors, these programs should be implemented prior to adolescence in order to instill the skills necessary to refuse tobacco use (CDC, 1994; Warren, Kann, Small, Santelli, Collins, & Kolbe, 1997). The growing threat to the health of the nation's youth has prompted the development of change-producing procedures to be delivered within school-based prevention or intervention programs to target these risk behaviors among youth (Bruvold, 1993; Cleary, Hitchcock, Semmer, Finchbaugh, & Pinney, 1988; Dent, Sussman, Stacy, Craig, Burton, & Flay, 1995; Hansen, 1992). The following review of relevant literature focuses on features of such prevention and intervention programs, their methods and results.

Prevention programs. Prevention programs vary in orientation, approach, and focus. Each program may be categorized in orientation as rational, developmental, social norms, or social reinforcement (Bruvold, 1993). The rational orientation uses an informational approach such as the Health Belief Model. This approach focuses on the presentation of factual information about drugs as well as the effects and consequences of drugs (e.g., Ajzen & Fishbein, 1980). The developmental orientation uses an approach known as affective education which focuses on the strengthening of protective factors such as self-esteem, self-reliance, decision-making skills, and interpersonal skills (Rosenberg, 1979). The social norms orientation attempts to reduce alienation and increase self-esteem while reducing boredom as implemented using Problem Behavior Theory (e.g., Jessor & Jessor, 1977). Finally, the social reinforcement orientation is derived from the Social Learning Theory, an approach focusing on development of the ability to recognize social pressures, the ability to identify consequences of drug use, and refusal skills (Bandura, 1988). Each of these will be further elaborated upon and briefly evaluated.

Approaches to Prevention Education

Rational Orientation. The rational orientation is based on the assumption that sufficient knowledge about drugs, their effects and consequences, provides the basis for changes in beliefs and attitudes about drugs, followed by appropriate behavioral change (Ajzen & Fishbein, 1980). The Health Belief Model is the most common model of this orientation and is the traditional approach used in prevention programs. The major objectives of health education programs have been to change knowledge, attitudes, and behavior. These objectives may typically be seen in the classroom through the use of lectures,

question and answer formats, audiovisual or other media techniques, and displays of substances (Israel, Cummings, Dignan, Heaney, Perales, Simons-Morton, & Zimmerman, 1995). These methods are used because they are seen as the most efficacious way to impart knowledge of drugs, their effects and consequences.

This program type is easily implemented in tobacco use prevention programs as exemplified by the Smoke-Free Class 2000 Program, a 12-year education and awareness program geared toward the children of the class of 2000 in the hopes of building a tobacco-free society by the year 2000 (Marty, Nenno, Hefelfinger, & Bacon-Pituch, 1996). This program attempts to convey knowledge about tobacco, its effects and consequences by providing children of the class of 2000, their parents and teachers with tobacco awareness material. This program also focuses the attention of the media and the community on this select group of children and the goal placed before them in an attempt to build support for, and pride among these children. Local tobacco control groups are built and strengthened, and the image of tobacco use is enforced as a socially unacceptable behavior. The effectiveness of such programs has received mixed support (Marty et al., 1996; Israel et al, 1995; Nyamathi, Flaskerud, Keenan, & Leake, 1998).

It may be said that learning occurs cognitively, behaviorally, and affectively, i.e., dealing with attitudes such as feelings, beliefs, emotions and opinions (Montagne, 1982). Clearly, health education programs are cognitively based in that they provide facts and information to participants. However, this educational approach leaves the two remaining domains of learning untouched. For example, the skills, actions, decision-making strategies, and physical abilities of the behavioral domain are not taught. While the information necessary

to form the beliefs, perceptions, emotions, and opinions of the affective domain is provided, this domain is not the focus of the program and, as such, it receives little or no attention. It seems a reasonable assumption, therefore, that health education programs cannot be as effective as programs that address all three domains of learning.

To illustrate, Nyamathi et al. (1998) compared the effects of a traditional AIDS education program to the effects of a specialized program combining education with self-esteem and coping enhancement exercises. Upon examining targeted cognitive factors, it was found that at the 6- and 12-month follow-ups, AIDS-related knowledge was higher in the group that received specialized prevention education than the group that received traditional prevention education. In terms of behavioral factors, women in the specialized group greatly reduced non-injection drug use compared to the traditionally educated group while women in both groups reduced risky sexual behavior. These findings do seem to suggest that a program combining traditional education approaches with some form of personal skill enhancement training may increase the effectiveness of preventative interventions.

The body of research investigating the effectiveness of enhanced traditional education programs is limited. However, Sussman, Dent, Burton, Stacy, and Flay (1995) offered two potential reasons why traditional prevention programs have been less successful than other approaches: (1) education-oriented programs simply may have been boring to recipients or poorly implemented; and, (2) education-oriented programs may have presented irrelevant material in terms of the etiology of drug use among adolescents. This suggests that with proper planning and implementation, traditional prevention programs may be

improved by making the programs more interesting and relevant to adolescents.

It may also be possible that traditional prevention programs have assumed risk-taking behavior to be rational behavior (Baumrind, 1987; Igra & Irwin, 1996; Jessor, 1982), capable of being reduced by appropriate information and education (Bell & Battjes, 1985). However, it must be recognized that adolescents rationalize much of this behavior with personal fables (Elkind, 1967). By believing their experiences are unique, many adolescents choose to engage in problem behaviors with the belief that negative consequences, such as those presented in health education programs, will not affect them. This belief may be reinforced by the fact that the effects of many negative health consequences presented in these programs are not evidenced until later in life; therefore, such messages may lack reality and credibility with adolescents (Bell & Battjes, 1985). Given this potential lack of realistic perceptions, when adolescents compare the positive short-term social benefits (e.g., acceptance by a clique at present) to long-term health effects (e.g., lung cancer in 30 years) of smoking, the short-term positive effects may outweigh the long-term negative effects (Chassin, Presson, Sherman, & Curran, 1992).

If the assumption that risk-taking behavior is rational is true, yet programs are boring or poorly implemented, learning sufficient to reduce such behaviors will not occur. Thus, by increasing the reality and relevance of health education prevention programs, they may indeed reduce risk-taking behavior. If, however, the assumption of rationality is false and risk-taking behavior is completely irrational, health education programs are not likely to reduce risk-taking behavior due to the fact that information on its own, no matter how relevant, is

not sufficient to change irrational behavior. It seems that the information currently provided by health education programs in and of itself is insufficient to produce change in risk-taking behavior. However, this information is still relevant and may prove more beneficial when incorporated in an enhanced prevention program.

Developmental Orientation. The developmental orientation incorporates the teaching of skills to facilitate psychosocial development to reduce risk behaviors (e.g., self-esteem, decision-making skills, and interpersonal skills). These programs reinforce self-reliance and attempt to decrease alienation in order to build well-adjusted, socially competent individuals. Programs of this type have either little or no focus on drugs or do not involve drugs as a specific focus (Werch, Lepper, Pappas, & Castellon-Vogel, 1994). Instead, developmentally oriented programs focus on strengthening individual competencies through Life Skills Training (LST) Programs or an approach known as affective education (Rosenberg, 1979). The rationale for such approaches is that a well-adjusted, socially competent individual has little need for drugs (Montagne & Scott, 1993).

Affective education assumes that psychological factors (e.g., temperament, personality, predisposition) place particular persons at increased risk for problem behaviors (Tobler, 1986). Therefore, this approach targets attitudes such as feelings, beliefs, perceptions, emotions, and opinions in an attempt to improve psychological factors. Specifically, affective education strives to increase self-esteem, self-worth, and self-concept so that these individuals will become better adjusted and more socially competent. Such programs implemented in the classroom setting utilize lecture formats, discussion groups,

group problem solving, and occasional role-playing in an attempt to modify or strengthen these attitudes, clarify values, and promote interpersonal growth (Bruvold, 1993). Should this interpersonal growth evoke such individual strength that a person feels no need or desire for drugs, then the affective approach would be effective. An example of this approach is the Colorado OSAP Project in which affective education was taught through individual counseling, drug/alcohol groups, skill-building groups, and other groups (Stein, Garcia, Marler, Embree-Beve, Garrett, Unrein, Burdick, & Fishburn, 1992). Skills were taught within Adventures in Change, a residential facility of Porter Memorial Hospital. This later served as a practice field for the skills taught in the program. The adolescents involved gained awareness of their current life situations as well as insight into the reasons behind their delinquent behavior. It was hoped that this added awareness and insight would lead to changes in behavior. Ultimately, the program was a success because many juveniles showed positive change.

Life skills training (LST) programs are based on the belief that a lack of interpersonal skills creates weaknesses within a person such as low autonomy or low self-confidence, making them vulnerable to drug abuse. Life skills training programs target interpersonal problems such as low self-esteem, poor decision-making, or inadequate communications skills with the goal of developing general, personal, and social skills. A variety of skills are incorporated in this program: cognitive strategies (i.e., goal setting) to increase self-esteem, self-management techniques (i.e., relaxation training) to help cope with anxiety, verbal and nonverbal communication skills, and social skills (i.e., conversational skills). LST programs are taught

through lecture, modeling, extended practice, feedback, reinforcement, and assigned homework (Botvin & Willis, 1985).

Affective and LST programs teach individuals more effective ways to solve interpersonal problems and to regulate their negative affective states. Since developmentally oriented programs focus on teaching and strengthening broad social skills and appropriate attitudes with no direct focus on a specific problem behavior, such a program used with the goal of preventing tobacco use would differ little from a program used to modify any other problem behavior in that neither program would directly target tobacco, drugs, or any other problem behavior. Hence, an affective program targeting alcohol prevention may teach values clarification and decision-making skills with no direct mention of alcohol use. Teaching of these skills is intended to promote individual strengths by increasing individual and social competencies. Likewise, an affective education program targeting tobacco prevention may teach the same skills, again with no direct mention of tobacco use, but with the intention of strengthening the individual in general by teaching individual and social skills.

A variety of problems exist with this approach. First, substance use is not limited to adolescents with low self-esteem (Chassin, Presson, Sherman, & Curran, 1992). Therefore, raising self-esteem may not eliminate problematic substance use/abuse. Second, according to the research of Fishbein and Ajzen (1974), one must focus on specific attitudes in order to change specific behaviors. However, affective education focuses on general attitudes (i.e., beliefs, perceptions, etc.) with the intent to change specific behaviors (i.e., substance use). Finally, affective education and LST programs seek to increase self-esteem and self-concept. However, both baseline self-esteem and

self-concept remain relatively stable over the course of adolescence (Rosenberg, 1986). This is not to say that neither is modifiable, although they may be resistant to change.

Despite these shortcomings, the skills taught by developmentally oriented programs are beneficial to adolescent development in that they are basic skills required for interpersonal functioning. However, these skills alone seem insufficient to change risk-taking behavior. Ragon, Kittleson, & St. Pierre (1995) assessed the effects of an affective HIV/AIDS program on the attitudes of 123 college students. Results of a 2-way ANOVA on the pre- and posttest questionnaires showed no significant changes in attitudes. However, the program was extremely brief (i.e., three activities in a one-hour period followed by a discussion and question/answer session), potentially limiting its effectiveness. According to a meta-analysis of 143 adolescent drug prevention programs, Tobler (1986) found no support for the continuation of affective education only programs. However, it was found that programs teaching specific skill training (i.e., LST programs) when combined with other programs (e.g., Alternatives programs) were tremendously successful.

Social Norms. From Social Learning Theory (Bandura, 1977) and Problem Behavior Theory (Jessor & Jessor, 1977), we may better conceptualize substance use as a socially learned behavior. Following the assumption that attitudes are closely related to behaviors, (Montagne & Scott, 1993), a social norm orientation to prevention often involves an attempt to change an attitude with the goal of affecting a behavior. For example, if one were to have an attitude against drug use, that person would likely not use drugs. However, it has been previously noted in this review that drug-related attitudes may be

difficult to change and that the correspondence between attitudes and behavior may vary greatly.

Social norms programs focus on increasing self-reliance and reducing alienation and boredom without focusing on problem behaviors. With the understanding that drug use may serve important social and psychological functions for adolescents, these programs attempt to provide more positive alternatives to drug use that may in turn fill the same social and psychological functions drugs would. The most popular social norm program is the alternative model (Swisher & Hu, 1983). The focus of this model is to provide alternatives to drugs, thus reducing time of exposure to, and deterring the use of, drugs. These alternatives are typically structured activities offered through community projects, recreational activities, or jobs (Swisher & Hu, 1983; Hansen, 1992). Alternative activities may include yoga, meditation, spiritual groups, athletics, dance, gardening, or exercise (Montagne & Scott, 1993). All of these alternatives involve some form of "getting high" without the use of drugs (Swisher & Hu, 1983).

Social-learning theory (Bandura, 1977) illustrates the significance of learning through symbolic and modeled learning. Thus, for example, adolescents learn about smoking and its effects by watching others smoke. Social norms programs have little or no focus on a specific problem behavior. Hence, an alternatives-based model with the goal of preventing tobacco use would differ little from an alternative program to prevent any other problem behavior. An alternative program, no matter its targeted problem behavior, will provide activities (i.e., a job, a project, exercise, etc.) with the intent of filling time potentially spent in a less socially acceptable manner (i.e., tobacco use). However, by providing alternative

activities within a community, school, or group setting, symbolic and modeled learning of these healthy alternatives will occur. Thus, rather than learning about smoking by watching others smoke, adolescents will learn job skills, athletic skills, etc. by watching others work, exercise, etc. and by participating in these desirable social activities.

Buckhalt, Halpin, Noel, and Meadows (1992) reported that students involved in alternative activities such as athletics, church, and family were less likely to use drugs. Research indicates that out-of-school smoking interventions should target sites frequented by adolescents as potential sites for intervention strategies (Bullock, De Vries, Lopez, Thomas, & Charlton, 1996). Suggested sites include shopping malls, sports venues, and cinemas. The Tobler (1986) meta-analysis of adolescent drug prevention programs found the alternative model to be extremely effective in preventing problem behaviors, particularly with special populations such as juvenile delinquents and drug abusers. Alternative programs may focus exclusively on alternative activities, but are preferable when combined with other program efforts (Price & Emshoff, 1997). Alternative programs are found to be especially effective when combined with LST programs (Tobler, 1986).

Social Reinforcement. The underlying assumption of social reinforcement programs is that adolescents use drugs because they are reinforced when they do so, either directly or indirectly (Calder & Ross, 1973). As mentioned before, according to the Social Learning Theory (Bandura, 1977) and the Problem Behavior Theory (Jessor & Jessor, 1977), substance use may be seen as a socially learned behavior. Adolescents model the behaviors they observe in their peers

or in adults. This imitation is not exclusive to behaviors; adolescents' attitudes about smoking may also be modeled after their peers' attitudes. The attitudes and behaviors adolescents perceive in their peers are significant predictors of use. Therefore, substance-using adolescents are likely to have substance-using friends (Jessor & Jessor, 1978). The goal of social reinforcement programs, therefore, is to instill social pressure identification skills and pressure resisting skills in adolescents for use against social pressures (i.e., drug, alcohol, and tobacco use) (Bruvold, 1993).

The predominant approach to social reinforcement is refusal skills training in which adolescents learn to identify and resist social pressures and influences from peers, siblings, parents, adults, and the media. This is typically done through the use of films, discussion, role-playing, lectures, and assertiveness training (Hansen, 1992). In addition, some social reinforcement programs have attempted to correct the overestimation of drug use prevalence among adolescents (Chassin, Presson, Sherman, & Curran, 1992). Many adolescents overestimate the prevalence of drug use and those who perceive a higher prevalence are more likely to begin drug use (Chassin, Presson, Sherman, Corty, & Olshavsky, 1984; Leventhal, Fleming, & Glynn, 1988). In addition, the media often glamorizes substance use. These campaigns are embodied through television, radio, literature, billboards, and websites. For as many books, articles, reports, labels, and billboards publicizing tobacco use and its ill effects, there are as many advertising its appeal. Perhaps by providing accurate prevalence information in addition to applying refusal skills to media campaigns, adolescents will feel less social pressure to begin substance use.

Elder, Sallis, Woodruff, & Wildey (1993) examined whether or not refusal skills training would prevent the onset of tobacco use. Refusal skills were taught to 389 high-risk junior high school students. Tobacco use measures were used at the beginning of the study and again at the end of the seventh, eighth, and ninth grade years. Refusal skill sessions included rehearsal of methods to resist pressure to use tobacco, practice of decision making, and performance and watching of tobacco-refusal skits. The refusal skills training only showed significant effects in overall refusal skill quality in the seventh grade and was not related to tobacco use, although such findings are not consistent across the literature.

For example, the Project Towards No Tobacco Use (Project TNT), (Sussman, Dent, Stacy, Hodgson, Burton, & Flay 1993) examined the effectiveness of common strategies used in preventing adolescent tobacco use. Project TNT provided refusal skill training for cigarette experimentation and smokeless tobacco use, as well as awareness of social value misperceptions and physical consequences of tobacco use. The project assigned 6,716 students to one of four program conditions, including a refusal-skills training group. Follow-up studies showed evidence that all three strategies were effective at one year (Sussman, Dent, Stacy, Sun, Craig, Simon, Burton, & Flay, 1993) and again at two years (Dent, Sussman, Stacy, Craig, Burton, & Flay, 1995). In addition to the refusal-skills training group, Project TNT included two other groups and a control group. One intervention group included prevalence of tobacco use information in an attempt to dispel misperceptions about the social images of tobacco use. The second intervention group also attempted to dispel misperceptions by including information regarding the physical consequences of tobacco use. Perhaps the difference in

effects of Elder et al. (1993) and Project TNT is the combination of methods used in Project TNT as opposed to the sole use of refusal skills training in Elder et al. (1993).

Hansen (1992) examined six groups of programs: Information/Values Clarification (i.e., traditional health education programs), Affective Education, Social Influence (i.e., refusal skills training), Comprehensive (i.e., life skills training), Alternatives (i.e., alternative model), and Incomplete Programs (e.g., programs not specifically fitting in any group). When analyzed for threats to internal validity, selection bias, and statistical power, comprehensive programs and social influence programs were found to be most successful in the prevention of substance use onset. Tobler (1986) found that traditional health education and affective education were least effective. However, social psychologically based programs in general were found to be most effective, (Tobler, 1986; Hansen, 1992), followed by alternative model programs.

However, multifaceted prevention programs have been shown to be more effective than single-method prevention programs. Raynal and Chen (1996) combined alternative, structured, educational, and recreational activities to focus on development and improvement of life skills and self-esteem, and to increase knowledge of substance use dangers and consequences. Results documented that knowledge about drugs, attitudes about drug use, and self-concept all improved significantly.

