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The Effectiveness of the YEA Tobacco Prevention Program with a Media Literacy Component for Middle School Age Students in Regards to Tobacco Use

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The Effectiveness of the YEA Tobacco Prevention Program with a Media Literacy Component for Middle School Age Students in Regards to Tobacco Use

by

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This dissertation has been approved as partial fulfillment of the requirements for the degree of

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at Lindenwood University by the School of Education

Ruth K. Shafer — 5-4-12

Dr. Ruth Shafer, Dissertation Chair — Date

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Dr. Deb Ayres, Committee Member — Date

Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

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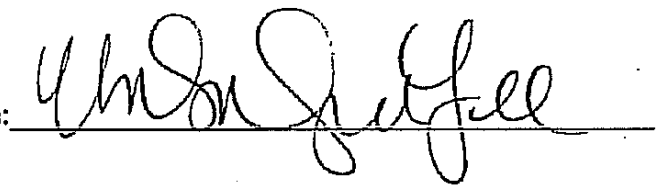
Signature:  Date: 5/4/12

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Abstract

This is a study focusing on a tobacco prevention program with a media literacy component that was administered in middle schools across the state of Missouri. In this study, the effectiveness of the Youth Empowerment in Action – Tobacco Education Advocacy and Media Program (YEA! TEAM) was investigated to determine if the inclusion of a media literacy component in an anti-tobacco prevention program made an impact on youth and their overall attitudes towards smoking. In this program, youth were taught how to dissect persuasive media techniques to make informed decisions. The research question for this study was, Can the media literacy component in the anti-tobacco prevention program have an effect than those without on preventing tobacco use? In order to answer this question, the researcher investigated the relationship between prevention programs with a media literacy component and prevention of tobacco use among adolescents. The YEA! TEAM program curriculum consisted of five major components which included professional development for teachers administering the program, detailed lesson plans aligned with state standards, student media production, Project Citizen, and parental involvement. Participation in the program was voluntary and students in Grades 6, 7, and 8 received program instruction during school or after school. All students who participated in the program took a pre-test before the program and a post-test after the program which was used to measure change in general media literacy (GML), smoking media literacy (SML), and attitudes towards smoking (ATS).

The data gathered from pre- and post-tests indicated that the YEA! TEAM programming significantly impacted their attitudes toward smoking. Three standardized scales, GML, SML, and ATS were compared by using t-tests to measure change. The

final results were encouraging and indicated significance in both GML, SML, and in ATS.

The results of the YEA! TEAM program found that a prevention program with a media literacy component has a significant impact on youth. Though the results of the YEA! TEAM program were encouraging, future prevention programs will benefit from further research for a sustained period of time to effectively assess if the program is successful in all middle school age youth.

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Chapter One - Introduction

Background of the Problem

Health issues regarding tobacco are a prevalent health concern because it is one of the most preventable causes of disease and death in the country (Mokad, Marks, Stroup, & Gerberding, 2004). According to an analysis presented by the Journal of American Medical Association (JAMA) researchers on the actual causes of death in country, "smoking remains the leading cause of mortality" (Mokad et al., 2004, p. 1238). The research analyses also estimated that about 435,000 deaths in the United States were a result of smoking in the year 2000 (Mokad et al., 2004). This astonishing number was also at an increase of 35,000 deaths from the previous decade, 1990 (Mokad et al., 2004).

Specific to adolescents, tobacco companies need to ensure that the smokers who die each year are replaced by new smokers, specifically the 14 to 24 year old age bracket (Josefson, 1998). If the tobacco companies can create new smokers, this will insure that the business will continue despite the large number of customers that die each year. Tobacco companies also know that of the current adult smokers, 90% of them became addicted as children, therefore, the carefully crafted, systematic advertising method of luring children is vital to the business (Califano, 2006). In fact, while young people may have some knowledge of the consequences, they do not feel that they will become addicted and therefore, continue to smoke (Institute of Medicine, 2007). In 1981, Myron Johnston of Philip Morris (one of Tobacco's biggest companies), stated that

> It is important to know as much as possible about teenage smoking patterns and attitudes. Today's teenager is tomorrow's potential regular customer and the overwhelming majority of smokers first begin to smoke

> while still in their teens…The smoking patterns of a teenager are particularly important to Philip Morris. (National Cancer Institute [NCI], 2006, p.57).

His statement clearly affirmed the suspicion that Tobacco companies were targeting children.