Other multifaceted prevention programs have reported similar findings. Botvin, Baker, Dusenbury, Botvin, and Diaz (1995) combined LST with refusal skills training. Skills were taught to 3,597 students in the seventh, eighth, and ninth grades. At the twelfth grade level, students were given self-report measures on tobacco, alcohol, and

marijuana use. Drug use was significantly reduced, particularly among students receiving the most complete version of the intervention (i.e., at each grade level). Wodarski and Feit (1997) recommended using LST, including social, cognitive, and academic skills training, combined with health education and practice in applying the information and skills taught in simulated troublesome situations (i.e., a mock situation in which peers pressure the adolescent to smoke cigarettes). Tobler (1986) suggested the combination of LST and alternatives. The predominant finding throughout the literature seems to be that multifaceted prevention programs are most effective.

Program Efficacy

There has been some debate as to what constitute effective prevention programs. As seen in the previously reviewed models, a variety of approaches and techniques exist for implementation in and out of the classroom. With the premise that school-based health programs should empower and encourage youth to continue to abstain from tobacco use, discontinue use, or seek help to quit, CDC (1994) compiled a list of guidelines for use in increasing effectiveness of school-based tobacco use prevention programs. The guidelines included (a) developing and enforcing a school policy on tobacco use; (b) educating students about consequences of tobacco use, social influences on tobacco use, peer norms about tobacco use, and refusal skills; (c) providing education from kindergarten through grade 12; (d) ensuring adequate teacher training; (e) acquiring support of parents or families; (f) supporting cessation among students as well as school staff; and, (g) assessing the program at regular intervals. The goal

of this set of recommendations is to help school personnel implement effective tobacco use prevention programs.

Likewise, the Department of Education developed a model for effective school-based TUPE programs (Griffin, 1990). The model was inclusive of the following five components: (a) access to TUPE from kindergarten through grade 12 education; (b) intensification of prevention strategies at the junior high level; (c) tobacco-free school policies for students, staff, and visitors; (d) increasing family and community involvement in prevention efforts; and, (e) providing cessation programs for addicted students and staff. This model stems from a larger statewide project aimed at reducing tobacco use in Minnesota. This project was divided into two parts aimed at (1) the Department of Health, which targeted workplaces, community organizations, public information and mass media efforts, and (2) the Department of Education, which targeted local school districts. This model is an effort of the Department of Education to improve school-based tobacco use prevention programs.

Similarities exist between the two models with a fundamental aspect of both models being the requirement of a school policy on smoking for students and staff. In an effort to examine aspects of school smoking policies, Bowen, Kinne, and Orlandi (1995) sampled 239 schools participating in the COMMIT (Community Intervention Trial for Smoking Cessation) program nationally. Surveys were administered prior to initiation of intervention activities and included questions on school smoking policies, resources, and compliance. Results showed three types of school policies were reported: (1) no smoking on school grounds, (2) smoking only outside the buildings, and (3) smoking only in designated areas. All schools had some form of smoking policy. All

elementary schools banned smoking completely whereas 1/4 of high schools limited smoking and all colleges allowed smoking somewhere on campus. Policy content varied by type of school (i.e., religious affiliation), as did compliance with school policy.

Support from families and the community, as suggested by the above models, allows for strengthening of program effectiveness by creating consistency between home, school, and the greater community. It has, in fact, been suggested that schools alone are not capable of solving substance use and abuse problems; support from the community is necessary (Lohrmann & Fors, 1986; Richmond & Peeples, 1984). However, tobacco use may be viewed as less urgent than other health issues (e.g., AIDS, sexual abuse, and eating disorders). Therefore, it may be more difficult to solicit family and community involvement for tobacco use prevention (Griffin, 1990).

The fact that tobacco use may be viewed as less urgent than other health issues, particularly by school personnel, may prove to be a significant barrier to effective tobacco use prevention efforts. It can, of course, be difficult to find time in an already crowded curriculum to include important health issues. Thus, many administrators and educators often determine themselves what are the most important health issues. More often than not, issues such as AIDS, drug use/abuse, eating disorders, and others will outweigh tobacco use for time allotted in school curriculum (Griffin, 1990).

Problems with school-based prevention programs vary widely, but consistently exist. Gottlieb, Brink, and Gingiss (1993) used a sample of 52 existing "Smoke-Free Class of 2000" coalitions to investigate both the descriptive characteristics and outcomes associated with various coalition activities, including fund raising, use of

volunteers, and extent of media coverage. Contact persons for each coalition were selected, 50 in total, who completed closed-question surveys regarding said coalition activities. Most coalitions described themselves as moderately active, and a vast majority of coalitions reported media coverage. Of coalitions rated very effective in areas of public relations and communications, over half reported that training teachers and volunteer coordination were ineffective or extremely ineffective while more than a third reported problems in evaluating the programs effectively. Fund availability, competing priorities, lack of coordination, and personnel availability were commonly given as concerns for the coalitions.

Prevention programs in the school system are constrained by a variety of factors including limited budgets, limited teacher and staff resources, lack of coordination, and limited classroom time (Ballard, Kingery, & Pruitt, 1991; Cleary, Hitchcock, Semmer, Flinchbaugh, & Pinney, 1988; Gottlieb, Brink, & Gingiss, 1993; Griffin, 1990). Cleary, Hitchcock, Semmer, Flinchbaugh, and Pinney (1988) made the obvious point that programs must be "marketable" in concordance with these demands. Although a total implementation cost is not known, an average estimated cost including instruction time, materials, equipment, teacher training, added classroom time, and opportunity costs was given as $56 per student in 1985.

Given these barriers, one question becomes more pertinent: what makes a school-based prevention program successful? Glynn (1989) outlined the elements of successful school-based smoking prevention programs, with a focus on teacher training. Sufficient training is often hindered by lack of adequate funding and the hope that programs can be equally effective without training. It has been suggested that

training should include motivation and skills as well as build the confidence necessary for proper delivery of the program. Perhaps the key to a successful program is an adequately trained teacher who not only adheres to the principles of the program, but supports it as well. Since teachers are at the closest level of interaction with the students, an effective school-based prevention program may only be as good as its teacher.

Characteristics of Effective Teachers

Fordney and Jones (1990) list the following as characteristics of effective teachers working in prevention programs: (1) learning appropriate teacher-student communication; (2) fostering student growth and development; (3) modeling healthy attitudes and choices; (4) preparing themselves for larger roles in students lives; (5) providing a knowledge base; (6) supporting innovative teaching methods and interactions; and, (7) willingness to conduct self-examination of own values. As each of these characteristics is a result of teacher training or teacher attitudes, both training and attitudes of teachers will be more closely examined to clarify how they relate to teacher effectiveness in prevention programs.

Teacher training. The manner in which teachers use health curriculums is largely determined by teacher training (Glynn, 1989). Without proper training on how to use a specific program, each teacher would likely use the same program differently. With such variation in program delivery, it would not be possible that every program would be used to its intended purpose. Thus, teacher training should be standardized and presented as closely as possible to the recommendation of the program being adopted (Glynn, 1989). It might also be necessary

to hold workshops each year to refresh techniques and to update teachers on the latest developments (Arciti, Pistone, Persici, Barbieri, & Santi, 1995).

In a study that the investigated effects on students of differential teacher training, Allison, Silverman, and Dignam (1990) tested three groups of students. The first group's teachers received fifteen hours of intensive curriculum training, the second group's teachers received 1-2 hours of in-service training, and the control group's teachers received the curriculum guidelines without any training. Pretests and posttests included items on exposure to drug education, drug use, problem-solving skills, knowledge, attitudes toward planned decision making, and coping skills and were administered to students to evaluate the effect of training on program effectiveness. There were significant differences between the groups. Students of the teachers who received intensive training were less likely to intend to take a drink than students of teachers with in-service training or no training. The results led the authors to conclude that differential teacher training has a significant effect on students' knowledge, coping skills, and attitudes toward planned decision-making.

Teacher training is often slighted or even neglected due to the cost of implementation. It is perhaps assumed that any program, whether properly implemented or not, will be better than no program at all. In that light, it may be easy for administrators to rationalize the lack of teacher training given its costs. However, a program can only be as effective as the teacher delivering it. Thus, teachers must be properly and thoroughly trained. Glynn (1989) suggested that good teacher training will develop the motivation, skills, and confidence

necessary to deliver programs effectively. Properly trained teachers gain skills with which to present the program and an understanding of the intricacies (e.g., rationale, goals, purpose, etc.) of the program, which contributes to their confidence in the presentation of the program. His or her understanding of a program makes it possible for a teacher to see the potential a program has. Thus, motivation may also be built through the process of teacher training.

In a follow-up study used to evaluate the school personnel training model ESW (Enhancing Student Well-Being), Romano (1997) reported the results of two separate cohort groups consisting of 30 ESW 1993 participants and 42 ESW 1995 participants. Each school involved was represented by at least one educator. Results showed that benefits of the training included specific components of the program (improved curriculum, peer mediation, faculty/staff inservice, improved student attendance, and improved student discipline), improved cooperation between teachers and staff, as well as greater involvement from the community. Weaknesses of the training model cited were: lack of commitment by staff and administration; time limitations; and, insufficient communication among staff members. The authors concluded that while this prevention program might be effective, certain management skills are of particular importance. Among these are team discussions focusing on needs and attitudes, interaction between teams from other schools, and planning of projects with ample time, guidelines, and assistance. These skills allow for professional networking and support among teachers.

Teachers' attitudes. Much of a program's effectiveness lies in the teacher's receptivity to the program, and ultimately in his or her attitude and presentation of the program to the students. A teacher who

is comfortable with the content of the program will present the program more effectively. For example, a teacher may find the content of a program to be in conflict with his or her personal moral, cultural, or religious beliefs (Galli, Greenberg, & Tobin, 1987). This teacher is likely to have difficulty presenting the program effectively. Likewise, teachers may feel uncomfortable with the content of a prevention program if they use drugs or alcohol themselves (Eiseman, Robinson, & Zapata, 1984).

In an article exploring teacher receptivity to tobacco prevention programs, Gingiss, Gottlieb, and Brink (1994) examined teachers' views toward teaching tobacco prevention by surveying 313 Texas first grade teachers. Initial surveys addressed teacher views toward adoption and use of tobacco prevention education materials. Follow-up surveys were issued the following year that addressed current use and intent to continue the tobacco use prevention education program. Results show that 97% of the teachers surveyed in the first year intended to continue use of the program. However, 41.1% did not continue use and 21.4% never initiated use. It was also found that initial adoption and use of programs were related to personal and school involvement while maintenance was found to be related to teachers' attitudes toward tobacco prevention education. Thus, the more involved a teacher is and the more supportive his or her attitude toward tobacco prevention education is, the more likely a program will be adopted, used, and maintained.

Factors related to teacher amenability. Teacher amenability, or responsiveness, to TUPE may depend on a number of factors. First is being pleased with the prevention program selected by school administrators (Glynn, 1989). If teachers dislike the program school

administrators select, they are less likely to be receptive to the TUPE from the start. Second, being confident with new teaching methods promotes amenability (Dewit, Timney, Silverman, & Stevens-Lavigne, 1996). The more confident a teacher is with the methods used, the more comfortable he or she feels, and the more receptive he or she will be. Third, personal beliefs congruent with the fundamentals of the prevention program (Galli et al., 1987) promotes increased receptivity. Fourth, believing that drug education is an important responsibility of an educator (Dewit et al., 1996) motivates the teacher to be more receptive. Fifth, feeling supported by administrators, parents, and the community (Tubman, Soza, Barr, & Langer, under review) also increases receptivity.

Tobacco use norms. In a similar vein, it may perhaps be said that the better the teacher training experience, the more receptive the teacher may be to the prevention program. However, the question arises as to whether or not teacher receptivity might be reduced given the school and community environments surrounding the prevention program. The ecological perspective (Bronfenbrenner, 1979) is evidenced in the complex effects seen between the nested systems in the environment. For example, parents' and peers' attitudes concerning tobacco use set standards to be modeled for adolescents (Biddle, Bank, & Marlin, 1980). These standards help create a set of tobacco use norms for that community. Should these norms be negative (i.e., in support of tobacco use), the environment in which TUPE programs are implemented may not be conducive to the effectiveness of these programs. As previously stated, a prevention program may only be as effective as the participating educator. Thus, a critical question is: given an environment

supportive of tobacco use, do teacher training experiences really matter in promoting teacher amenability to TUPE?

The Current Study

This study attempts to determine whether teacher receptivity is affected by key contextual factors. Teachers are responsible for delivering TUPE programs. Their receptivity to TUPE and their training experience play crucial roles in determining program success. Lack of receptivity to TUPE programs may lead to a subsequent lack of motivation to properly present program materials. Similarly, a lack of teacher training experiences may lead to a lack of skills necessary to properly present program material. Little is known about teachers' receptivity to TUPE programs and how this is influenced by their training experiences or by the influence of broader social environments.

The current study has three main aims. First, descriptive statistics are summarized documenting differences between samples of middle and high school teachers in mean levels of TUPE program variables. In addition, correlational analyses are used to describe intercorrelations among TUPE program variables. The second aim of this study is to empirically classify TUPE teachers, using cluster analysis, into distinct and meaningful groups on the basis of their TUPE-related perceptions and to identify group differences in the middle and high school teacher samples based on these empirical classifications. Specifically, this study examines differences in: teachers' TUPE training experiences, their perceptions of tobacco use norms, and their reports of TUPE-related classroom activities on the basis of their levels of amenability to TUPE. The third aim of the study is to determine if teacher training experiences, perceived norms for

adolescent tobacco use, and TUPE-related classroom activities are significant independent predictors of teachers' perceptions of TUPE effectiveness. Specifically, which of these three sets of variables consistently accounts for significant variance in teachers' ratings of program effectiveness?

Hypotheses

It is hypothesized that there are significant differences in high school and middle school teachers' reports of TUPE-related variables, and significant correlations among teacher TUPE variables. It is hypothesized that distinct and meaningful subgroups of teachers can be identified based on their reported levels of support for, or the value of TUPE, as well as the perceived effectiveness of these programs. It is hypothesized that teacher training, teachers' perceptions of tolerance for tobacco use, and TUPE-related classroom activities will account for significant variance in teachers' perceptions of TUPE program success, but that more proximal influences (e.g., classroom activities) will be more powerful predictors than more distal influences.

Chapter 3: Method

Participants

The data used in this study were obtained from a phone survey conducted in the state of Florida as part of the Tobacco Pilot Project (1998). A total of 383 principals were interviewed, 193 from middle schools and 190 from high schools. The active refusal rate for the Principal Survey was 3.3%. In addition, 578 teacher interviews were completed. The teacher sample included 296 middle school teachers (28.0% were men and 72.0% were women) and 282 high school teachers (39.9% were men and 62.1% were women). The active refusal rate for teachers was less than 1%. Participants were informed that they would receive $20 to compensate them for their time. Participants also had the option of faxing or mailing their responses if a phone appointment was not convenient.

The terminal academic degree held by the majority of the middle school teachers was a Bachelor's (53.2%) or a Master's degree (40.0%). The terminal academic degree held by the majority of the high school teachers was a Bachelor's (52.1%) or a Master's degree (42.6%). Of the middle school teachers, the majority (57.1%) described their primary position as a teacher in the health education program. Of the high school teachers, the majority (74.8%) described their primary position as teachers in the health education program. The average number of years spent teaching substance abuse prevention overall was 8.88 years for middle school teachers and 9.78 years for high school teachers. Few of the TUPE teachers smoked, only 4.0% of the middle school teachers and 6.3% of the high school teachers.

Measures

Survey Instruments

A telephone survey was used as the primary method for securing the information required to address the research questions. Two sets of telephone survey instruments were designed, constructed, pilot tested, and revised. The middle school teacher version contained 75 items while the nearly identical version for high school teachers contained 78 items.

The survey instruments for principals and teachers were different from one another in a number of substantive areas since the two instruments tapped a number of information domains that were appropriate for either principals or teachers, but not for both groups of educators. The principal and teacher survey protocols each contained approximately 75 items. This interview schedule kept the length of administration to between 15 to 20 minutes. In retrospect, this brief protocol proved to be both adequate and efficient in securing the data necessary to complete the research successfully; it minimized the number of interviews terminated; and, it kept respondent burden at a low level.

Items used in the teacher and principal survey instruments were derived from several sources. They included items regarding the instructional objectives and skills taught in current TUPE programming. These were drawn directly from CDC guidelines for effective tobacco prevention education programs. Other items that assessed teacher attitudes about the value of tobacco programs, and the preparation required to teach tobacco prevention programs were drawn from the Gallup Organization's evaluation of the California Tobacco Control Program. Additional questions were written or revised specifically for

this project. These included a number of items intended to secure demographic data; items that tapped perceived effects of tobacco use, and perceived norms for tobacco use.

The items included in the principals' telephone survey can be placed in the following broad categories:

1. Perceived influence of tobacco on adolescent functioning.
2. Perceived tobacco use by students.
3. Perceived acceptance of tobacco use.
4. Current school policies prohibiting tobacco use.
5. Current substance use prevention education programming.
6. Instructional goals of current TUPE programs.
7. Skills taught in current TUPE programs.
8. Issues of availability, community norms, and enforcement.
9. Demographic variables.

The teachers' survey instrument included items that can be placed into these broad categories:

1. Perceived influence of tobacco on adolescent functioning.
2. Perceived tobacco use by students.
3. Perceived acceptance of tobacco use.
4. Teacher involvement in TUPE programming.
5. Teacher's training for TUPE programming
6. Teachers' attitudes and behavior regarding tobacco use.
7. Perceived barriers to effective tobacco prevention education.
8. Instructional goals of current TUPE programs.
9. Skills taught in current TUPE programs.
10. Teachers' perceptions of students' drug use.
11. Classification variables for teachers.

Procedure

The interviews were conducted by the Institute for Public Opinion Research (IPOR), a research unit housed at Florida International University. A 40% random sample of the 1,140 middle and high schools in the seven geographic regions of Florida was generated. Schools were selected into the sampling frame if they were middle schools or high schools with enrollments of no less than 100 students. The sampling frame also contained both racially/ethnically mixed and racially/ethnically homogenous schools. Once the schools were selected from the sampling frame, telephone contacts were made with the principals. They were informed of their selection, the background and goals of the research were described, and their participation was requested. At this time, they were also informed that they would be compensated for their time. When principals indicated a willingness to participate, informed consent was obtained and the interview was either conducted or scheduled for a mutually acceptable future date. Of the 383 completed principal interviews, 161 of the middle school principals were interviewed by phone and 32 completed the survey in writing and returned it by fax or mail. Among the high school principals, 171 were interviewed by phone and 19 completed a hand written survey. The questions on the survey did not differ from those that would have been asked if they had completed a phone survey. Eight of the faxed interviews (5 middle school principals and 3 high school principals) arrived too late to contact the teachers identified by them. Fifteen of the faxed principal interviews were completed and returned after the target number of 386 schools had been obtained and data collection had ended. Since data entry was still in progress, these additional data were included in the final data set.

As part of the interview process, the principals were asked to provide a list of all the teachers responsible for tobacco or other substance use education in their school. The anticipated teacher sample included two teachers per school (N=756). The research plan called for random selection of only two teachers when more than two names were provided. However, in 12 instances no names were provided and in 31 instances the principals identified teachers who, when contacted, indicated they did not teach in the school's substance use prevention programs. When this occurred, the teachers contacted were asked to provide the names of those whom they thought were responsible for substance use education. In turn, these teachers were contacted for interviews. For 77 schools only one teacher's name was provided. The average interview for each group was between 15 and 20 minutes. Once initiated, none of the interviews was terminated before its completion.

Analytic Plan

Cluster analysis was used to classify teachers on the basis of similarity in self-reported support for TUPE, perceptions of the value of TUPE, and perceptions of the effectiveness of TUPE. Likewise, teachers were classified by amenability to TUPE on the basis of similarity of perception of tobacco tolerance norms, acquisition of teacher training, and implementation of TUPE-related classroom activities. Ward's method (Ward, 1963), a similarity method, was used to create descriptive profiles within the sample since its properties included nonoverlapping clusters, distance rather than a correlational measure, and preservation of unequal cluster sizes. Optimal cluster solutions were determined for each sample of teachers through an inspection of fusion coefficients for significant jumps in magnitude as

described in Aldenderfer and Blashfield (1984). Ward's method was conducted using the CLUSTER procedure outlined in SPSS for Windows (Green, Salkind, & Akey, 2000). Following the determination of the optimal cluster solutions, mean scores for the component variables across the clusters were identified using multivariate analysis of variance (MANOVA). Cluster means were compared to describe any systematic patterns in levels of the component variables by cluster membership.

Hierarchical Multiple Regression (HMR) analyses were conducted to assess relations between different blocks of predictors and teachers' perceptions of the effectiveness of TUPE programs both for preventing the initiation of tobacco use and promoting its cessation. This was done separately for the middle and high school samples. HMR analysis was chosen because it accepts entry of a number of predictor variables, provides the association between the dependent variable and these predictor variables, and allows for predictions to be made from these results (Rosenthal & Rosnow, 1991). Thus, the results of HMR analyses allow statements to be made concerning order of importance of predictors (i.e., which predictors are most or least important).

Chapter 4: Results

Descriptive Analyses

The participants consisted of two samples of 296 middle school and 282 high school TUPE teachers, and two samples of 190 middle school and 193 high school principals recruited from across the State of Florida. The four samples are described in Table 1. Several differences in the distribution of demographic characteristics between the middle school and high school samples were significant. Among both teachers and principals, males were overrepresented in the high school samples in comparison to the middle school samples. High school principals had held their positions significantly longer on average than their middle school counterparts. Participating high schools were significantly larger than middle schools both with regard to mean numbers of (a) students and (b) teachers and related professional staff. In terms of geographical location, middle schools were more likely to be located in suburbs of large cities or in small cities or towns, while high schools were more likely to be located in rural areas. Principals' reports of students' economic statuses also varied significantly between middle and high schools. Middle school principals were more likely to describe their students as predominantly upper middle class while high school principals were more likely to describe their students as predominantly middle class.

Table 2 summarizes the distributions of key variables in the middle and high school teacher samples. Several significant differences were found between the samples of middle and high school teachers. For example, group differences in teacher training (i.e., whether or not teachers received training) were significant across grade level (F = 8.711, 1/569 df, $p < .01$). Middle school teachers (M = 1.21) were more

Table 1. Descriptive Characteristics of Participating Teachers, Principals, and their Schools.

	Middle School		High School		Test Statistic	df	p
	N	%	N	%			
Teacher Variables							
Gender							
Male	83	28.0	107	37.9	χ^2=6.43	1	.011
Female	213	72.0	175	62.1			
Highest Academic Degree							
Associate	4	1.4	3	1.1	χ^2=1.64	5	NS
Bachelor	157	53.2	147	52.1			
Master	118	40.0	120	42.6			
Other Cerificate	5	1.7	2	0.7			
Specialist	6	2.0	6	2.1			
Doctorate	5	1.7	4	1.4			
Tobacco Use Amount							
None at All	283	95.9	264	93.6	χ^2=1.66	2	NS
On Some Days	6	2.0	10	3.5			
Every Day	6	2.0	8	2.8			
Years Teaching Substance Use Prevention	260		282		t=-1.43	540	NS
Mean	8.88		9.78				
SD	7.54		7.18				
Principal Variables							
Gender							
Male	110	57.0	127	66.8	χ^2=3.94	1	.047
Female	83	43.0	63	33.2			
Highest Academic Degree							
Bachelor	4	2.1	2	1.1	χ^2=5.50	3	NS
Master	143	74.5	136	71.6			
Specialist	30	15.6	24	12.6			
Doctorate	15	7.8	28	14.7			
Years as Principal	190		189		t=-2.87	338.76	.004
Mean	3.89		5.14				
SD	3.47		4.90				
School Variables							
School Location							
Large City	56	29.2	60	31.6	χ^2=10.59	3	.014
Suburb	49	25.5	32	16.8			
Small City or Town	60	31.3	50	26.3			
Rural Area	27	14.1	48	25.3			
Ethnic Composition							
Mainly White	117	60.6	124	65.3	χ^2= 3.75	4	NS
Mainly Black	21	10.9	27	14.2			
Mainly Hispanic	17	8.8	11	5.8			

Racially/Ethnically Mixed	34	17.6	25	13.2			
Other	4	2.1	3	1.6			
Student Economic Status							
Mainly Upper Middle Class	14	7.3	1	.5	χ^2=14.75	4	.005
Mainly Middle Class	61	31.6	69	36.3			
Mainly Working Class	85	44.0	86	45.3			
Evenly Mixed	29	15.0	32	16.8			
Other	4	2.1	2	1.1			
Number of Students in School	193		190		$\underline{t}$=-4.97	241.36	.001
Mean	1163.92		1627.16				
SD	455.46		1203.15				
Number of Staff in School	192		190		$\underline{t}$=-5.63	270.80	.001
Mean	67.74		92.09				
SD	25.77		53.79				

likely to have received formal TUPE training than high school teachers (M = .98). However, the amount of training received was not significant when subgroups of teachers who had received training were compared.

Group differences were found for several TUPE classroom activities. Teaching tobacco resistance skills (F = 9.105, 1/568 df, p <.01) and peer pressure resistance skills (F = 12.837, 1/569 df, p < .001) were reported as being covered more frequently by middle school teachers than by high school teachers. Middle school teachers were more likely than high school teachers to cover all TUPE classroom activities with the exception of supporting tobacco cessation and requesting a tobacco-free environment. Many of these group differences in mean levels of specific classroom activities, however, did not attain statistical significance.

There were significant group differences in mean levels of teacher-reported perceived tolerance norms for student tobacco use for each of the following groups: peers (F = 10.026, 1/556 df, p < .01), school staff (F = 9.194, 1/563 df, p < .01), parents (F = 32.885, 1/536 df, p < .001), and the community (F = 12.366, 1/541 df, p < .001). High school teachers consistently reported higher levels of perceived tolerance among these groups than did middle school teachers. Therefore, high school teachers may be more likely than middle school teachers to view their TUPE programs as encountering a lack of support from other stakeholders in these prevention programs.

Middle school teachers believed TUPE programs were more effective for prevention than did high school teachers (F = 13.003, 1/568 df, p < .001). There was, however, no significant group difference in teacher ratings for the belief that TUPE programs were effective for promoting

Table 2. Distribution of Key Variables in Middle School and High School Teacher Samples.

	Middle School		High School				
	X	SD	X	SD	df	F	p
Tobacco Tolerance Norms for:							
Peers	1.95	.74	1.76	.69	1/556	10.026	.002
School Staff	3.71	.64	3.53	.78	1/563	9.194	.003
Parents	2.40	.80	2.02	.75	1/536	32.885	.000
Community	2.42	.83	2.16	.83	1/541	12.366	.000
Classroom Activities							
Encourage Non-use	2.03	.87	2.07	.84	1/568	.394	NS
Support Tobacco Cessation	2.35	.97	2.23	.80	1/569	2.541	NS
Share Knowledge and Attitudes	2.05	.83	2.12	.84	1/568	1.047	NS
Teach Tobacco Resistance	2.06	.92	2.29	.87	1/568	9.105	.003
Resist Advertising Messages	1.98	.91	2.06	.87	1/566	1.193	NS
Resist Peer Pressure	1.48	.65	1.69	.71	1/569	12.837	.000
Request Tobacco-Free Environment	2.28	.98	2.14	.87	1/569	3.431	NS
Teacher Training							
Formal Training	1.21	.90	.98	.93	1/569	8.711	.003
Training Amount	1.67	.94	1.83	.85	1/269	2.044	NS
Teacher Amenability							
Effective for Prevention	2.00	.62	2.19	.67	1/568	13.003	.000
Effective for Cessation	2.29	.77	2.40	.71	1/563	2.799	NS
Valuable Use of Student Time	1.36	.63	1.47	.73	1/576	.165	NS
Support No Tobacco Policy	1.06	.27	1.07	.29	1/576	3.217	NS

cessation. As teaching tobacco and peer pressure resistance skills may be more prevention-oriented (as opposed to cessation-oriented) than other TUPE classroom activities, this finding may be related to the finding that middle school teachers are more likely than high school teachers to teach tobacco resistance and peer pressure resistance skills. Alternatively, both middle school and high school teachers may believe that once adolescents have started using tobacco, preventative educational programs are only minimally effective.

Cluster Analyses

As summarized in Table 3, MANOVA using data reported by middle school teachers revealed significant between-group differences in component variables by cluster membership. The Pillai-Bartlett multivariate test statistic indicated an overall pattern of significant group differences across the four variables used in the cluster analysis (V = 2.09, F = 151.97, 12/798 df, $p < .001$). Table 3 summarizes the results of the univariate F tests.

Significant group differences on the basis of cluster membership were identified for teachers' personal support for anti-tobacco policies (F = 433.88, 3.271 df, $p < .001$), their perceptions of the value of TUPE (F = 271.82, 3/271 df, $p < .001$), their perceptions of the effectiveness of TUPE in preventing initiation of tobacco use (F = 27.04 , 3/271 df, $p < .001$), and the effectiveness of TUPE for promoting cessation of tobacco use (F = 82.88, 3/271 df, $p < .001$).

Table 3 also summarizes the means for each component variable among the four groups of middle school teachers. While cluster means varied widely, multivariate patterns of differences were found among the clusters. Members of Cluster 1 can be described as having high levels of support for TUPE, but only endorsing moderately the value and

Table 3. Cluster Means of Component Variables for Four-Cluster Solution Among Middle School TUPE Teachers.

	Cluster 1 n = 64	Cluster 2 n = 130	Cluster 3 n = 62	Cluster 4 n = 15	F
Teacher Personally Supports TUPE	1.00_a	1.00_a	1.00_a	2.13_b	433.88***
Teacher Considers TUPE a Valuable Use Of Student Time	2.31_a	1.02_b	1.05_b	1.80_c	271.82***
Teacher Considers TUPE Effective in Tobacco Prevention	2.14_a	1.70_b	2.42_a	2.20_a	27.04***
Teacher Considers TUPE Effective in Tobacco Cessation	2.38_a	1.83_b	3.19_c	2.13_a	82.88***

Note. Means with different subscripts are significantly different, by Student-Newman-Keuls tests with significance levels of .05. ***$p<.001$.

effectiveness of TUPE. Members of Cluster 2 reported high levels of support for TUPE as well as strong endorsements of the value and the effectiveness of TUPE (i.e., for prevention and, to a lesser degree, cessation). Members of Cluster 3 reported high levels of support for TUPE and strongly endorsed its value. Yet, these teachers reported perceptions of TUPE as being largely ineffective in either preventing the initiation of tobacco use or promoting its cessation. In contrast to the other groups of teachers, members of Cluster 4 reported only moderate support for TUPE and associated school policies. In addition, this group of teachers perceived their TUPE programs as moderately valuable and moderately effective with regard to preventing tobacco use or promoting its cessation.

Cluster membership among the middle school teachers was not significantly associated with gender, cumulative years of experience teaching TUPE, or the terminal degree acquired. Cluster membership was associated with teachers' level of tobacco use χ^2 (6, $\underline{N}$ = 270) = 18.19, $\underline{p} < .01$), although the majority of cells (66.7%) contained fewer than 5 cases, potentially invalidating the test statistic. Daily smokers were overrepresented in Cluster 4, the group reporting the lowest support for, and perceived effectiveness of, TUPE. In addition, post-hoc exploratory ANOVAs confirmed significant group differences in personal support for TUPE ($\underline{F}$ = 11.21, 2/292 $\underline{df}$, $\underline{p} < .001$) and perceived value of TUPE ($\underline{F}$ = 3.32, 2/294 $\underline{df}$, $\underline{p} < .05$) by teachers' reported level of tobacco use.

As reported in Table 4, MANOVA using data reported by high school TUPE teachers also revealed significant between-group differences in component variables by cluster membership. The Pillai-Bartlett

multivariate test statistic indicated an overall pattern of significant group differences across the four variables resulted in the cluster analysis (V = 2.26, F = 83.54, 16/1028 df, p < .001). Table 4 summarizes the results of the univariate F tests.

Significant group differences on the basis of cluster membership were identified for teachers' personal support for school anti-tobacco policies (F = 673.28, 4/261 df, p < .001), the perceived value of TUPE (F = 171.03, 4/261 df, p < .001), the perceived effectiveness of TUPE for tobacco prevention (F = 64.12, 4/261 df, p < .001), and the effectiveness of TUPE for tobacco cessation (F = 51.31, 4/261 df, p < .001).

Table 4 also summarizes the means for each component variable among the five groups of high school teachers. Once again, mulitvariate patterns of differences were found among the clusters. Members of Cluster 1 reported high levels of support for TUPE, as well as strong endorsement of the value of TUPE. In contrast, the majority of these teachers reported that TUPE was largely ineffective for either preventing tobacco use or promoting its cessation. Members of Cluster 2 reported high levels of support for TUPE as well as strong endorsement of its value. These teachers reported that TUPE is moderately effective for prevention and cessation goals. Members of Cluster 3 reported moderate levels of support for TUPE but strongly endorsed its value. In addition, these teachers reported perceptions of TUPE as being moderately effective. Similar to Cluster 2, members of Cluster 4 reported high levels of support for TUPE and associated policies. In addition, this group of teachers perceived their TUPE programs as moderately valuable and moderately effective with regard to preventing tobacco use or promoting its cessation. Members of Cluster 5, while

Table 4. Cluster Means of Component Variables for Five-Cluster Solution Among High School TUPE Teachers.

	Cluster 1 n = 88	Cluster 2 n = 99	Cluster 3 n = 15	Cluster 4 n = 43	Cluster 5 n = 17	F
Teacher Personally Supports TUPE	1.00_a	1.00_a	2.13_b	1.00_a	1.00_a	673.28***
Teacher Considers TUPE a Valuable Use Of Student Time	1.24_a	1.02_b	1.33_a	2.35_c	3.06_d	171.03***
Teacher Considers TUPE Effective in Tobacco Prevention	2.65_a	1.77_b	2.13_c	1.93_{bc}	3.29_d	64.12***
Teacher Considers TUPE Effective in Tobacco Cessation	2.90_a	1.88_b	2.47_c	2.26_c	3.18_a	51.31***

Note. Means with different subscripts are significantly different by Student-Newman-Keuls tests with significance levels of .05. ***p<.001.

reporting high levels of support for TUPE, considered TUPE only a somewhat valuable use of students' time. In addition, these teachers reported that TUPE was largely ineffective for either preventing tobacco use or promoting its cessation.

Cluster membership among the high school teachers was not significantly associated with cumulative years of experience teaching TUPE or the terminal degree acquired. Cluster membership was associated with teachers' gender χ^2 (4, $\underline{N}$ = 262) = 9.47, $\underline{p}$ = .05 and level of tobacco use χ^2 (8, $\underline{N}$ = 262) = 19.97, $\underline{p}$ = .01, although the majority of cells (66.7%) contained fewer than 5 cases, potentially invalidating the latter statistical test. Male teachers were overrepresented in Cluster 4. Daily smokers were overrepresented in Cluster 5, the group reporting low perceived effectiveness for TUPE. Post-hoc exploratory ANOVAs confirmed significant group differences in the perceived effectiveness of TUPE for preventing tobacco use ($\underline{F}$ = 4.40, 2/272 $\underline{df}$, $\underline{p}$ < .05) and the perceived value of TUPE ($\underline{F}$ = 5.18, 2/281 $\underline{df}$, $\underline{p}$ < .01) by teachers' reported level of tobacco use.

Table 5 summarizes the results of a series of ANOVAs of variables used to validate the cluster-analytically derived TUPE amenability typology for middle school teachers. Numerous significant between-group differences were found for the three sets of external variables by cluster membership. Table 5 summarizes the variable means by cluster membership for teachers, as well as accompanying univariate $\underline{F}$ tests. Significant group differences on the basis of cluster membership were identified for teachers' perceptions of tobacco tolerance norms for school staff ($\underline{F}$ = 4.421, 3/264 $\underline{df}$, $\underline{p}$ < .01), parents ($\underline{F}$ = 2.855, 3/255 $\underline{df}$, $\underline{p}$ < .05), and the broader community ($\underline{F}$ = 4.701, 3/259 $\underline{df}$, $\underline{p}$ < .01). Variable means by cluster indicate lower

Table 5. Cluster Differences in External Variables for Amenability Typology for Middle School TUPE Teachers.

	Cluster 1 n = 62	Cluster 2 n = 127	Cluster 3 n = 62	Cluster 4 n = 15	F
Tobacco Tolerance Norms for:					
Peers	2.00_{a}	2.01_{a}	1.77_{a}	1.93_{a}	1.557
School Staff	3.66_{ab}	3.83_{b}	3.55_{ab}	3.40_{a}	4.421**
Parents	2.43_{a}	2.50_{a}	2.17_{a}	2.64_{a}	2.855*
Community	2.46_{ab}	2.54_{b}	2.10_{a}	2.67_{b}	4.701**
Classroom Activities					
Encouraging non-use	2.34_{b}	1.73_{a}	2.31_{b}	2.00_{ab}	11.388***
Support Tobacco Cessation	2.58_{a}	2.09_{a}	2.56_{a}	2.60_{a}	6.044***
Share Knowledge and Attitudes	2.28_{b}	1.82_{a}	2.16_{ab}	2.67_{c}	8.686***
Teach Tobacco Resistance	2.36_{b}	1.84_{a}	2.21_{ab}	2.20_{ab}	6.032***
Resist Advertising Messages	2.09_{a}	1.75_{a}	2.23_{a}	2.13_{a}	5.090**
Resist Peer Pressure	1.70_{a}	1.35_{a}	1.53_{a}	1.67_{a}	4.997**
Request Tobacco-Free Environment	2.52_{b}	1.95_{a}	2.55_{b}	2.93_{b}	10.861***
Teacher Training					
Formal Training	1.11_{a}	1.45_{a}	1.02_{a}	1.07_{a}	4.231**
Training Amount	$.92_{a}$	1.04_{a}	$.72_{a}$	$.73_{a}$	1.323

Note: Means with different subscripts are significantly different, by Student-Newman-Keuls tests with significance levels of .05. *$p<.05$; **$p<.01$; ***$p<.001$.

ratings for perceived tolerance among school staff than among parents or the broader community. While there were significant between-cluster differences in mean levels of perceived tolerance for adolescents' tobacco use, it was not evident that the patterning of these group differences was consistent. For example, while Cluster 4 assigned the most tolerant ratings for staff members' norms regarding adolescents' tobacco use, the most tolerant norms for tobacco use among community members was reported by teachers in Cluster 3.