A study on Missouri's youth uncovered that youth from Grades 9-12 had a substantially higher smoking prevalence of 24.8% then the national level (Kaynai, Yun, & Zhu, 2007). In 2009, the Missouri Youth Tobacco Survey revealed that 28.1% of youth have reported smoking within the last 30 days (Missouri Department of Health and Senior Services, 2009). At a national level, an estimated 850 youth become daily cigarette smokers (Missouri Department of Health and Senior Services, 2009) before the age of 18 years. Even more disturbing is that once smoking is started, a very small percentage of youth can successfully quit smoking (Missouri Department of Health and Senior Services, 2009). In addition, cigarettes are considered a gateway drug that leads to riskier behavior such as the use of alcohol, other drugs, and high-risk sexual behavior (Missouri Department of Health and Senior Services, 2009). Most of the literature suggests that intervening and impacting choices that youth make before they begin smoking may have the desired effect of establishing healthy habits to prevent chronic health problems later in life (Franks et al., 2007).

Media is an important element if not the most critical medium to attract new smokers. Children are exposed to an average of eight hours and 33 minutes of media every day (Primack, Gold, Land, & Fine, 2006). Children are exposed to media through a variety of mediums on a daily basis such as television, ads on the internet, billboards,

direct mail, radio, magazines, company websites, corporate sponsorship at events, and transit advertisements seen on buses, taxis, and cars (NCI, 2008). In the United States, tobacco companies marketing cigarettes spend billions of dollars each year (NCI, 2008). The Tobacco companies spent 13.5 billion dollars advertising cigarettes in 2005 at a daily average rate of 37 million dollars (NCI, 2008). Therefore, a prevention program with a media literacy component is imperative if children are to be prepared for the onslaught of daily media advertisements and understand how to dissect them instead of accepting all the messages at face value.

Rationale/Need for Study

Because of the rising statistics, the need for a successful school-based tobacco prevention program is very important. This study will demonstrate that there is a critical health issue on the horizon that needs to be addressed in regards to curtailment of smoking behavior in youth through prevention programs. Unfortunately, the school-based smoking prevention programs traditionally used have not been successful in reducing the rate of new adolescent smokers (Primack et al., 2006). Incorporating the media literacy component with a prevention program in school-based programs may lead to a longer impact and curtail smoking behavior in youth. Understanding how a young person is affected by those they are surrounded by in conjunction with what the media is portraying is critical for youth in order to understand, analyze, and interpret social messages. Although the purpose of school is to provide an academic education, it is also an important social element in the lives of children and adolescents.

Origin of the Study

This study focuses on the effectiveness of school-based tobacco prevention programs using a media literacy component with middle school aged students in Missouri. The purpose of this study is to determine if the inclusion of a media literacy component within an anti-tobacco academic curriculum has an effect on student tobacco use in regards to prevention. The tobacco prevention program used in this study was developed by the Youth Empowerment in Action – Tobacco Education Advocacy and Media (YEA! TEAM) located in St. Louis, Missouri at the University of Missouri-St. Louis. The principle investigator for the Youth Empowerment in Action (YEA) program was Dr. Melinda Bier. The YEA! TEAM program received grant funding from the Missouri Health Foundation (MHF) to develop, implement, and monitor the program for three years. The YEA! TEAM program was funded by MHF for the 2006-2007 (Cohort One), 2007-2008 (Cohort 2), and 2008-2009 (Cohort 3) school years for a total of three cohort years.

The complete YEA! TEAM curriculum consisted of five major components. The first component was 16 hours of professional development for the teachers administering the program. The second component was a written curriculum with 14 detailed lesson plans. The lesson plans took about two to three class periods to teach. The third component was embedded within the curriculum and involved students creating their own Public Service Announcements (PSA's) about the negative health risks associated with tobacco. The PSA's were designed and written by the students. The fourth component was participation in the national civic engagement program, Project Citizen, and the final component was parental involvement. In summary, the program components integrated four major topics in the prevention program. Those topics were

tobacco education, media literacy, civic engagement through participation in Project Citizen, and youth activism and advocacy.