Significant group differences existed in the proportions of teachers in each group who had received formal in-service training on tobacco prevention education in the last five years (F = 4.231, 3/267 df, $p < .01$). Members of Cluster 2 (M = 1.45) were more likely to have received formal in-service training than members of other clusters. There was no significant between-cluster difference in the amount of training received among those teachers who had received any formal training.

Significant group differences by cluster were found across all classroom activities: encouraging others not to use tobacco (F = 11.388, 3/269 df, $p < .001$), supporting cessation (F = 6.044, 3/269 df, $p < .001$), sharing knowledge and attitudes (F = 8.686, 3/269 df, $p < .001$), teaching tobacco resistance skills (F = 6.032, 3/269 df, $p < .001$), resisting messages in advertising (F = 5.090, 3/267 df, $p < .01$), resisting peer pressure to begin use (F = 4.997, 3/269 df, $p < .01$), and requesting a tobacco-free environment (F = 10.861, 3/269 df, $p < .01$). In the classroom, the most consistently covered skill among middle school teachers was resisting peer pressure. This may be directly related to teachers' perceptions of tobacco tolerance norms as highest among peers. Teachers in Clusters 1, 3, and 4 covered resisting

peer pressure skills constantly while very frequently covering all other classroom activities. Members of Cluster 2, however, constantly covered all classroom activities with the exception of supporting tobacco cessation, which was covered very frequently. Therefore, a key conclusion to be drawn from Table 5 is that teachers in Cluster 2 were consistently more likely to cover key CDC-recommended TUPE classroom activities than teachers in the other clusters. These between-cluster differences in levels of classroom activities reached statistical significance in four of seven instances.

Parallels may be seen between the patterning of component and external variables among middle school TUPE teachers, in particular with regard to Cluster 2. The fact that members of Cluster 2 reported high levels of support for TUPE as well as strong endorsements of the value and the effectiveness of TUPE (i.e., for prevention and, to a lesser degree, cessation) may be reflected in, or influenced by, the classroom activities that they cover. Members of Cluster 2 covered all TUPE classroom activities equally with the exception of supporting those trying to quit, which was covered less frequently. If teachers perceive TUPE as less effective for cessation than prevention, they are less likely to have covered cessation-related skills and more likely to endorse prevention-related skills. In addition, it must be noted that members of Cluster 2 were more likely to have received TUPE training. This may contribute to the finding that Cluster 2 more consistently covered TUPE classroom activities than the other clusters. It is important to note that in Table 5 teacher amenability to TUPE appears to be significantly associated with the content of anti-tobacco lessons presented by middle school teachers.

Similar to Table 5, Table 6 summarizes the results of a series of ANOVAs of variables used to validate the cluster-analytically-derived TUPE amenability typology of high school teachers. Among high school teachers, however, significant between-group differences by cluster membership were confined to TUPE classroom activities. Table 6 summarizes the variable means by teacher cluster, as well as accompanying univariate F tests. No significant group differences were found for teachers' perceptions of tobacco tolerance norms. However, variable means by cluster indicate lower perceptions of tolerance among school staff than among peers, parents, or community. Similarly, no significant group differences were found for type or amount of formal teacher training experiences. Each subgroup of teachers reported similar proportions receiving formal training and similar amounts of training.

Significant group differences by cluster membership were found across all classroom activities: encouraging others not to use tobacco ($F = 10.460$, 4/257 df, $p < .001$), supporting cessation ($F = 5.354$, 4/258 df, $p < .001$), sharing knowledge and attitudes ($F = 9.450$, 4/258 df, $p < .001$), teaching tobacco resistance skills ($F = 8.231$, 4/258 df, $p < .001$), resisting messages in advertising ($F = 5.347$, 4/257 df, $p < .001$), resisting peer pressure to begin use ($F = 3.677$, 4/258 df, $p < .01$), requesting a tobacco-free environment ($F = 2.977$, 4/258 df, $p < .05$), and using resources to help students quit ($F = 11.557$, 4/258 df, $p < .001$).

Members of Clusters 1 and 4 constantly covered resisting peer pressure to begin use while very frequently covering all other classroom activities. Members of Cluster 2 constantly covered all classroom activities with the exception of supporting tobacco

Table 6. Cluster Differences in External Variables for Amenability Typology for High School TUPE Teachers.

	Cluster 1 n = 86	Cluster 2 n = 99	Cluster 3 n = 15	Cluster 4 n = 42	Cluster 5 n = 17	F
Tobacco Tolerance Norms for:						
Peers	1.73_a	1.79_a	1.80_a	1.85_a	1.44_a	1.197
School Staff	3.55_a	3.63_a	3.20_a	3.38_a	3.47_a	1.497
Parents	1.85_a	2.14_a	1.91_a	2.07_a	1.77_a	2.291
Community	2.10_a	2.26_a	2.00_a	2.18_a	2.12_a	.630
Classroom Activities						
Encourage Non-use	2.00_{ab}	1.88_a	2.47_b	2.10_{ab}	3.12_c	10.460***
Support Tobacco Cessation	2.29_a	2.04_a	2.40_a	2.21_a	2.94_b	5.354***
Share Knowledge and Attitudes	2.13_a	1.89_a	2.67_b	2.17_a	3.00_b	9.450***
Teach Tobacco Resistance	2.28_a	2.00_a	2.80_b	2.36_a	3.06_b	8.231***
Resist Advertising Messages	2.09_{ab}	1.81_a	2.47_b	2.17_{ab}	2.65_b	5.347***
Resist Peer Pressure	1.69_{ab}	1.52_a	2.00_b	1.79_{ab}	2.06_b	3.677**
Request Tobacco-Free Environment	2.15_{ab}	1.97_a	2.47_{ab}	2.10_{ab}	2.65_b	2.977*
Use Resources to Help Quit	2.64_a	2.17_a	2.67_a	2.74_a	3.59_b	11.557***
Teacher Training						
Formal Training	$.97_a$	1.09_a	$.87_a$	$.93_a$	$.76_a$	.671
Training Amount	$.77_a$	$.76_a$	$.67_a$	$.70_a$	$.88_a$	.127

Note: Means with different subscripts are significantly different, by Student-Newman-Keuls tests with significance levels of .05. *$p<.05$; **$p<.01$; ***$p<.001$.

cessation, teaching tobacco resistance, and using resources to help quit, which were covered very frequently. Members of Cluster 3 very frequently covered all classroom activities. Members of Cluster 5 very frequently covered supporting tobacco cessation, resisting advertising messages, resisting peer pressure, and requesting a tobacco-free environment. The remaining classroom activities (e.g., encouraging non-use, sharing knowledge and attitudes, teaching tobacco use resistance, and using resources to help quit) were only sometimes covered. In general, members of Cluster 2 were more likely to consistently cover activities at a higher rate than other groups, whereas members of Cluster 5 were more likely to consistently cover activities at a lower rate than other groups.

Parallels between component and external variables for high school teachers exist. While members of Cluster 2 strongly support and value TUPE, they believe TUPE is only moderately effective for prevention and cessation, with more positive emphasis on prevention than cessation. This may explain the fact that cessation-related skills (e.g., supporting tobacco cessation, teaching tobacco resistance, and using resources to help quit) were covered less frequently than other TUPE classroom activities. The division in Cluster 5 regarding the frequency with which TUPE classroom activities are covered may result from their belief that TUPE is only somewhat valuable and relatively ineffective for prevention or cessation. Therefore, the more teachers support TUPE and believe it to be valuable and effective, the more likely those teachers are to implement TUPE classroom activities. By the same token, lower amenability appears to be associated with less effective implementation of TUPE.

Correlational Analyses

Table 7 summarizes Pearson correlations among predictor and criterion variables used in Hierarchical Multiple Regression (HMR) analyses. The criterion variables are teacher reports of the perceived effectiveness of TUPE programs for (a)preventing initiation of tobacco use and (b)promoting cessation of tobacco use. Both criterion variables showed robust patterns of significant correlations with the predictor variables.

Perceived program effectiveness for prevention of smoking (1 = very effective to 4 = not at all effective) was significantly inversely associated with each of the perceived tobacco tolerance norms (i.e., for peer, staff, parent, and community) for middle school teachers, but only with peer and parent tobacco tolerance norms for high school teachers. Therefore, lower levels of perceived tolerance for tobacco use were associated with higher perceptions of TUPE effectiveness, at least among middle school teachers. Teacher training and amount of training was inversely associated with effectiveness of prevention for middle school teachers, but not for high school teachers. Among middle school teachers, then, formal training was associated with higher effectiveness ratings for preventing initiation while more training was associated with lower effectiveness ratings. TUPE classroom activities were positively correlated with effectiveness of prevention for both middle and high school teachers. Teachers at each grade level who conducted higher levels of CDC-recommended classroom activities reported higher effectiveness rating for TUPE.

The second criterion variable was teacher perceived program effectiveness of TUPE for promoting smoking cessation. Similar to the

Table 7. Correlations Between Predictor and Criterion Variables Used in Hierarchical Multiple Regression Analyses.

Predictor		Prevention	Cessation
		Middle Schools	
1. TUPE Classroom Activities		.330**	.349**
	N	(282)	(276)
2. Peer Tolerance		-.181**	-.179**
	N	(275)	(268)
3. Staff Tolerance		-.322**	-.155*
	N	(277)	(270)
4. Parent Tolerance		-.144*	-.156*
	N	(267)	(260)
5. Community Tolerance		-.193**	-.262*
	N	(271)	(266)
6. Teacher Training		-.266**	-.166**
	N	(283)	(274)
7. Amount of Training		-.196**	-.074
	N	(285)	(276)
		High Schools	
1. TUPE Classroom Activities		.284**	.312**
	N	(269)	(264)
2. Peer Tolerance		-.129*	-.087
	N	(269)	(264)
3. Staff Tolerance		-.054	-.115
	N	(270)	(265)
4. Parent Tolerance		-.209**	-.123*
	N	(265)	(260)
5. Community Tolerance		-.097	-.015
	N	(266)	(262)
6. Teacher Training		.011	-.106
	N	(268)	(263)
7. Amount of Training		.056	-.033
	N	(273)	(268)

Note. *$p < .05$; **$p < .01$.

first criterion, cessation effectiveness ratings were inversely associated with all categories of tobacco tolerance norms for middle school teachers. However, only the inverse association for parent tolerance norms was significant for the high school sample. Among middle school teachers, then, tolerance of tobacco use by adolescents by a range of different groups was consistently associated with lower effectiveness ratings for cessation objectives. Access to formal training was again inversely associated with effectiveness ratings for cessation goals among middle school teachers. However, neither of the teacher training variables among high school teachers was significantly correlated with effectiveness ratings for cessation objectives for TUPE. TUPE classroom activities were positively correlated with effective ratings for cessation for both middle and high school teachers. Once again, higher mean levels of classroom activities were significantly associated with higher effectiveness rating for TUPE at each grade level.

Table 8 summarizes Pearson intercorrelations among predictor variables used in Hierarchical Multiple Regression (HMR) analyses. Several findings are noteworthy in the samples of middle and high school TUPE teachers. First, the tobacco tolerance norms are significantly intercorrelated across groups. Second, TUPE classroom activities are modestly yet significantly correlated with teacher training variables. However, it is equally important to note that TUPE classroom activities are independent of tobacco tolerance norms. Third, teacher training and amount of teacher training are highly intercorrelated, as might be expected due to the related nature of these variables.

Table 8. Intercorrelations Among Predictor Variables Used in Hierarchical Multiple Regression Analyses.

Variable		1	2	3	4	5	6	7
1. TUPE Classroom Activities		--	-.039	-.069	.004	-.083	-.243**	-.109
	N	--	(283)	(286)	(274)	(280)	(289)	(291)
2. Peer Tolerance		-.060	--	.092	.385**	.258**	.005	-.011
	N	(273)	--	(279)	(270)	(273)	(280)	(282)
3. Staff Tolerance		-.090	-.217**	--	.145*	.159**	-.071	-.065
	N	(277)	(273)	--	(271)	(275)	(283)	(285)
4. Parent Tolerance		-.065	.334**	.176**	--	.438**	.060	.004
	N	(262)	(258)	(262)	--	(267)	(271)	(273)
5. Community Tolerance		-.091	.238**	.097	.489**	--	.036	-.032
	N	(261)	(257)	(261)	(251)	--	(277)	(279)
6. Teacher Training		-.201**	.016	.042	-.005	.003	--	.717**
	N	(274)	(271)	(274)	(259)	(258)	--	(292)
7. Amount of Training		-.109	-.008	-.008	.029	-.022	.799**	--
	N	(278)	(274)	(278)	(263)	(262)	(277)	--

Note. Coefficients above the diagonal represent relations in the sample of middle school teachers. Coefficients below the diagonal represent relations in the sample of high school teachers. *p < .05; **p < .01.

Hierarchical Multiple Regression Analyses

Hierarchical multiple regression analyses were conducted to assess relations between different blocks of predictors and teachers' perceptions of the effectiveness of TUPE programs for preventing the initiation of tobacco use. This was done separately for the middle and the high school samples of TUPE teachers. The order of entry may best be explained by the ecological perspective (Bronfenbrenner, 1979). Thus, the variables were entered from distal to the most proximal variables. For example, tobacco tolerance norms are maintained within the context of the community (i.e., most distal variable in time or place from teachers.) The second block of variables entered included the two teacher training variables. The third and final block entered included an average of all TUPE-related classroom activities (i.e., the most proximal variables to teachers, what they are actually doing during TUPE lessons).

For the perceptions of middle school TUPE teachers, the predictor variables were entered in three blocks. All three blocks were significantly predictive of teachers' perceptions of the effectiveness of TUPE programs for preventing the initiation of tobacco use. The first block, consisting of tobacco tolerance norms, accounted for 11.7% of the variance ($F(4, 245) = 9.282$, $p < .001$). The second block, consisting of teacher training variables, accounted for another 7% of the variance ($F(2, 243) = 11.466$, $p = .001$). The third block, consisting of the composite classroom activity variable, accounted for another 4.9% of the variance ($F(1, 242) = 16.524$, $p < .001$).

The combined R^2 for all four blocks of variables entered was 23.6% of the variance in middle school teachers' perceptions of the effectiveness of TUPE programs for the prevention of the initiation of

Table 9. Hierarchical Multiple Regression Model Predicting Middle School Teachers' Perceptions of Program Effectiveness for Preventing Initiation of Tobacco Use.

Predictors	Standardized *t*		Cumulative R^2	R^2	*F*	
	Beta	t value	R^2	Change	Change	df
1.Tobacco Norms			.117	.117	9.282***	4, 245
Peers	-.112	-1.837				
Staff	-.312	-5.434***				
Parents	.005	.072				
Community	-.060	- .979				
2.Training			.187	.070	11.466***	2, 243
Formal	-.192	-2.329*				
Amount of	-.038	- .475				
3.Classroom			.236	.049	16.524***	1, 242
Activities	.235	4.065***				

Note: Overall significance of the model: $F(7, 249) = 11.971$, $p < .001$.

*$p < .05$; **$p < .01$; ***$p < .001$.

Table 10. Hierarchical Multiple Regression Model Predicting High School Teachers' Perceptions of Program Effectiveness for Preventing Initiation of Tobacco Use.

Predictors	Standardized Beta	*t* t value	Cumulative R^2	R^2 Change	*F* Change	df
1.Tobacco Norms			.072	.072	5.563***	4, 231
Peers	-.120	-1.829				
Staff	-.012	- .194				
Parents	-.222	-3.025**				
Community	.046	.654				
2.Training			.070	-.002	.708	2, 229
Formal	-.001	- .005				
Amount of	.069	.670				
3.Classroom			.144	.074	20.739***	1, 228
Activities	.289	4.554***				

Note: Overall significance of the model: $F(7, 235) = 6.626$, $p < .001$.

*$p < .05$; **$p < .01$; ***$p < .001$.

tobacco use. Analysis of individual beta weights for each predictor revealed significant effects for staff tolerance norms, receipt of teacher training, and level of classroom activities. These findings are summarized in Table 9, which contains the final regression model.

For the perceptions of the high school TUPE teachers, the predictor variables were also entered in three blocks. Tobacco norms and classroom activities were predictive of high school teachers' perceptions of TUPE program effectiveness for preventing tobacco use. The first block, consisting of tobacco use norm variables, accounted for 7.2% of the variance ($\underline{F}(4, 231) = 5.563$, $\underline{p} < .001$). The second block, consisting of teacher training variables, did not account for any appreciable amount of the variance ($\underline{F}(2, 229) = .708$, $\underline{p} > .1$). The third block, consisting of the composite classroom activities variable, accounted for 7.4% of the variance ($\underline{F}(1, 228) = 20.739$ $\underline{p} < .001$).

The combined R^2 for all four blocks of variables entered was 14.4% of the variance in high school teachers' perceptions of the effectiveness of TUPE programs for the prevention of initiation of tobacco use. Analysis of individual beta weights for each predictor revealed significant effects for perceived parent tolerance norms, and classroom activities. These findings are summarized in Table 10, which contains the final model.

For middle school teachers' perceptions of TUPE program effectiveness for promoting smoking cessation, the predictor variables again were entered in three blocks. Tobacco norms, teacher training, and classroom activity variables were predictive of middle school teachers' perceptions of TUPE program effectiveness for promoting smoking cessation. The first block, consisting of tobacco tolerance norm variables, accounted for 6.1% of the variance ($\underline{F}(4, 239) = 4.964$ $\underline{p}$

Table 11. Hierarchical Multiple Regression Model Predicting Middle School Teachers' Perceptions of Program Effectiveness for Promoting Cessation of Tobacco Use.

Predictors	Standardized *t*		Cumulative R^2	R^2	*F*	
	Beta	t value	R^2	Change	Change	df
1.Tobacco Norms			.061	.061	4.964***	4, 239
Peers	-.076	-1.171				
Staff	-.089	-1.482				
Parents	-.042	- .599				
Community	-.163	-2.508*				
2.Training			.084	.023	3.980*	2, 237
Formal	-.108	-1.240				
Amount of	.029	.344				
3.Classroom			.168	.084	24.849***	1, 236
Activities	.306	4.985***				

Note: Overall significance of the model: $F(7, 243) = 8.001$, $p < .001$.

*$p < .05$; **$p < .01$; ***$p < .001$.

Table 12. Hierarchical Multiple Regression Model Predicting High School Teachers' Perceptions of Program Effectiveness for Promoting Cessation of Tobacco Use.

Predictors	Standardized *t*		Cumulative R^2	R^2	*F*	
	Beta	t value	R^2	Change	Change	df
1.Tobacco Norms			.040	.040	3.430**	4, 228
Peers	-.003	- .045				
Staff	-.074	-1.178				
Parents	-.197	-2.700**				
Community	.037	.523				
2.Training			.053	.013	2.519	2, 226
Formal	-.115	-1.090				
Amount of	.103	.992				
3.Classroom			.146	.093	25.767***	1, 225
Activities	.325	5.076***				

Note: Overall significance of the model: $F(7, 232) = 6.683$, $p < .001$.

*$p < .05$; **$p < .01$; ***$p < .001$.

< .001). The second block, consisting of teacher training variables, accounted for 2.3% of the variance ($F(2, 237) = 3.980$ $p < .05$). The third block, consisting of the composite classroom activities variable, accounted for 8.4% of the variance ($F(1,236) = 24.849$, $p < .001$).

The combined R^2 for all four blocks of variables entered was 16.8% of the variance in middle school teachers' perceptions of the effectiveness of TUPE programs for promoting smoking cessation. Analysis of individual beta weights for each predictor revealed significant effects for perceived community tolerance norms and classroom activities. These findings are summarized in Table 11, which contains the final model.

For high school teachers' perceptions of TUPE effectiveness in promoting smoking cessation, the predictor variables were once again entered in three blocks. Only two blocks were significantly predictive of teachers' perceptions of the effectiveness of TUPE programs for promoting smoking cessation. Tobacco tolerance norms and classroom activities accounted for significant proportions of variance. The first block, consisting of tobacco tolerance norms, accounted for 4% of the variance ($F(4, 228) = 3.430$, $p < .01$). The second block, consisting of teacher training variables, did not account for an appreciable amount of the variance. The third block, consisting of the composite classroom activities variable, accounted for another 9.3% of the variance ($F(1, 225) = 25.767$, $p < .001$).

The combined R^2 for all four blocks of variables entered was 14.6% of the variance in teachers' perceptions of the effectiveness of TUPE programs in promoting smoking cessation. Analysis of individual beta weights for each predictor revealed significant effects for parent

tolerance norms and classroom activities. These findings are summarized in Table 12, which contains the final model.

Chapter 5: Discussion

The purpose of this study was to identify key correlates and predictors of teacher receptivity including key contextual factors. Teachers are responsible for delivering TUPE programs. Factors that influence their receptivity to TUPE (e.g., their training experience) play crucial roles in determining program success. Lack of receptivity to TUPE programs may lead to a subsequent lack of motivation to properly present program materials. For example, a lack of appropriate teacher training experiences may lead to a lack of skills necessary to properly present program material.

This study identified a number of noteworthy findings. Cluster analyses suggested that TUPE teachers, at both the middle and high school levels, can be meaningfully grouped into distinct empirical categories on the basis of multivariate differences in their perceptions of TUPE (i.e., their personal support, the perceived value and effectiveness of TUPE). Parallels between component and external variables among clusters suggested that teachers' perceptions of TUPE are associated with their implementation of TUPE classroom activities (i.e., the higher the support for and more positive perceptions of TUPE, the more likely teachers are to implement TUPE classroom activities). Resisting peer pressure was the classroom activity covered most frequently, although that pattern is stronger and more consistent among middle school teachers than among high school teachers. In addition, members of Cluster 2 were consistently more likely to cover key CDC-recommended TUPE classroom activities at a higher rate than teachers in other clusters, regardless of grade level.

Correlational analyses revealed that lower levels of perceived tolerance for tobacco use were associated with higher perceptions of

TUPE effectiveness among middle school teachers. For the middle school teacher sample only, teacher training variables showed a significant negative correlation with perceptions of TUPE effectiveness for smoking prevention. Given the coding of the training variables, receipt of formal training was associated with higher effectiveness ratings for prevention while more training was associated with lower effectiveness ratings. It is also important to note that teachers at each grade level who conducted higher levels of CDC-suggested classroom activities reported higher effectiveness ratings for TUPE.

HMR analyses confirmed that middle school teachers' perceptions of the effectiveness of TUPE programs for smoking prevention were significantly predicted by staff tolerance norms, teacher training, and mean levels of TUPE classroom activities. They also confirmed that high school teachers' perceptions of program effectiveness for smoking prevention were significantly predicted by parent tolerance norms and mean levels of classroom activities. With regard to teachers' perceptions of program effectiveness for smoking cessation, regression analyses confirmed that middle school teachers' perceptions were predicted by community tolerance norms and mean levels of classroom activities. Comparable ratings by high school teachers were predicted by parent tolerance norms and mean levels of classroom activities.

Links with Available Research

These findings are consistent with existing research on the implementation of TUPE in secondary schools. The school and community contexts in which TUPE lessons are delivered influence teachers, a crucial link in the successful delivery and maintenance of TUPE programs (Glynn, 1989; Rohrbach, D'Onofrio, Backer, & Montgomery, 1996). Teachers' personal support for TUPE and their perceptions of

its value and efficacy were significantly associated with norms for tolerance of tobacco use by adolescents and CDC-recommended classroom activities (Gingiss, et al., 1994; Perhats, et al., 1996). Teachers reported lower perceptions of program efficacy and value, as well as less personal support in school and community contexts unfavorable to the implementation of TUPE. In addition, lower receptivity to TUPE among teachers was significantly associated with less effective implementation of TUPE, i.e., lower levels of key classroom activities. This finding suggests that the more teachers support TUPE and believe it to be valuable and effective, the more likely those teachers are to implement TUPE classroom activities.

Relationships between the teacher classification variables and the external variables for the amenability typology (i.e., tobacco tolerance norms, teacher training variables, and classroom activities) were more often statistically significant and of a higher magnitude among the middle school teachers than among the high school teachers. This trend suggests that the middle school teachers' perceptions of and receptivity to TUPE were more plastic or open to contextual influences than those of high school teachers. This greater potential openness of perceptions among middle school teachers lends support to the idea that primary prevention efforts are needed to reduce adolescents' early experimentation with tobacco use (CDC, 1994; Price, Beach, Everett, Telljohann, & Lewis, 1998; Warren, Kann, Small, Santelli, Collins, & Kolbe, 1997). Specifically, the findings of this study suggest that teacher-focused interventions or policy initiatives could be designed to increase the motivation, amenability, and effectiveness of TUPE teachers at the time that adolescents are at an increasing risk for

experimental use of tobacco and the development of nicotine dependence (Fergusson & Horwood, 1995).

There were consistently negative relations found in this study among norms for peer, parent, and community tolerance and middle and high school teachers' perceptions of program effectiveness in preventing tobacco use. This might be explained by a sense of shared responsibility that allows the teacher to feel more capable of convincing students not to smoke when there is community support that promotes messages espoused in TUPE programs (e.g., Crow, 1984). In other words, teachers reported higher ratings of TUPE effectiveness when tolerance of smoking by peers, parents, and the community was minimal or nonexistent. The finding that peer, parental, and community norms are significantly related to perceptions of TUPE effectiveness is consistent with previous research (Andrews & Hearne, 1984; Chassin et al., 1984; Evans, 1984; Forster, Murray, Wolfson, Blaine, Wagenaar, & Hennrikus, 1998; Noland, Kryscio, Riggs, Linville, Ford, & Tucker, 1998; Schinke & Gilchrist, 1983). Therefore, a relationship exists between teachers' perceptions of tobacco tolerance norms and TUPE effectiveness. It is unclear whether teachers' perceptions of these norms influences or is influenced by their perceptions of TUPE effectiveness, or whether the relationship is bidirectional. However, it does appear that the two sets of perceptions are related.

Contrary to previous research that suggests that teacher training is critical to the success of TUPE programs (Meers, Werch, Hedrick, & Lepper, 1995; Perry, Murray, & Griffin, 1990; Romano, 1997; Ross, Luepker, Nelson, Saavedra, & Hubbard, 1991), the current study did not find a consistent pattern of correlations between training variables and the effectiveness criteria. The teacher training variables were

significantly correlated only with middle school teachers' perceptions of TUPE effectiveness for smoking prevention and only one training variable was significantly correlated with smoking cessation. All the significant teacher training correlations were in the negative direction. It is important to note that the teacher training variables were scored in different ways. Teacher training was scored as: 0 = received no training, 1 = received informal training, 2 = received formal training. Amount of training was scored in the opposite direction (more than one full day of in-service training = 1 to less than a half day of in-service training = 4). Middle school teachers who received formal training rated TUPE programs as more effective for smoking prevention and cessation than did teachers who had no formal training. This is consistent with previous findings that suggest that formal training of teachers supports TUPE program success (Meers et al., 1995; Perry et al., 1990).

However, significant negative correlations exist between the amount of training received by middle school teachers and their ratings of TUPE effectiveness for preventing initiation of tobacco use. This finding indicates that teachers who received more than one full day of in-service training were more likely than teachers who received less than a half day of in-service training to rate their TUPE program as not very effective. Perhaps teachers who had more training were more aware of the limitations of their programs than teachers who had less training and, therefore, were more likely to rate their programs as not very effective.

High school teachers' perceptions of program effectiveness were not related to any of the training variables. Overall, among high school teachers, predictors related to perceptions of effectiveness

tended to be associated with tobacco tolerance norms and classroom activities. Therefore, these findings suggest that it is important to make teachers feel the support and participation of parents, school staff members, and the community in order to enhance their perceptions of program effectiveness (Biglan, Ary, Koehn, Levings, Smith, Wright, James, & Henderson, 1996; Biglan, Ary, Yudelson, Duncan, Hood, James, Koehn, Wright, Black, Levings, Smith, & Gaiser, 1996; Forster et al., 1998). In addition, tobacco tolerance norms may play a critical role in shaping teachers' perceptions of TUPE program effectiveness (Crow, 1984; Dewit et al., 1996; Glynn, 1989).

To reiterate, these data suggest that a teacher who perceives higher levels of program effectiveness is more likely to implement TUPE classroom activities. Therefore, teachers need to feel supported by students, parents, staff members, and the community. If students receiving TUPE lessons are returned to an environment where tobacco is tolerated, then teachers are likely to feel that they are fighting a losing battle (Brink, Simons-Morton, Harvey, Parcel, & Tiernan, 1988; Crow, 1984; Dewit et al., 1996). Peers who think everyone is smoking would undermine all prevention-oriented messages presented in TUPE programs (Evans, 1983). Parents who model smoking behavior (Higgins et al., 1984; Noland, 1996) or who do not participate in prevention programs with their children (Glynn, 1989; Hahn, Rado-Simpson, & Kidd, 1996) could also convey contradictory messages to students. In addition, staff members who promote smoking areas for students or visitors and who do not perceive smoking as harmful (Brink et al., 1988; Griffin et al., 1988), may maintain or support adolescents' tobacco use. Similarly, communities that do not impose sanctions upon youthful smokers (Biglan, Ary, Koehn et al., 1996; Cummings et al.,

1998), may contribute to tobacco use, rather than promoting the prevention or cessation of tobacco use.

Implications for Intervention, Prevention and Social Policy

The results of this study suggest that prevention programs may be improved by targeting teachers' perceptions of program effectiveness. Teachers cannot be neglected in efforts to enhance the efficacy of TUPE programs (Perry et al., 1990; Smith, McCormick, Steckler, & McLeroy, 1993). If teachers do not feel the support of the community, they may be less motivated to teach their programs effectively (Smith et al., 1993). Therefore, for example, high levels of tolerance for tobacco norms within groups of program stakeholders, may negatively influence teachers' levels of motivation to implement programs. This study highlights several opportunities for intervention. First, the teachers who deliver TUPE lessons are prime targets for intervention including increasing teachers' receptivity to TUPE by bolstering effective implementation to TUPE. Second, there are specific targets in school and community settings that are associated with diminished receptivity among teachers. Therefore, these targets must also be addressed (e.g., lowering of tobacco tolerance norms). Third, interventions targeting teachers may be more successful if begun earlier (i.e., in middle school rather than high school) due to the greater openness of teachers' perceptions at the earlier grade levels.

Teachers are responsible for delivering TUPE programs. Since teachers are at the most proximal level of interaction with the students, an effective school-based prevention program may only be as good as its participating teachers. Teacher receptivity to TUPE and their training experiences are likely to play crucial roles in determining long-term program success. Lack of receptivity to TUPE

programs may lead to a subsequent lack of motivation to properly present program materials or to maintain program integrity over time. Similarly, a lack of teacher training experiences may lead to a lack of skills necessary to properly present program material. Therefore, to increase and maintain teachers' receptivity to TUPE, ongoing intervention efforts are needed to address multiple factors that appear to influence teachers' perceptions of, and attitudes toward TUPE.

Students are surrounded by an environment that can either support or detract from the messages conveyed by TUPE teachers (e.g., Biglan, Glasgow, Ary, Thompson, Severson, Lichtenstein, Weissman, Faler, & Gallison, 1987; Chassin et al., 1984; Schinke & Gilchrist, 1983). Parents, peers, and the broader community can exert significant influences on adolescents that may affect their decisions to initiate or maintain tobacco use (Brink et al., 1988; Chassin et al., 1984). Teachers' perceptions of the strength of these influences affect their receptivity to TUPE and, in turn, their willingness to implement TUPE programs. Given the association between teachers' receptivity to TUPE and perceived norms for student tobacco use among peers, parents, staff, and community, it seems evident that beyond than the benefits of community-level interventions for each of these groups (Flynn, Worden, Secker-Walker, Badger, Geller, & Constanza, 1992; Jason, 1998), an added benefit would be an increase in teachers' perceptions of the efficacy of TUPE.

The descriptive profiles of TUPE teachers generated from this data set highlight the importance of timing in the implementation of TUPE, for both teachers and students. For example, relations between teachers' perceptions of effectiveness and the sets of external variables (i.e., tobacco tolerance norms, teacher training, and

classroom activities) were more often statistically significant and of a higher magnitude among the middle school teachers than among the high school teachers. Therefore, the perceptions of middle school teachers seem to be more malleable in that they are more subject to contextual influences than those of the high school teachers. The greater openness of middle school teachers' perceptions of TUPE to contextual influences reinforces the need for primary prevention efforts to reduce adolescents' early experimentation with tobacco use (Price et al., 1998). Specifically, the findings of this study suggest that teacher-focused interventions or policy initiatives could be designed to increase the motivation and effectiveness of TUPE teachers at precisely the time that adolescents are at an increasing risk for experimental use of tobacco and the development of nicotine dependence (Fergusson & Horwood, 1995; Irwin, Igra, Eyre, & Millstein, 1997). Timing is of great importance to intervention efforts for both teachers and students. The optimal time for such an intervention with TUPE teachers is at the middle school level.

Limitations and Directions for Future Research

This study has several limitations that must be acknowledged. First, the data used in these analyses were self-report, so they are vulnerable to biases typical of this type of data, including the influence of social desirablity and the accuracy of the self-report data. Second, in order to maintain the brevity desired with telephone surveys (Dillman, 1978), most variables were measured via single items, potentially inflating the levels of measurement error of specific variables. Third, due to the time constraints and objectives of the original study, these data were collected from a single source, the TUPE teachers. Therefore, it is possible that relations between

variables may actually be inflated. Furthermore, given a single source of data sources many of the teachers' responses regarding students' behaviors were not corroborated by collateral reports. Fourth, these cross-sectional data are purely descriptive in nature. While associations have been identified between teachers' receptivity to TUPE and other sets of variables, the degree to which these associations are influenced by other extraneous factors remains undetermined.

Future research might be designed to address some of the limitations of this study by using a multi-method, multi-source design that can examine the same variables used in this study. Furthermore, this study has supported the importance of exploring teachers' attitudes about and perceptions of TUPE programs. Further research should be conducted to perhaps determine the direction of the relationships between teachers' attitudes about and perceptions of TUPE (e.g., whether teachers' perceptions of tobacco tolerance norms influences or is influenced by their perceptions of TUPE effectiveness, etc.).

The results of this study are significant because they represent teachers' perceptions of the effectiveness of TUPE programs for a random sample of teachers across an entire state. This has implications for assessing the current state of TUPE programs in Florida. It appears that the more teachers support TUPE and believe it to be valuable and effective, the more likely those teachers are to implement TUPE classroom activities. Therefore, higher amenability appears to be associated with more effective implementation of TUPE.

References

Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice Hall.

Allison, K.R., Silverman, G., Dignam, C. (1990). Effects on students of teacher training in use of a drug education curriculum. Journal of Drug Education, 20, 31-46.

Andrews, R.L., & Hearne, J.T. (1984). Effects of Primary Grades Health Curriculum Project on student and parent smoking attitudes and behavior. Journal of School Health, 54, 18-20.

Arciti, C., Pistone, M., Persici, P. Barbieri, A., & Santi, L. (1995). Ten years of anti-smoking programs in Italy: A review. American Journal of Health Promotion, 9, 190-200.

Ballard, D.J., Kingery, P.M., & Pruitt, B.E., (1991). School worksite health promotion: An interdependent process. Journal of Health Education, 22, 111-115.

Bandura, A. (1977). Social Learning Theory. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1988). Social foundations of thought and action. Englewood Cliffs, NJ: Prentice Hall.

Baumrind, D. (1987). A developmental perspective on adolescent risk taking in contemporary America. In C.E. Irwin, Jr. (Ed.), New directions for child development: Vol. 37. Adolescent social behavior and health (pp. 91-126). San Francisco: Jossey-Bass.

Bell, C.S., & Battjes, R. (1985). Prevention research: Deterring drug abuse among children and adolescents. NIDA Research Monograph 63, DHHS Publication No. (ADM) 85-1334. Washington, DC: U.S. Government Printing Service.

Biddle, B.J., Bank, B., & Marlin, M. (1980). Parental and peer influences on adolescents. Social Forces, 58, 1057-1079.

Biglan, A., Ary, D., Yudelson, H., Duncan, T.E., Hood, D., James, L., Koehn, V., Wright, Z., Black, C., Levings, D., Smith, S., & Gaiser, E. (1996). Experimental evaluation of a modular approach to mobilizing antitobacco influences of peers and parents. American Journal of Community Psychology, 24, 311-339.

Biglan, A., Ary, D., Koehn, V., Levings, D., Smith, S., Wright, Z., James, L., & Henderson, J. (1996). Mobilizing positive reinforcement in communities to reduce youth access to tobacco. American Journal of Community Psychology, 24, 625-638.

Biglan, A., Glasgow, R., Ary, D., Thompson, R., Severson, H., Lichtenstein, E., Weissman, W., Faller, C., & Gallison, C. (1987). How generalizable are the effects of smoking prevention programs?

Refusal skills training and parent messages in a teacher-administered program. Journal of Behavioral Medicine, 10, 613-628.

Botvin, G.J., Baker, E., Dusenbury, L., Botvin, E.M., & Diaz, T. (1995). Long-term follow-up results of a randomized drug abuse prevention trial in a white middle-class population. Journal of the American Medical Association, 273, 1106-1112.