In the fall of 2006, Dr. Melinda Bier and her YEA team approached the Suburban One School District, a fictitious name for the school; specifically, the after school program Director and Site Director for Suburban One Jr. High School. At that time, I was the Site Director for the Suburban One Jr. High School afterschool program in addition to being the building school social worker. Dr. Bier extended an invitation to Suburban One Jr. High to pilot the YEA! TEAM program. The Suburban One School District and Suburban One Jr. High School administrators agreed, and a partnership was formed with a three-year commitment to work with YEA, and deliver the program at Suburban One Jr. High School during the after-school program. The first year of the partnership, before the first cohort year, the YEA program focused on the development of the YEA! TEAM program design, and implementation for the following years.

In the first cohort year, 2006-2007, four teachers at Suburban One Junior High piloted the YEA! TEAM program during the after-school program and continued to implement the YEA! TEAM program throughout the second cohort year, 2007-2008. I was one of the four teachers delivering the program in the after-school program and worked closely with the YEA team to give feedback and assist in revising the curriculum that now exists. The curriculum was developed by the YEA team and presented to teachers for implementation. The YEA team utilized teacher feedback to revise and improve the curriculum. The program was delivered Monday through Thursday to students in the Stars and Heroes after-school program. There was communication with the YEA team several times a week. During these discussions the successes and failures

with each lesson were shared. Constructive criticism was given as well as suggested improvements that would strengthen the curriculum.

My relationship with Dr. Bier was a collaborative one and the YEA! TEAM program was a topic I was very interested in. I sincerely believed that the media component in the YEA! TEAM program was critical and set this program apart from others. Media is integrated into almost every aspect of our lives and influences what we believe, how we purchase and feel about ourselves. I believed in this program because I wanted students to learn how to advocate for themselves in a society where they are bombarded by media messages as well as be empowered about the decisions they make. Most of all, I wanted my students to have the media literacy tools to make healthy decisions when faced with the temptations of risky behavior, such as smoking.

The YEA!TEAM program began in the Suburban One School District but shortly into the 2006-2007 year, additional schools were added. By the end of 2008-2009, the third cohort year and last year of the grant program, the YEA! TEAM program had a diverse group of students and schools in three major demographic areas throughout Missouri. The program was implemented in urban, suburban, and rural school districts in St. Louis and Southeastern Missouri.

Purpose of Study

The purpose of this study was to address the main research question, Can the media literacy component in the anti-tobacco prevention program have an effect than those without on preventing tobacco use? The study will investigate the relationship between prevention programs with a media literacy component and prevention of tobacco use among adolescents. The complete YEA! TEAM program utilized in this study was

created by Youth Empowerment in Action and administered by teachers in the state of Missouri.

The following research sub questions were specifically addressed in this study:

1. Will student knowledge of general media literacy (GML) as measured by the GML scale increase upon completion of the program?
2. Will student knowledge of smoking media literacy (SML) as measured by the SML scale increase upon completion of the program?
3. Will students' positive attitudes toward smoking (ATS), as measured by the attitude scale decrease upon completion of the program?
4. Will students' future susceptibility for smoking as measured by the smoking susceptibility scale change upon completion of the program?
5. Are the outcomes the same for male and female students?

Independent Variable

The delivery of the complete YEA! TEAM program (which is made of five components) served as the independent variable for this study. The components were teacher professional development, written curriculum, creation of student designed and produced public service announcements, Project Citizen, and parental involvement. The relationship between the complete YEA! TEAM curriculum program and student pre- and post-survey-style assessment questionnaire responses were conducted over a one-year period and analyzed during the course of two years.

Dependent Variables

The dependent variables for this study were

- general media literacy (GML)

- smoking media literacy (SML)
- attitudes towards smoking (ATS)
- smoking susceptibility

The study examined the relationship between the independent variables and the dependent variable.

Hypotheses

Alternative hypothesis #1. For students exposed to the YEA! TEAM anti-tobacco curriculum there will be a change in overall general media literacy (GML), as measured by student response to pre- and post-administration of the GML assessment scale.

Alternative hypothesis #2. For students exposed to the YEA! TEAM anti-tobacco curriculum, there will be a change in smoking media literacy (SML), as measured by student response to pre- and post-administration of the SML assessment scale.

Alternative hypothesis #3. For students exposed to the YEA! TEAM anti-tobacco curriculum, there will be a positive change in attitude toward smoking (ATS), as measured by student response to pre- and post-administration of the ATS.

Alternative hypothesis #4. For students exposed to the YEA anti-tobacco curriculum, there will be a change in future smoking susceptibility, as measured by student response to pre- and post-administration of the smoking susceptibility scale.