Botvin, G.J., & Wills, T.A. (1985). Personal and social skills training: Cognitive-behavioral approaches to substance abuse prevention. In C.S. Bell & R. Battjes (Eds.), Prevention Research: Deterring Drug Abuse among Children and Adolescents. NIDA Research Monograph 63, DHHS Publication No. (ADM) 85-1334. Washington, DC: U.S. Government Printing Service.

Bowen, D.J., Kinne, S., Orlandi, M. (1995). School policy in COMMIT: A promising strategy to reduce smoking by youth. Journal of School Health, 65, 140-144.

Brink, S.G., Simons-Morton, D.G., Harvey, C.M., Parcel, G.S., & Tiernan, K.M. (1988). Developing comprehensive smoking control programs in schools. Journal of School Health, 58, (177-180).

Bronfenbrenner, U. (1979). The ecology of human development: Experiments by nature and design. Cambridge, MA: Harvard University Press.

Bruvold, W.H. (1993). A meta-analysis of adolescent smoking prevention programs. American Journal of Public Health, 83, 872-880.

Buckhalt, J.A., Halpin, G., Noel, R. & Meadows, M.E. (1992). Relationship of drug use to involvement in school, home, and community activities: Results of a large survey of adolescents. Psychological Reports, 70, 139-146.

Bullock, A.D., De Vries, H., Lopez, M.L., Thomas, H., & Charlton, A. (1996). Smoking prevention and young people: Using research to identify out-of-school intervention sites in three countries. Educational Review, 48, 143-152.

Calder, B.J., & Ross, M. (1973). Attitudes and behavior. Morristown, NJ: General Learning Press.

Centers for Disease Control and Prevention. (April, 3, 1998). Tobacco use among high school students - United States, 1998. Morbidity and Mortality Weekly Report, 47 (12).

Centers for Disease Control (1994). Guidelines for school health programs to prevent tobacco use and addiction. Journal of School Health, 64, 353-360.

Centers for Disease Control and Prevention. (1994). Preventing tobacco use among young people - A report to the Surgeon General. Atlanta, GA.: DHHS.

Chassin, L., Presson, C.C., Sherman, S.J., Corty, E., & Olshavsky, R. (1984). Predicting the onset of cigarette smoking in adolescents: A longitudinal study. Journal of Applied Social Psychology, 14, 224-243.

Chassin, L., Presson, C.C., Sherman, S.J., & Curran, P.J., (1992).Social psychological factors in adolescent substance use and abuse. In F.J. Medway, & Cafferty, T.D. (Eds.) School psychology: A social psychological perspective(pp. 397-424). Hillsdale, N.J.: Earlbaum Associates.

Cleary, P.D., Hitchcock, J.L., Semmer, N., Flinchbaugh, L.J., & Pinney, J.M. (1988). Adolescent smoking: Research and health policy. The Milbank Quarterly, 66, 137-171.

Crow, C.S. (1984). Smoking areas on school grounds: Are we encouraging teenagers to smoke? Journal of Adolescent Health, 5, 117-119.

Cummings, K.M., Hyland, A., Saunders-Martin, T., Perla, J., Coppola, P.R., & Pechacek, T.F. (1998). Evaluation of an enforcement program to reduce tobacco sales to minors. American Journal of Public Health, 88, 932-936.

Dent, C.W., Sussman, S., Stacy, A.W., Craig, S., Burton, D., & Flay, B.R. (1995). Two-year behavior outcomes of project towards no tobacco use. Journal of Consulting and Clinical Psychology, 63, 676-677.

Dewit, D.J., Timney, C.B., Silverman, G., & Stevens-Lavigne, A. (1996). A process evaluation of a comprehensive drug education training package. Journal of Alcohol and Drug Education, 41, 102-122.

Dillman, D.A. (1978). Mail and Telephone Surveys: The Total Design Method. New York: Wiley-Interscience.

Eiseman, D., Robinson, J., & Zapata, V. (1984). M.D.A.: A multi-disciplinary approach for teacher effectiveness training in drug education. Journal of Drug Education, 14, 357-367.

Elder, J.P., Sallis, J.F., Woodruff, S.I., & Wildey, M.B. (1993). Tobacco-refusal skills and tobacco use among high-risk adolescents. Journal of Behavioral Medicine, 16, 629-641.

Elkind, D. (1967). Egocentrism in adolescence. Child Development, 38, 1025-1034.

Evans, R.I. (1984). A social inoculation strategy to deter smoking in adolescents. In J.D. Matarazzo, S.M. Weiss, A.J. Herd, & N.E. Miller (Eds.), Behavioral health: A handbook of health enhancement and disease prevention. New York: John Wiley and Sons, Inc.

Fergusson, D.M., & Horwood, L.J. (1995). Transitions to cigarette smoking during adolescence. Addictive Behaviors, 20, 627-642.

Flynn, B.S., Worden, J.K., Secker-Walker, R.H., Badger, G.J., Geller, B.M., & Costanza, M.C. (1992). Prevention of cigareet smoking through mass media intervention and school programs. American Journal of Public Health, 82, 827-834.

Fishbein, M., & Ajzen, I. (1974). Attitudes toward objects as predictors of single and multiple behavioral criteria. Psychological Review, 81, 59-74.

Fordney, S.J. & Jones, R.M. (1990). Training teachers for substance abuse prevention. In R.R. Watson (Ed.) Drug and alcohol abuse prevention (pp. 363-371). Clifton, NJ: Humana Press.

Forster, J.L., Murray, D.M., Wolfson, M., Blaine, T.M., Wagenaar, A.C., & Hennrikus, D.J. (1998). The effects of community policies to reduce youth access to tobacco. American Journal of Public Health, 88, 1193-1198.

Galli, N., Greenberg, J.S., & Tobin, F. (1987). Health education and sensitivity to cultural, religious, and ethnic beliefs. Journal of School Health, 57, 177-180.

Gingiss, P.L., Gottlieb, N.H., & Brink, S.G. (1994). Increasing teacher receptivity toward use of tobacco prevention education programs. Journal of Drug Education, 24, 163-176.

Glynn, T.J. (1989). Essential elements of school-based smoking prevention programs. Journal of School Health, 59, 181-188.

Gottlieb, N.H., Brink, S.G., & Gingiss, P.L. (1993). Correlates of coalition effectiveness: The smoke free class of 2000 program. Health Education Research, 8, 375-384.

Green, S.B., Salkind, N.J., & Akey, T.M. (2000). Using SPSS for windows: Analyzing and understanding data. Upper Saddle River, NJ: Prentice-Hall, Inc.

Griffin, G. (1990). Tobacco use prevention in Minnesota schools: A case study. American Journal of Health Promotion, 5, 122-136.

Hahn, E.J., Rado-Simpson, M., & Kidd, P. (1996). Cues to parent involvement in drug prevention and school activities. Journal of School Health, 66, 165-170.

Hansen, W.B. (1992). School-based substance abuse prevention: A review of the state of the art in curriculum, 1980-1990. Health Education Research, 7, 403-430.

Higgins, C.W., Whitley, K.N., & Dunn, J.D. (1984). A comparison of smoking-related attitudes and behaviors among Kentucky public school

children whose families are and are not involved in tobacco production. Journal of School Health, 54, 185-187.

Igra, V., & Irwin, C.E., Jr. (1996). Theories of adolecent risk-taking behaviors. In R.J. DeClimente, W.B. Hansen, et al. (Eds.) Handbook of adolescent health risk behavior: Issues in clinical child psychology (pp. 35-51). New York, NY: Plenum Press.

Irwin, C.E., Jr. (1987). Adolescent social behavior and health. New directions for child development, No. 37. San Francisco: Jossey-Bass.

Irwin, C.E., Jr., Igra, V., Eyre, S. & Millstein, S. (1997). Risk-taking behavior in adolescents: The paradigm. In M.S. Jacobson, J.M. Rees, et al. (Eds.) Adolescent nutritional disorders: Prevention and Treatment: Vol. 817. Annals of the New York Academy of Sciences. New York, NY: New York Academy of Sciences.

Irwin, C.E., Jr., Millstein, S.G. (1992). Risk-taking behaviors and biopsychosocial development during adolescence. In E.J. Susman, L.V. Feagans, et al. (Eds.) Emotion, cognition, health, and development in children and adolescents (pp. 75-102). Hillsdale, NJ: Lawrence Erlbaum.

Irwin, C. E., Jr., & Vaughan, E. (1988). Psychosocial context of adolescent development: Study group report. Journal of Adolescent Health Care, 9 (Suppl), 11-20.

Israel, B.A., Cummings, K.M., Dignan, M.B., Heaney, C.A., Perales, D.P., Simons-Morton, B.G., & Zimmerman, M.A. (1995). Evaluation of health education programs: current assessment and future directions. Health Education Quarterly, 22, 364-389.

Jason, L.A. (1998). Tobacco, drug, and HIV preventive media interventions. American Journal of Community Psychology, 26, 151-173.

Jessor, R. (1982). Problem behavior and developmental transition in adolescence. Journal of School Health, 52, 295-300.

Jessor, R. & Jessor, S.C. (1977). Problem behavior and psychological development: A longitudinal study of youth. New York: Academic Press.

Leventhal, H., Fleming, R., & Glynn, K. (1988). A cognitive-developmental approach to smoking intervention. In S. Maes, C.D. Spielberger, P. Defares, & I.G. Sarason (Eds.), Topics in health psychology (pp. 79-105). New York: Wiley.

Lohrmann, D.K., & Fors, S.W. (1986). Can school-based educational programs really be expected to solve the adolescent drug use problem? Journal of Drug Education, 16, 327-339.

Marty, P.J., Nenno, M., Hefelfinger, J., & Bacon-Pituch, B. (1996). Florida tobacco prevention and control program: Building

capacity through collaboration. Journal of Florida Medical Association, 83, 117-121.

Meers, B.W., Werch, C.E., Hedrick, B., & Lepper, J. (1995). Prevention training for teachers: A contemporary challenge. Journal of Alcohol and Drug Education, 40, 47-51.

Montagne, M., (1982). Preventing drug-use problems: A pharmacy perspective. Pharmacy International, 3, 80-84.

Montagne, M., & Scott, D.M. (1993). Prevention of substance use problems: Models, factors, and processes. The International Journal of the Addictions, 28, 1177-1208.

Noland, M.P. (1996). Tobacco prevention in tobacco-producing areas: Lessons from the lion's den. Journal of School Health, 66, 266-268.

Noland, M.P., Kryscio, R.J., Riggs, R.S., Linville, L.H., Ford, V.Y., & Tucker, T.C. (1998). The effectiveness of a tobacco prevention program with adolescents living in a tobacco-producing region. Public Health Briefs, 88 (12), 1862-1865.

Nyamathi, A., Flaskerud, J., Keenan, C., & Leake, B. (1998). Effectiveness of a specialized vs. traditional AIDS education program attended by homeless and drug-addicted women alone or with supportive persons. AIDS Education and Prevention, 10, 433-446.

Perhats, C., Oh, K., Levy, S.R., Flay, B.R., & McFall, S. (1996). Role differences in gatekeeper perceptions of school-based drug and sexuality education programs: A cross-sectional survey. Health Education Research, 11, 11-27.

Perry, C., Murray, D.M., & Griffin, G. (1990). Evaluating the statewide dissemination of smoking prevention curricula: Factors in teacher compliance. Journal of School Health, 60, 501-504.

Price, A.W., & Emshoff, J.G. (1997). Breaking the cycle of addiction: Prevention and intervention with children of alcoholics. Alcohol Health and Research World, 21, 241-246.

Price, J.H., Beach, P., Everett, S., Telljohann, S.K., & Lewis, L. (1998). Evaluation of a three-year urban elementary school tobacco prevention program. Journal of School Health, 68, 26-31.

Ragon, B.M., Kittleson, M.J., & St. Pierre, R.W. (1995). The effect of a single affective HIV/AIDS educational program on college students' knowledge and attitudes. AIDS Education and Prevention, 7, 221-231.

Raynal, M.E., & Chen, W.W. (1996). Evaluation of a drug prevention program for young high risk students. International Quarterly of Community Health Education, 16, 187-195.

Richmond, J., & Peeples, D. (1984). Rural drug abuse prevention: A structured program for middle schools. Journal of Counseling and Development, 63, 113-114.

Romano, J.L. (1997). School personnel training for the prevention of tobacco, alcohol, and other drug use: Issues and outcomes. Journal of Drug Education, 27, 245-258.

Rohrbach, L.A., D'Onofrio, C.N., Backer, T.E., & Montgomery, S.B. (1996). Diffusion of school-based substance abuse prevention programs. American Behavioral Scientist, 39, 919-934.

Rosenberg, M. (1986). Self concept from middle childhood through adolescennce. In J. Suls & A. Greenwald (Eds.), Psychological perspectives on the self (Vol. 3). Hillsdale, NJ: Erlbaum.

Rosenberg, M. (1979). Conceiving the self. New York: Basic Books.

Rosenthal, R. & Rosnow, R.L. (1991). Essentials of behavioral research: Methods and data analysis. New York, NY: McGraw-Hill, Inc.

Ross, J.G., Luepker, R.V., Nelson, G.D., Saavedra, P., & Hubbard, B.M. (1991). Teenage health teaching modules: Impact of teacher training on implementation and student outcomes. Journal of School Health, 61, 31-34.

Schinke, S.P., & Gilchrist, L.D. (1983). Primary prevention of tobacco smoking. Journal of School Health, 53, 416-419.

Smith, D.W., McCormick, L.K., Steckler, A.B., & McLeroy, K.R. (1993). Teachers' use of health curricula: Implementation of Growing Healthy, Project SMART, and the Teenage Health Teaching Modules. Journal of School Health, 63, 349-354.

Stanton, W.R., Lowe, J.B., & Gillespie, A.M. (1996). Adolescents' experiences of smoking cessation. Drug and Alcohol Dependence, 43, 63-70.

Stein, S.L., Garcia, F., Marler, B., Embree-Bever, J., Garrett, C.J., Unrein, D., Burdick, M.A., & Fishburn, S.Y. (1992). A study of multiagency collaborative strategies: Did juvenile delinquents change? Journal of Community Psychology, OSAP Special Issue, 88-105.

Sussman, S. Dent, C.W., Burton, D., Stacy, A.W., & Flay, B.R. (1995). Developing school-based tobacco use prevention and cessation programs. Thousand Oaks, CA; Sage.

Sussman, S. Dent, C.W., Stacy, A.W., Hodgson, C.S., Burton, D. & Flay, B.R. (1993). Implementation, process, and immediate outcome evaluation of project towards no tobacco use. Health Education Research: Theory and Practice, 8, 109-123.

Sussman, S., Dent, C.W., Stacy, A.W., Sun, P., Craig, S., Simon, T.R., Burton, D., & Flay, B.R. (1993). Project towards no tobacco use

one-year behavior outcomes. American Journal of Public Health, 83, 1245-1250.

Swisher, J.D., & Hu, T-W. (1983). Alternatives to drug abuse: Some are and some are not. In J.Suis & A.G. Greenwald (Eds.), Preventing adolescent drug abuse: Intervention strategies (pp. 141-154). NIDA Research Monograph 47, National Institute on Drug Abuse, Washington, DC: U.S. Government Printing Office.

Tobler, N.S. (1986). Meta-analysis of 143 adolescent drug prevention programs: Quantitative outcome results of program participants compared to a control or comparison group. The Journal of Drug Issues, 16, 537-567.

Tubman, J.G., Soza, R.M., Barr, J.E., & Langer, L.M. (under review). Teachers' support of, commitment to, and the perceived effectiveness of tobacco use prevention education. Journal of Drug Education.

U.S. Department of Health and Human Resources. (1997). Selected cigarette smoking initiation and quitting behaviors among high school students. MMWR [On-line]. Available: http://www.cdc.gov/nccdphp/osh/mmwr0598.htm

U.S. Department of Health and Human Resources. (1997). Tobacco use among high school students. MMWR [On-line]. Available: http://www.cdc.gov/nccdphp/osh/tob-hs97.htm

Ward, J. (1963). Hierarchical grouping to optimize an objective Function. Journal of American Statistical Association, 58, 236-234.

Warren, C.W., Kann, L., Small, M.L., Santelli, J.S., Collins, J.L., & Kolbe, L.J. (1997). Age of initiating selected health-risk behaviors among high school students in the United States. Journal of Adolescent Health, 21, 225-231.

Werch, C.E., Lepper, J.M., Pappas, D.M., Castellon-Vogel, E.A. (1994). Use of theoretical models in funded college drug prevention programs. Journal of College Student Development, 35, 359-363.

Wodarski, J.S., & Feit, W.D. (1997). Adolescent preventive health: A social and life group skills paradigm. Family Therapy, 24, 191-207.

Appendix A: High School Principal Survey

Appendix A

Before I start asking about specific programming related to tobacco use in your school I'd like to ask you some very general questions about your own perception of attitudes towards student tobacco use and related problems. By the way, when we talk about tobacco use we mean smoking and smokeless tobacco.

1. First, how much do you think the use of tobacco influences school drop-out rates? Would you say a great deal, some, a little, or none?

A GREAT DEAL ----------1
SOME----------2
A LITTLE----------3
NONE----------4
DON'T KNOW----------9

2. How much does the use of tobacco influence overall academic performance? [...Would you say a great deal, some, a little, or none?]

A GREAT DEAL ----------1
SOME----------2
A LITTLE----------3
NONE----------4
DON'T KNOW----------9

3. How much does the use of tobacco influence the use of other substances such as alcohol and illicit drugs? [...Would you say a great deal, some, a little, or none?]

A GREAT DEAL ----------1
SOME----------2
A LITTLE----------3
NONE----------4
DON'T KNOW----------9

4. How much is tobacco use related to other delinquent acts such as stealing, fighting, or gang membership? [...Would you say a great deal, some, a little, or none?]

A GREAT DEAL ----------1
SOME----------2
A LITTLE----------3
NONE----------4
DON'T KNOW----------9

5. What would you pick at the most typical age when tobacco use starts for the average student in your school who uses it?

_____

6. Which substance do you think students in your school are most likely to use before any of the others: tobacco, alcohol, marijuana, or other illicit drugs?

TOBACCO----------1
ALCOHOL----------2
MARIJUANA----------3
OTHER ILLICIT DRUGS----------4
DON'T KNOW----------9

7. How much tolerance is there for student tobacco use among their peers? Is there a lot, some, very little, or no tolerance?

A LOT----------1
SOME----------2
VERY LITTLE----------3
NO TOLERANCE----------4
DON'T KNOW----------9

8. How much is student tobacco use generally tolerated by the professional staff of your school? Is there a lot, some, very little, or no tolerance?