Alternative hypothesis #5. For students exposed to the YEA anti-tobacco curriculum, there will be a difference in outcomes for males and females.

Limitations of Study

The limitations of the study include variables outside the scope of this study. These variables include

- Parental Perceptions of Tobacco Use – Students may have parents and/or family members who are smokers and believe it is acceptable to smoke.
- Community Perceptions of Tobacco Use – Students may live in a community where smoking is perceived to be an acceptable social act and an important source of income for area businesses.
- Personal Testimony – Students may have personal experience with family and/or friends affected by tobacco in a negative way (ex. cancer or other related illness).
- Personal Stories/Knowledge – Students may be impacted by own current knowledge of topic through other personal stories or what they know.
- Peers Influence – Students may be influenced by a group of peers who may or may not smoke or be experimenting with tobacco. Student's perception may be effected but may experiment if peers are smoking.
- Delivery of Curriculum – Teachers may unknowingly influence the delivery of the curriculum with their own beliefs about tobacco. Teachers may also teach the curriculum differently based on their own perceptions about the program.
- Delivery of Teacher Development by YEA staff – Teachers may be influenced by the YEA staff developer throughout the process. Some teachers may have a good relationship with the staff developer and some teachers may not have a good relationship. There may have also been inconsistencies with the training delivered by the staff developer depending on the level of skill.

- Delivery of YEA program during the school day – The YEA curriculum was designed to be taught as a cross-curriculum during the school day. However, some schools did not allow the YEA program in the school day due to concerns about taking away instructional time. Those schools implemented the program in an after-school setting.
- Incomplete Data – Some students took the pre-Survey but did not take the post-survey. Those students were taken out of the data set.
- Cohort One data not valid – The data collected in Cohort One was not valid, for the purposes of this study's methodology, because the students who participated in the first year only took the pre-survey-style questionnaire and did not take the post-survey upon completion of the program.

Definition of Terms

In this study, the following terms will are defined

- Media Literacy – students will understand how media messages affect their decision making process by understanding what it is, analyzing the messages and purpose and evaluating current advertisements and messages in media (Primack et al., 2006).
- Social Influence – behavior is affected by the person's social context (Wills, Ainette, & Walker, n.d.).
- Social Norm Theory – a person's perception about what the social norm is about a behavior; such as smoking, even though the perception may or may not be accurate (Wills et al., n.d.).

- Social Perception Theory – a person's perception on another individual's behavior, healthy or not, may be a motivating factor to either mimic or not mimic the behavior (Wills et al., n.d.).
- Social Communication Theory – a model that focuses on the communication between parents and their children and the impact it has on health related decisions (Wills et al., n.d.).
- Media Exposure Theory – a person is affected by the media messages in television, movies, or print ads, impacting the attitude about behaviors (such as smoking) (Wills et al., n.d.).
- Social Cognitive Theory – a model of learning where the learner engages in a proactive and self-regulating process, which allows the learner to change and adapt to the environment (NCI, 2008).

With the exception of the media literacy definition, all of the other definitions fall underneath the broad umbrella of the social influence model.

Summary

The current research shows that school-based prevention programs that include a media literacy component are effective and shows a reduction in the rate of adolescent smokers (Flay, 2009b). The need for effective prevention programs exist not only for tobacco but also for drugs, alcohol, and risky sexual behavior. With successful programming, adolescents will be more equipped to make positive choices that will not hinder their health or future. In this paper, I discuss the benefits of effective school based prevention programs and their importance for our adolescents. I discuss the results of the evaluation of the YEA program and future implications from the program.

The focus of Chapter 2 is on the review of literature regarding the influence of media on children and the use of tobacco. The literature is also reviewed on other aspects of the study, which include the history of tobacco and media, the review of current prevention based programs, and the impact of media and tobacco specific to gender, race, and demographics. Chapter 3 explains the research methodology. Chapter 4 focuses on the analysis of the pre- and post-survey data from two years of program delivery, and will discuss the implications from the results in regards to the effectiveness of the YEA program. Chapter 5 discusses the results and future implications from the research results in regards to prevention programs.

Chapter Two – Review of Literature

The purpose of this study is to determine if the inclusion of a media literacy component within an anti-tobacco academic curriculum has an effect on student tobacco use in regards to prevention. The review of literature includes the following topics: (a) the health effects of tobacco, (b) the theoretical framework of tobacco prevention programs versus media literacy programs, (c) the argument for integrating anti-tobacco programming into the educational landscape during the middle school years, (d) the impact and implications of media for children and adolescents, (e) the recommended best practices for comprehensive anti-tobacco programs, and (f) recommendations for future programs.