A LOT----------1
SOME----------2
VERY LITTLE----------3
NO TOLERANCE----------4
DON'T KNOW----------9

9. Does your school have an official policy prohibiting tobacco use?

YES----------1
NO [SKIP TO QUESTION 12]----------2
DON'T KNOW [SKIP TO QUESTION 12]----------9

10. Of students, teachers, other staff, and visitors to the school, to whom is your no-tobacco policy clearly communicated? [CHECK ALL THAT APPLY]

STUDENTS----------1
TEACHERS----------2
OTHER STAFF----------3
VISITORS TO THE SCHOOL----------4
DON'T KNOW----------9

11. In your opinion, to what extent is your school's no-tobacco use policy enforced? Would you say a great deal, moderately, not too much, or not at all?

A GREAT DEAL----------1
MODERATELY----------2
NOT TOO MUCH----------3
NOT AT ALL----------4
DON'T KNOW----------9

12. If students are caught smoking cigarettes or using smokeless tobacco at school, which of these policies does your school apply: suspend/expel them, punish them in some other way, call their parents, require them to attend a smoking cessation program, require them to go to tobacco education classes, or some other action? [CHECK ALL THAT APPLY—IF ONLY ONE IS GIVEN, ASK "Are there any other actions taken?" For suspend/expel, write in if immediate or last resort]

SUSPEND/EXPEL [circle] THEM----------1
PUNISH THEM IN SOME OTHER WAY----------2
CALL THEIR PARENTS----------3
REQUIRE SMOKING CESSATION PROGRAM------4
REQUIRE TOBACCO EDUCATION CLASSES------5
OTHER (DESCRIBE)----------7
DON'T KNOW/NOT SURE----------8

13. Does school policy provide staff access to programs to help them quit using tobacco?

YES----------1
NO----------2
DON'T KNOW----------9

14. Is tobacco advertising prohibited at school or in school publications?

YES----------1
NO----------2
DON'T KNOW----------9

15. Does your school include substance use prevention education, in any form, as a regular part of your curriculum?

YES----------1
NO [SKIP TO QUESTION 41]----------2
DON'T KNOW [SKIP TO QUESTION 41]----------9

[***INTERVIEWERS, THE ANSWER TO THE NEXT QUESTION WILL DETERMINE WHETHER YOU ASK "your program" OR "a program" IN QUESTIONS 22-31]

16. Does this substance use prevention education include tobacco use prevention as a regular part of the curriculum?

YES [CONTINUE, SAY "your program" in 22-31]----------1
NO [SKIP TO 22, SAY "a program" THERE]----------2
DON'T KNOW [SKIP TO 22, SAY "a program" THERE]----------9

17. Are all students required to participate?

YES----------1
NO----------2
DON'T KNOW----------9

18. Do those responsible for teaching this curriculum have special training in substance abuse education?

YES----------1
NO----------2
SOME DO AND SOME DON'T----------3
DON'T KNOW----------9

19. Does the curriculum clearly explain why preventing tobacco use is important?

YES----------1
NO----------2
DON'T KNOW----------9

20. How often are tobacco and substance use prevention programs in your school evaluated for their effectiveness? Never, less than once a year, once a year, two times a year, or three or more times a year?

NEVER----------1
LESS THAN ONCE A YEAR----------2
ONCE A YEAR----------3
TWO TIMES A YEAR----------4
THREE OR MORE TIMES A YEAR--------5
DON'T KNOW----------9

21. Who developed the tobacco prevention curriculum that you use in your school—people at your school, the county school system, the state of Florida, Federal or other government programs outside the state of Florida, a private vendor, or don't you know?

PEOPLE AT YOUR SCHOOL----------1
THE COUNTY SCHOOL SYSTEM----------2
THE STATE OF FLORIDA----------3
OTHER GOV'T OUTSIDE STATE OF FLORIDA-------4
PRIVATE VENDOR----------5
DON'T KNOW----------9

[INTERVIEWERS: ASK "your program" IF SCHOOL HAS A PROGRAM (YES ON QUESTION 16, PAGE 3}; IF SCHOOL HAS NO PROGRAM SAY "a program"]

A major reason for this survey is to determine what topics are currently addressed in tobacco prevention programs. Please describe how important the following topics are to your/a tobacco prevention program.

22. First, how important is it in your/a tobacco prevention program that students learn about the prevalence of smoking among young people and adults? Would you say it is one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
NOT FAMILIAR WITH CONTENT----------5
DON'T KNOW----------9

23. [How important is it in your/a program] that students learn about the social and/or economic issues associated with tobacco use? . . .[Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
NOT FAMILIAR WITH CONTENT----------5
DON'T KNOW----------9

24. [How important is it in your/a program] that students learn about the long and short term effects on health of smoking and the use of smokeless tobacco? . . .[Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
NOT FAMILIAR WITH CONTENT----------5
DON'T KNOW----------9

25. [How important is it in your/a program] that students learn about the organizations available to help people quit using tobacco? . . .[Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
NOT FAMILIAR WITH CONTENT----------5
DON'T KNOW----------9

26. [How important is it in your/a program] that students learn about the effectiveness of smoking cessation programs? . . .[Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
NOT FAMILIAR WITH CONTENT----------5
DON'T KNOW----------9

27. [How important is it in your/a program] that students learn about the negative aspects of using tobacco to deal with stress or to lose weight? . . .[Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
NOT FAMILIAR WITH CONTENT----------5
DON'T KNOW----------9

28. [How important is it in your/a program] that students learn about the laws and rules that control the sale and use of tobacco? . . .[Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
NOT FAMILIAR WITH CONTENT----------5
DON'T KNOW----------9

29. [How important is it in your/a program] that students learn about the strategies that tobacco makers use to target young people? . . .[Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
NOT FAMILIAR WITH CONTENT----------5
DON'T KNOW----------9

30. [How important is it in your/a program] that students learn about the health benefits of tobacco-free environments? . . .[Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
NOT FAMILIAR WITH CONTENT----------5
DON'T KNOW----------9

31. [How important is it in your/a program] that students learn about the many harmful substances contained in tobacco? . . .[Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
NOT FAMILIAR WITH CONTENT----------5
DON'T KNOW----------9

[INTERVIEWER: IF SCHOOL DOES NOT HAVE A TOBACCO PROGRAM—"NO" ON QUESTION 16 ON PAGE 3 ABOVE], SKIP TO QUESTION 41

We would also like to know about the skills that your current tobacco prevention program tries to teach students. Please rate how often these student skills are the focus of program materials or exercises.

32. Encouraging <u>other</u> people not to use tobacco, would you say this is constantly covered in the lessons of your programs, very frequently covered, sometimes covered, rarely covered, or are you not familiar with the content of the tobacco prevention programming?

CONSTANTLY COVERED----------1
VERY FREQUENTLY COVERED----------2
SOMETIMES COVERED----------3
RARELY COVERED----------4
NOT AT ALL COVERED----------5
NOT FAMILIAR WITH CONTENT----------6
DON'T KNOW----------9

33. Supporting people trying to stop using tobacco, [. . . constantly covered in the lessons of your programs, very frequently covered, sometimes covered, rarely covered, or are you not familiar with the content of the tobacco prevention programming?]

CONSTANTLY COVERED----------1
VERY FREQUENTLY COVERED----------2
SOMETIMES COVERED----------3
RARELY COVERED----------4
NOT AT ALL COVERED----------5
NOT FAMILIAR WITH CONTENT----------6
DON'T KNOW----------9

34. Sharing knowledge and attitudes about tobacco use with others, [. . . constantly covered in the lessons of your programs, very frequently covered, sometimes covered, rarely covered, or are you not familiar with the content of the tobacco prevention programming?]

CONSTANTLY COVERED----------1
VERY FREQUENTLY COVERED----------2
SOMETIMES COVERED----------3
RARELY COVERED----------4
NOT AT ALL COVERED----------5
NOT FAMILIAR WITH CONTENT----------6
DON'T KNOW----------9

35. Teaching others tobacco resistance skills, [. . . constantly covered in the lessons of your programs, very frequently covered, sometimes covered, rarely covered, or are you not familiar with the content of the tobacco prevention programming?]

CONSTANTLY COVERED----------1
VERY FREQUENTLY COVERED----------2
SOMETIMES COVERED----------3
RARELY COVERED----------4
NOT AT ALL COVERED----------5
NOT FAMILIAR WITH CONTENT----------6
DON'T KNOW----------9

36. Resisting messages in tobacco advertising, [. . . constantly covered in the lessons of your programs, very frequently covered, sometimes covered, rarely covered, or are you not familiar with the content of the tobacco prevention programming?]

CONSTANTLY COVERED----------1
VERY FREQUENTLY COVERED----------2
SOMETIMES COVERED----------3
RARELY COVERED----------4
NOT AT ALL COVERED----------5
NOT FAMILIAR WITH CONTENT----------6
DON'T KNOW----------9

37. Resisting peer pressure to begin using tobacco, [. . . constantly covered in the lessons of your programs, very frequently covered, sometimes covered, rarely covered, or are you not familiar with the content of the tobacco prevention programming?]

CONSTANTLY COVERED----------1
VERY FREQUENTLY COVERED----------2
SOMETIMES COVERED----------3
RARELY COVERED----------4
NOT AT ALL COVERED----------5
NOT FAMILIAR WITH CONTENT----------6
DON'T KNOW----------9

38. Requesting a smoke-free environment, [. . . constantly covered in the lessons of your programs, very frequently covered, sometimes covered, rarely covered, or are you not familiar with the content of the tobacco prevention programming?]

CONSTANTLY COVERED----------1
VERY FREQUENTLY COVERED----------2
SOMETIMES COVERED----------3
RARELY COVERED----------4
NOT AT ALL COVERED----------5
NOT FAMILIAR WITH CONTENT----------6
DON'T KNOW----------9

39. Overall, how effective do you believe the substance use education program is in assisting smokers in your school to stop smoking? Would you say: very effective, somewhat effective, not very effective, or not at all effective?

VERY EFFECTIVE----------1
SOMEWHAT EFFECTIVE----------2
NOT VERY EFFECTIVE----------3
NOT AT ALL EFFECTIVE----------4
DON'T KNOW----------9

40. How often does your school involve the parents of your students and other members of your community in substance use prevention and intervention programs? Would you say: always, often, sometimes, rarely, or never involved?

ALWAYS----------1
OFTEN----------2
SOMETIMES----------3
RARELY----------4
NEVER----------5
DON'T KNOW----------9

[INTERVIEWER: RESTART QUESTIONS HERE, IF SKIPPING TO QUESTION 41]

41. In your opinion, how much is tobacco use on the part of the students in your school tolerated by their parents? Is there a lot, some, very little, or no tolerance.

A LOT----------1
SOME----------2
VERY LITTLE----------3
NO TOLERANCE----------4
DON'T KNOW----------9

42. In your opinion, how much do members of your community tolerate the use of tobacco on the part of students and other minors in the area? Is there a lot, some, very little, or no tolerance.

A LOT----------1
SOME----------2
VERY LITTLE----------3
NO TOLERANCE----------4
DON'T KNOW----------9

43. In your opinion, how accessible are cigarettes to your students and other minors in your community? Would you say: easily accessible, somewhat accessible, not very accessible, or not at all accessible?

EASILY ACCESSIBLE----------1
SOMEWHAT ACCESSIBLE----------2
NOT VERY ACCESSIBLE----------3
NOT AT ALL ACCESSIBLE----------4
DON'T KNOW----------9

44. In keeping with State mandates, areas around schools are designated as Drug Free Zones. How strictly would you say this statute is enforced by law enforcement agencies around your school? Would you say: strictly enforced; enforced, but not regularly; enforced only when notified by school officials; or not enforced at all?

STRICTLY ENFORCED----------1
ENFORCED, BUT NOT REGULARLY----------2
ENFORCED ONLY WHEN NOTIFIED BY SCHOOL OFFICIALS--3
NOT ENFORCED AT ALL----------4
DON'T KNOW----------9

[We are getting close to the end]. Now I'd like to ask you a few questions about your perception of the amount of substance abuse by students in your school.

45. What would you give as a very approximate estimate of the percentage of students in your school who smoke tobacco more than once a month?

_____

46. [What is your approximate estimate of] . . . the percentage of students in your school who use smokeless tobacco more than once a month

_____

47. [What is your approximate estimate of] . . . the percentage of students in your school who use alcohol more than once a month

_____

48. [What is your approximate estimate of] . . . the percentage of students in your school who smoke marijuana more than once a month

_____

49. [What is your approximate estimate of] . . . the percentage of students in your school who have ever used illicit drugs, other than marijuana, such as speed, LSD, crack, or non-crack cocaine?

_____

Finally, I have a few classification questions about your school and yourself.

50. First, is your school located in a large city, a suburb of a large city, a smaller city or town, or a rural area?

LARGE CITY----------1
SUBURB OF A LARGE CITY----------2
SMALLER CITY OR TOWN----------3
RURAL AREA----------3
DON'T KNOW----------9

51. What grades are included in your school?

_____

52. Approximately how many students are enrolled in your school?

_____

53. How many teachers are there in your school, including special education teachers and guidance counselors?

_____

54. How many years have you been the Principal/Asst. Principal [circle] of this school?

_____

55. What is the highest academic degree you hold?

BACHELOR----------1
MASTER----------2
SPECIALIST OR OTHER----------3
DOCTORATE----------4
DON'T KNOW----------9

56. How would you describe the predominant ethnic composition of your school? Would you say it is predominantly non-Hispanic White, predominantly non-Hispanic Black, predominantly Hispanic, racially/ethnically mixed where no one group contains more than 50% of the students, or something else?

PREDOMINANTLY NON-HISPANIC WHITE--------1
PREDOMINANTLY NON-HISPANIC BLACK--------2
PREDOMINANTLY HISPANIC----------3
RACIALLY/ETHNICALLY MIXED----------4
OTHER (WRITE IN) _____----------5
DON'T KNOW----------9

57. What is the economic status of the majority of your students? Would you say they are: mostly from upper middle class families, mostly from middle class families, mostly from lower or working class families, or is it evenly mixed?

UPPER MIDDLE CLASS FAMILIES----------1
MIDDLE CLASS FAMILIES----------1
LOWER/WORKING CLASS FAMILIES----------2
EVENLY MIXED----------3
OTHER_____----------4
DON'T KNOW----------9

57a. [What is your approximate estimate of] . . . the percentage of entering ninth grade students who graduated from your school?

_____

57b. [What is your approximate estimate of] . . . the percentage of graduates who go to colleges or universities?

_____

58. That is all the questions. Do you have any additional comments on anti-smoking programs or this interview that you would like me to record?

YES, COMMENTS----------1
NO COMMENTS----------2

_____

_____

59. I'd like to thank you for your participation. Once again, to compensate you for your time we will be sending a check for $20. A form is required to do this which we will send you; for this I need to verify your address. Is it [READ SCHOOL NAME AND ADDRESS ON COVER]

_____

May I have the names and telephone numbers of the teachers in your school responsible for substance use prevention education?

LIST TEACHERS AT SCHOOL RESPONSIBLE FOR TOBACCO USE/SUBSTANCE ABUSE PROGRAMS ON THE SHEET ATTACHED TO THE COVER SHEET.

WRITE IN NUMBER AT TOP OF COVERSHEET HERE: __/__ __/__ __ __/__

GENDER OF RESPONDENT [DO NOT ASK].

MALE----------1
FEMALE----------2

Appendix B: High School Teacher Survey

1. You have been identified as someone who teaches substance use prevention in your school.

Have you taught tobacco use prevention in the past two years?

YES [SKIP TO QUESTION 4]----------1
NO----------2

2. Could you please give me the names of those teachers who might have taught tobacco use prevention in the past two years? [IF YES, WRITE NAME(S) OF TEACHERS AND TERMINATE INTERVIEW]

Teacher 1_____----------1
Teacher 2_____----------2
Teacher 3_____----------3
Teacher 4_____----------4
Teacher 5_____----------5
Teacher 6_____----------6
NO, ARE NO OTHER TEACHERS----------7
DON'T KNOW/NO RESP----------9

3. Are there any other teachers who teach substance use prevention education? [IF YES, WRITE NAME(S) OF TEACHERS AND TERMINATE INTERVIEW; IF NO, TERMINATE INTERVIEW]

Teacher 1_____----------1
Teacher 2_____----------2
Teacher 3_____----------3
Teacher 4_____----------4
Teacher 5_____----------5
Teacher 6_____----------6
NO, ARE NO OTHER TEACHERS----------7
DON'T KNOW/NO RESP----------9

4. How would you best describe your primary position in terms of health education? Do you administer the health education program, do you teach in the health education program, are you a health care provider, a health education counselor, or is there another role that best describes you?

ADMINISTER HEALTH EDUCATION PROGRAM----------1
TEACH IN HEALTH EDUCATION PROGRAM----------2
HEALTH CARE PROVIDER----------3
HEALTH EDUCATION COUNSELOR----------4
TRUST COUNSELOR----------5
ANOTHER ROLE----------6
DON'T KNOW/NO RESP----------9

5. Are you the only health education teacher at your school or are there more than one?

ONLY ONE----------1
MORE THAN ONE----------2
DON'T KNOW/NO RESP----------3

6. What grade level(s) do you teach? [CHECK ALL THAT APPLY.]

6TH----------1
7TH----------2
8TH----------3
9TH----------4
10TH----------5
11TH----------6
12TH----------7
OTHER_____----------8
DON'T KNOW/NO RESP----------9

7. In comparison to other health education topics, what priority does tobacco prevention education hold at your school? Would you say the highest priority, a high priority, a moderate priority, a low priority, or the lowest priority?

THE HIGHEST PRIORITY----------1
A HIGH PRIORITY----------2
A MODERATE PRIORITY----------3
A LOW PRIORITY----------4
THE LOWEST PRIORITY----------5
DON'T KNOW/NO RESP----------9

8. Are you supplied with enough materials to teach tobacco prevention lessons adequately? Would you say yes or no?

YES----------1
NO----------2
DON'T KNOW/NO RESP----------9

9. To what extent do teachers at your school make their own decisions about which topics they will cover and which materials they will use in tobacco prevention lessons? Would you say: a great deal, somewhat, no too much, or not at all?

A GREAT DEAL----------1
SOMEWHAT----------2
NOT TOO MUCH----------3
NOT AT ALL----------4
DON'T KNOW/NO RESP----------9

10. During the past two years have you taught any tobacco prevention lessons from a formal curriculum? [IF ASKED: "Formal curriculum" means those developed by commercial companies, community organizations, your school district, etc.]

YES----------1
NO [SKIP TO QUESTION 13]----------2
DON'T KNOW/NO RESP----------9

11. This question refers to the last completed school year, that is 1996-1997 only. During that year, did you teach all of the tobacco prevention lessons included in that published curriculum, or did you teach only some of them?

ALL OF THE LESSONS----------1
SOME OF THE LESSONS----------2
NONE OF THE LESSONS----------3
DON'T KNOW/NO RESP----------9

12. What is the focus of that published curriculum? Would you say it is focused solely on tobacco prevention; on tobacco, alcohol, and other drug prevention; on a broad range of health topics; or on other topics?

FOCUSED SOLELY ON TOBACCO PREVENTION---------1
FOCUSED ON TOBACCO, ALCOHOL, AND OTHER-------2
COVERS A BROAD RANGE OF HEALTH TOPICS--------3
OTHER [DESCRIBE]_____----------4
DON'T KNOW/NO RESP----------9

13. Who developed the tobacco prevention curriculum that you use in your school—people at your school, the county school system, the state of Florida, Federal or other government programs outside the state of Florida, a private vendor, or don't you know? [CHECK ALL THAT APPLY]

PEOPLE AT YOUR SCHOOL----------1
THE COUNTY SCHOOL SYSTEM----------2
THE STATE OF FLORIDA----------3
OTHER GOV'T OUTSIDE STATE OF FLORIDA-------4
PRIVATE VENDOR----------5
DON'T KNOW/NO RESP----------9

14. During the last school year, that is 1996-97, approximately how many classroom teaching hours of tobacco prevention lessons did each student receive? [MAKE SURE NUMBER IS FOR HOURS]

_____

15. Since the beginning of the current school year, that is 1997-98, approximately how many classroom teaching hours of tobacco prevention lessons did each student receive? [MAKE SURE NUMBER IS FOR HOURS]

_____

16. In the last two years, how interested were your students in the tobacco prevention lessons that you taught? Would you say: very interested, moderately interested, not too interested, or not interested at all?

VERY INTERESTED----------1
MODERATELY INTERESTED----------2
NOT TOO INTERESTED----------3
NOT INTERESTED AT ALL----------4
DON'T KNOW/NO RESP----------9

17. To what extent has your school tried to get the parents of your students involved in tobacco prevention? Would you say: a great deal, somewhat, not too much, or not at all?

A GREAT DEAL----------1
SOMEWHAT----------2
NOT TOO MUCH----------3
NOT AT ALL [SKIP TO QUESTION 19]----------4
DON'T KNOW/NO RESP----------9

18. How has your school tried to get parents involved in tobacco prevention education? Have you: assigned child-parent homework; held meetings with parents of all students; held meetings with parents of students who use tobacco; given parents informational pamphlets; given presentations during open house at the school; or any other means? [CHECK ALL THAT APPLY. AFTER RESPONSE, PROBE ONCE MORE] Is there anything else?

CHILD-PARENT HOMEWORK ASSIGNMENTS----------1
MEETINGS WITH PARENTS OF ALL STUDENTS-------2
MEETINGS WITH PARENTS OF TOBACCO USERS------3
GAVE PARENTS INFORMATIONAL PAMPHLETS--------4
PRESENTATION DURING OPEN HOUSE AT SCHOOL----5
OTHER (DESCRIBE)_____----------6
DON'T KNOW/NO RESP----------9

Before I start asking about specific programming related to tobacco use in your school I'd like to ask you some very general questions about your own perception of attitudes towards student tobacco use and related problems. By the way, when we talk about tobacco use we mean smoking and smokeless tobacco.

19. First, how much do you think the use of tobacco influences school drop-out rates? Would you say a great deal, some, a little, or none?

A GREAT DEAL ----------1
SOME----------2
A LITTLE----------3
NONE----------4
DON'T KNOW/NO RESP----------9

20. How much does the use of tobacco influence overall academic performance? [...Would you say a great deal, some, a little, or none?]

A GREAT DEAL ----------1
SOME----------2
A LITTLE----------3
NONE----------4
DON'T KNOW/NO RESP----------9

21. How much does the use of tobacco influence the use of other substances such as alcohol and illicit drugs? [...Would you say a great deal, some, a little, or none?]

A GREAT DEAL ----------1
SOME----------2
A LITTLE----------3
NONE----------4
DON'T KNOW/NO RESP----------9

22. How much is tobacco use related to other delinquent acts such as stealing, fighting, or gang membership? [...Would you say a great deal, some, a little, or none?]

A GREAT DEAL ----------1
SOME----------2
A LITTLE----------3
NONE----------4
DON'T KNOW/NO RESP----------9

23. What would you pick at the most typical age when tobacco use starts for the average student in your school who uses it?

_____

24. Which substance do you think students in your school are most likely to use before any of the others: tobacco, alcohol, marijuana, or other illicit drugs?

TOBACCO----------1
ALCOHOL----------2
MARIJUANA----------3
OTHER ILLICIT DRUGS----------4
DON'T KNOW/NO RESP----------9

25. How much tolerance is there for student tobacco use among their peers? Is there a lot, some, very little, or no tolerance?

A LOT----------1
SOME----------2
VERY LITTLE----------3
NO TOLERANCE----------4
DON'T KNOW/NO RESP----------9

26. How much is student tobacco use generally tolerated by the professional staff of your school? Is there a lot, some, very little, or no tolerance?

A LOT----------1
SOME----------2
VERY LITTLE----------3
NO TOLERANCE----------4
DON'T KNOW/NO RESP----------9

27. In your opinion, how much is tobacco use on the part of students at your school tolerated by their parents? Is there a lot, some, very little, or no tolerance.

A LOT----------1
SOME----------2
VERY LITTLE----------3
NO TOLERANCE----------4
DON'T KNOW/NO RESP----------9

28. In your opinion, how much do members of your community tolerate the use of tobacco on the part of students and other minors in the area? Is there a lot, some, very little, or no tolerance.

A LOT----------1
SOME----------2
VERY LITTLE----------3
NO TOLERANCE----------4
DON'T KNOW/NO RESP----------9

A major reason for this survey is to determine what topics are currently addressed in tobacco prevention programs. Please describe how important the following topics are to your/a tobacco prevention program.

29. First of all, how important is it in your tobacco prevention program that students learn about the prevalence of smoking among young people and adults? Would you say it is one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
DON'T KNOW/NO RESP----------9

30. How important is it in your program that students learn about the social and/or economic issues associated with tobacco use? [Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
DON'T KNOW/NO RESP----------9

31. How important is it in your program that students learn about the long and short term effects on health of smoking and the use of smokeless tobacco? [Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
DON'T KNOW/NO RESP----------9

32. How important is it in your program that students learn about the organizations available to help people quit using tobacco? [Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
DON'T KNOW/NO RESP----------9

33. How important is it in your program that students learn about the effectiveness of smoking cessation programs? [Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
DON'T KNOW/NO RESP----------9

34. How important is it in your program that students learn about the negative aspects of using tobacco to deal with stress or to lose weight? [Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
DON'T KNOW/NO RESP----------9

35. How important is it in your program that students learn about the laws and rules that control the sale and use of tobacco? [Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
DON'T KNOW/NO RESP----------9

36. How important is it in your program that students learn about the strategies that tobacco makers use to target young people? [Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
DON'T KNOW/NO RESP----------9

37. How important is it in your program that students learn about the health benefits of tobacco-free environments? [Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
DON'T KNOW/NO RESP----------9

38. How important is it in your program that students learn about the many harmful substances contained in tobacco? [Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
DON'T KNOW/NO RESP----------9

39. How important is it in your program that students learn about the negative effects of tobacco on a fetus during pregnancy? [Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
DON'T KNOW/NO RESP----------9

40. How important is it in your program that students learn about the difficulties involved with quitting tobacco use? [Would you say one of the most important topics in the program, very important, somewhat important, not important, or are you not familiar with tobacco prevention programming content?]

ONE OF THE MOST IMPORTANT TOPICS----------1
VERY IMPORTANT----------2
SOMEWHAT IMPORTANT----------3
NOT IMPORTANT----------4
DON'T KNOW/NO RESP----------9

We would also like to know about the skills that your current tobacco prevention program tries to teach students. Please rate how often these student skills are the focus of program materials or exercises.

41. Encouraging other people not to use tobacco, would you say this is constantly covered in the lessons of your programs, very frequently covered, sometimes covered, rarely covered, or are you not familiar with the content of the tobacco prevention programming?

CONSTANTLY COVERED----------1
VERY FREQUENTLY COVERED----------2
SOMETIMES COVERED----------3
RARELY COVERED----------4
NOT AT ALL COVERED----------5
DON'T KNOW/NO RESP----------9

42. Supporting people trying to stop using tobacco, [. . . constantly covered in the lessons of your programs, very frequently covered, sometimes covered, rarely covered, or are you not familiar with the content of the tobacco prevention programming?]

CONSTANTLY COVERED----------1
VERY FREQUENTLY COVERED----------2
SOMETIMES COVERED----------3
RARELY COVERED----------4
NOT AT ALL COVERED----------5
DON'T KNOW/NO RESP----------9

43. Sharing knowledge and attitudes about tobacco use with others, [. . . constantly covered in the lessons of your programs, very frequently covered, sometimes covered, rarely covered, or are you not familiar with the content of the tobacco prevention programming?]

CONSTANTLY COVERED----------1
VERY FREQUENTLY COVERED----------2
SOMETIMES COVERED----------3
RARELY COVERED----------4
NOT AT ALL COVERED----------5
DON'T KNOW/NO RESP----------9

44. Teaching others tobacco resistance skills, [. . . constantly covered in the lessons of your programs, very frequently covered, sometimes covered, rarely covered, or are you not familiar with the content of the tobacco prevention programming?]

CONSTANTLY COVERED----------1
VERY FREQUENTLY COVERED----------2
SOMETIMES COVERED----------3
RARELY COVERED----------4
NOT AT ALL COVERED----------5
DON'T KNOW/NO RESP----------9

45. Resisting messages in tobacco advertising, [. . . constantly covered in the lessons of your programs, very frequently covered, sometimes covered, rarely covered, or are you not familiar with the content of the tobacco prevention programming?]

CONSTANTLY COVERED----------1
VERY FREQUENTLY COVERED----------2
SOMETIMES COVERED----------3
RARELY COVERED----------4
NOT AT ALL COVERED----------5
DON'T KNOW/NO RESP----------9

46. Resisting peer pressure to begin using tobacco, [. . . constantly covered in the lessons of your programs, very frequently covered, sometimes covered, rarely covered, or are you not familiar with the content of the tobacco prevention programming?]

CONSTANTLY COVERED----------1
VERY FREQUENTLY COVERED----------2
SOMETIMES COVERED----------3
RARELY COVERED----------4
NOT AT ALL COVERED----------5
DON'T KNOW/NO RESP----------9

47. Requesting a tobacco-free environment, [. . . constantly covered in the lessons of your programs, very frequently covered, sometimes covered, rarely covered, or are you not familiar with the content of the tobacco prevention programming?]

CONSTANTLY COVERED----------1
VERY FREQUENTLY COVERED----------2
SOMETIMES COVERED----------3
RARELY COVERED----------4
NOT AT ALL COVERED----------5
DON'T KNOW/NO RESP----------9

48. Using existing community or school resources for help to quit tobacco use, [. . . constantly covered in the lessons of your programs, very frequently covered, sometimes covered, rarely covered, or are you not familiar with the content of the tobacco prevention programming?]

CONSTANTLY COVERED----------1
VERY FREQUENTLY COVERED----------2
SOMETIMES COVERED----------3
RARELY COVERED----------4
NOT AT ALL COVERED----------5
DON'T KNOW/NO RESP----------9

49. In your opinion, to what extent is tobacco prevention education a valuable use of student time? Would you say: Very valuable, somewhat valuable, or not at all valuable?

VERY VALUABLE----------1
VALUABLE----------2
SOMEWHAT VALUABLE----------3
NOT AT ALL VALUABLE----------4
DON'T KNOW/NO RESP----------9

We would also like to know about any training you have received to prepare you to teach your current tobacco prevention program.

50. During the last five years, have you received a formal in-service training on tobacco prevention education? Would you say: yes, no, you don't remember, or that you received informal training only?

YES----------1
NO [SKIP TO QUESTION 56]----------2
I DON'T REMEMBER [SKIP TO QUESTION 56]----------3
RECEIVED INFORMAL TRAINING [SKIP TO QUESTION 56]-4
DON'T KNOW/NO RESP----------9

51. How much tobacco prevention training have you received? Would you say: more than one full day, a half day, less than half day, or that you don' remember?

MORE THAN ONE FULL DAY OF IN-SERVICE TRAINING----------1
A FULL DAY OF IN-SERVICE TRAINING----------2
A HALF DAY OF IN-SERVICE TRAINING----------3
LESS THAN HALF DAY OF IN-SERVICE TRAINING----------4
I DON'T REMEMBER----------5
DON'T KNOW/NO RESP----------9

52. Have you been trained to deliver a specific published tobacco prevention curriculum? If so, which one? [IF YES, ASK] When and where?

NO----------1
YES [WHICH ONE?_____]----------2
DATE_____ CITY_____----------3
DON'T KNOW/NO RESP----------9

53. To what extent did your tobacco prevention in-service training prepare you to teach tobacco prevention lessons? Would you say: a great deal, some, a little, or none?]

A GREAT DEAL ----------1
SOME----------2
A LITTLE----------3
NONE----------4
DON'T KNOW/NO RESP----------9

54. During any tobacco prevention education training that you have received, were adequate levels of the following resources provided? -a full review of the program by skilled trainers; demonstrations of major program activities; opportunities to practice major activities. [CHECK ALL THAT APPLY].

FULL REVIEW OF PROGRAM----------1
DEMONSTRATIONS OF MAJOR PROG ACTIVITIES------2
OPPORTUNITIES TO PRACTICE----------3
DON'T KNOW/NO RESP----------9

55. Have you attended a special training course as part of the new Florida Kids against Tobacco Program? If yes, when and where did you attend it?

YES [DATE_____, CITY_____]----------1
NO----------2
DON'T KNOW/NO RESP----------9

56. Which of the following people are generally supportive of your efforts to teach tobacco lessons: school district administrators; school principals; other teachers; students; parents; and members of the local community? [CHECK ALL THAT APPLY].

SCHOOL DISTRICT ADMINISTRATORS----------1
SCHOOL PRINCIPALS----------2
OTHER TEACHERS AT SCHOOL----------3
STUDENTS----------4
PARENTS----------5
MEMBERS OF THE COMMUNITY----------6
DON'T KNOW/NO RESP----------9

57. If you catch a student smoking cigarettes or using smokeless tobacco at school, personally what do you do? [DO NOT READ RESPONSES. CHECK ALL THAT APPLY. IF ONLY ONE ANSWER IS GIVEN, ASK: Are there any other actions you would take?"]

REPORT STUDENT TO THE PRINCIPAL----------1
PUNISH IN SOME WAY----------2
TAKE AWAY CIGARETTES/TOBACCO----------3
CALL PARENTS----------4
SEND TO TREATMENT/EDUCATION PROGRAM----------5
TALK TO STUDENTS----------6
OTHER [FILL IN]_____----------7
DON'T KNOW/NO RESP----------9

58. How much do you personally support any "no tobacco" policies at your school? Would you say: a great deal, somewhat, a little, none, or that your school does not have a no-tobacco policy?

A GREAT DEAL ----------1
SOMEWHAT----------2
A LITTLE----------3
NONE----------4
OUR SCHOOL DOES NOT HAVE A NO-TOBACCO POLICY---5
DON'T KNOW/NO RESP----------9

59. Which of the following have been barriers to your teaching tobacco prevention lessons: lack of adequate instructional materials; lack of time; your school district has not made tobacco prevention a high priority; your school administrator has not made tobacco prevention a high priority; or you have not received adequate tobacco prevention training. [CHECK ALL THAT APPLY; IF NECESSARY PROBE BY REPEATING OPTIONS ABOVE].

LACK OF ADEQUATE INSTRUCTIONAL MAT----------1
LACK OF TIME----------2
SCHOOL DISTRICT NOT MADE IT HIGH PRIORITY---------3
SCHOOL ADMINISTRATOR NOT MADE IT HIGH PRIORITY----4
HAVE NOT RECEIVED ADEQUATE TRAINING----------5
OTHER (DESCRIBE)_____----------6
NO BARRIERS----------7
DON'T KNOW/NO RESP----------9

60. Does your tobacco prevention education program use peer leaders as part of the program?

YES----------1
NO----------2
DON'T KNOW/NO RESP----------9

61. How often are the tobacco use prevention programs in your school evaluated for their effectiveness? Never, less than once a year, once a year, two times a year, or three or more times a year?

NEVER----------1
LESS THAN ONCE A YEAR----------2
ONCE A YEAR----------3
TWO TIMES A YEAR----------4
THREE OR MORE TIMES A YEAR---------5
DON'T KNOW/NO RESP----------9

62. Overall, how effective do you believe the substance use education program is in preventing the initiation of tobacco use among students in your school? Would you say: very effective, somewhat effective, not very effective, or not at all effective?

VERY EFFECTIVE----------1
SOMEWHAT EFFECTIVE----------2
NOT VERY EFFECTIVE----------3
NOT AT ALL EFFECTIVE----------4
DON'T KNOW/NO RESP----------9

63. Overall, how effective do you believe the substance use education program is in assisting smokers in your school to stop smoking? Would you say: very effective, somewhat effective, not very effective, or not at all effective?

VERY EFFECTIVE----------1
SOMEWHAT EFFECTIVE----------2
NOT VERY EFFECTIVE----------3
NOT AT ALL EFFECTIVE----------4
DON'T KNOW/NO RESP----------9

64. Do you currently use tobacco?---not at all, some days, every day?

NOT AT ALL----------1
SOME DAYS----------2
EVERY DAY----------3
DON'T KNOW/NO RESP----------9

We are getting close to the end]. Now I'd like to ask you a few questions about your perception of the amount of substance abuse by students in your school.

65. What would you give as a very approximate estimate of the percentage of students in your school who smoke tobacco more than once a month?

_____

66. [What is your approximate estimate of] . . . the percentage of students in your school who use smokeless tobacco more than once a month

_____

67. [What is your approximate estimate of] . . . the percentage of students in your school who use alcohol more than once a month

_____

68. [What is your approximate estimate of] . . . the percentage of students in your school who smoke marijuana more than once a month

_____

69. [What is your approximate estimate of] . . . the percentage of students in your school who have ever used illicit drugs, other than marijuana, such as speed, LSD, crack, or non-crack cocaine?

_____

Finally, I have a few classification questions about you, for classification purposes.

70. First, how long have you been a teacher?

_____

71. How many years have you been a teacher at this school?

_____

72. How long have you been teaching substance use prevention education at this school?

_____

73. How long have you been teaching substance use prevention education overall?

_____

74. What is the highest academic degree you hold?

BACHELOR----------1
MASTER----------2
SPECIALIST OR OTHER----------3
DOCTORATE----------4
DON'T KNOW/NO RESP----------9

75. That is all the questions. Do you have any additional comments on anti-smoking programs or this interview that you would like me to record?

YES, COMMENTS----------1
NO COMMENTS----------2
DON'T KNOW/NO RESP----------9

_____

_____

76. I'd like to thank you for your participation. Once again, to compensate you for your time we will be sending a check for $20. A form is required to do this which we will send you; for this I need to verify your address. Is it [READ SCHOOL NAME ON COVER]?

_____

WRITE IN NUMBER AT TOP OF COVERSHEET HERE: __/__ __/__ __ __/__-__

78. GENDER OF RESPONDENT [DO NOT ASK].

MALE----------1
FEMALE----------2
DON'T KNOW/NO RESP----------9