Because the focus on tobacco use has occurred within the last 20 years, there is limited longitudinal data on the effectiveness of successful programs where behavior has changed for smokers versus nonsmokers. A study conducted by the Center for Disease Control analyzed smoking patterns of students Grades 9-12 and found that "60.9% of students who ever smoked cigarettes daily tried to quit smoking" and only 12.2% were successful (Missouri Department of Health and Senior Services, 2009, para.1). Data from "Monitoring the Future" surveyed over 46,000 students in 2008, and showed that 45% of youth have tried cigarettes by 12th grade and one out of five (20%) are smokers (Johnston, O'Malley, Bachman, & Schulenberg, 2009).

Multiple recommendations state that being preventative and helping young people make healthy choices before they begin smoking reduces the chances of them smoking later in life (Franks et al., 2007; Johnson et al., 2009; Missouri Department of Health and Senior Services, 2009). This literature review will also include various media literacy

programs and the effectiveness these programs have on preventing the long term use of cigarettes.

Health Effects of Tobacco Use

In the United States, tobacco use is one of the most preventable diseases and the leading cause of preventable death (Kayani et al., 2007). Currently, it is estimated that 45 million adults in the United States smoke (Pechacek, Blair, Husten, Mariolis, & Starr, 2007). Every day, an average of 4,400 new young people who are between the ages of 12 and 17 begin smoking (Primack et al., 2006). Within the 4, 400 new young people who begin smoking, 82% of the daily smokers are those who began smoking before they reached the age of 18 (Guidelines for School Health Programs to Prevent Tobacco Use and Addiction, 1994). Simplified, this means that before 1994 four out of every five children become smokers before they turned 18 (Guidelines for School Health Programs to Prevent Tobacco Use and Addiction, 1994). Therefore, programs targeting young people, in schools, have become an important vehicle to deliver anti-tobacco curriculum in hopes that the information will sway kids to be able to resist the pressure to begin or try smoking.

In 1964, the Surgeon General first reported on smoking and its impact on health (Guidelines for School Health Programs to Prevent Tobacco Use and Addiction, 1994). In that report and other reports that followed, it was outlined that smoking cigarettes causes chronic bronchitis, lung cancer, laryngeal cancer, coronary heart disease, atherosclerotic peripheral vascular disease, cerebrovascular disease, chronic obstructive pulmonary disease which includes emphysema, intrauterine growth retardation, oral cancer, esophageal cancer, and urinary cancer (U.S. Department of Health and Human

Services, 1994). Not only does smoking negatively impact every organ of the body, it also reduces the quality of life and life expectancy (Kayani et al., 2007). In addition to these preventable diseases, babies born to mothers who smoked had low birth rates and an estimated 10% of infant mortality rates have been attributed to smoking (Guidelines for School Health Programs to Prevent Tobacco Use and Addiction, 1994).

While one of the reasons why youth may begin to smoke is to fit in or look cool, there are additives that impact the body and smoking becomes something that the body begins to yearn for. The addictive component in cigarettes is nicotine, which has a variety of effects on users and for a lot of users, provides a calming effect. There is an immediate surge of glucose and the body's blood pressure is elevated, along with heart rate and breathing. All of these effects make the physical craving for cigarettes difficult to ignore (Foster et al., 2007). Nicotine's impact on the adolescent brain is more damaging because the brain is still developing. In addition to the hormonal changes adolescents experience during puberty, the combination impacts how young people are able to understand risks which makes them more vulnerable and susceptible to experimenting with risky behaviors (Foster et al., 2007).

Among adolescent smokers, the negative health impact reported in the Surgeon General's report in 1994, revealed the serious nature of smoking and its effects on adolescents (U.S. Department of Health and Human Services, 1994). Among adolescent smokers, they exhibited reductions in the rate of lung growth, decreased lung function, an increase in the amount and severity of respiratory illnesses and a negative effect on blood lipid levels (Guidelines for School Health Programs to Prevent Tobacco Use and Addiction, 1994). Adolescent smokers also experienced shortness of breath, coughing

spells, and a weakened immune system (Foster et al., 2007). The negative effect on blood lipid levels has also been thought to speed up the development of cardiovascular diseases as they grow into adulthood (Guidelines for School Health Programs to Prevent Tobacco Use and Addiction, 1994). The addiction to nicotine is devastating to adolescents and it has been found that the likelihood of cigarette addiction as an adult is more likely if smoking begins at a young age (U.S. Department of Health and Human Services, 1994).

In Missouri alone, during 2000-2004, smoking resulted in

> An estimated average of 9,578 adult deaths (17.5% of total deaths), including 5,800 deaths (22.1% of all deaths) in men and 3,778 deaths (13.3% of all deaths) in women. Among adults, 3,870 (40.4%) of these deaths were attributed to cancer, 3,256 (34.0%) to cardiovascular diseases and 2,453 (25.6%) to respiratory diseases. (Kayani et al., 2007, p. 266)

The financial burden of these deaths impacted the overall budget in Missouri and burden nonsmokers with costs for medical care. In 2004, the total spent on Medicaid for smoking related costs was over $512 million, resulting in every Missouri resident paying $91 for smoking related health problems (Kayani et al., 2007). Most of the literature suggests that intervening and impacting choices that youth make before they begin smoking may have the desired effect of establishing healthy habits to prevent chronic health problems later in life (Franks et al., 2007).

Theoretical Framework of Tobacco Prevention versus Media Literacy Programs

The CDC has seven guidelines listed in its recommendations for school based

tobacco prevention programs (Guidelines for School Health Programs to Prevent Tobacco Use and Addiction, 1994). Those recommendations are as follows

- Schools need to develop and enforce a policy on tobacco use on school campuses.
- Schools need to provide instruction about the short and long term effects of tobacco use, the social influences, peer norm perceptions on tobacco use and instruction on refusal skills.
- School-based tobacco prevention programs need to begin in kindergarten and follow through until 12th grade with the added recommendation that the programs be more intense in middle/junior high school and reinforced in high school.
- School-based tobacco prevention programs must provide professional development and training for teachers specific to the program.
- The programs need to involve the parents and families in supporting the tobacco prevention programs.
- The schools need to support students and staff who are trying to quit smoking.
- Continually utilize the tobacco prevention programs regularly throughout the school year.

The CDC in partnership with the Secretary of the Department of Health and Human Services, created national health objectives for the Healthy People 2000 initiative (Guidelines for School Health Programs to Prevent Tobacco Use and Addiction, 1994).

The ultimate goal of school-based tobacco prevention programs is to help accomplish the following objectives related to children and adolescents

- To reduce the number of smokers age 20 or older to no more than 15%.
- To reduce the number of children and adolescents who try their first cigarette in order to ensure that no more than 15% become regular smokers by the age of 20.
- To reduce the number of children, age six and younger, who are routinely exposed to cigarette smoke in their homes to no more than 20%.
- To reduce the number of males, ages 12 to 24, who use smokeless tobacco by no more than 4%.
- To establish a tobacco free environment combined with a school based tobacco prevention curriculum in every school at every level (elementary, middle, and high school).

In addition to developing guidelines and recommendations for school based prevention programs, the CDC also developed the Youth Risk Behavior Surveillance System (YRBSS) in 1990. The purpose of YRBSS was to measure and monitor any progresses made to achieving the national health and education objectives, as outlined earlier in this paper. The YRBSS measures six categories of health risk behaviors that are most often established in adolescence, and which generally leads to death and disease. Of those six categories, tobacco use is one of them. Within the YRBSS, there is also a Youth Risk Behavior Survey (YRBS) (Guidelines for School Health Programs to Prevent Tobacco Use and Addiction, 1994). The tobacco use behaviors that are monitored in the YRBS are

- Has the participant ever tried smoking a cigarette?
- What was the age when the participant first smoked a whole cigarette?
- Has the participant ever smoked cigarettes regularly, which means one cigarette smoked every day for 30 days?
- The age when the participant first smoked regularly.
- The number of days in which the participant smoked cigarettes in a month.
- The number of cigarettes the participant smoked in a month.
- The number of days the participant smoked cigarettes on the school campus in a month.
- Has the participant tried to quit smoking at any point in the last six months?
- Has the participant ever used chewing tobacco or snuff in the last month?
- Has the participant ever used chewing tobacco or snuff in the last month on the school campus?

The YRBS is recommended by the CDC for states and large cities to use in order to monitor tobacco use prevalence among adolescents (Guidelines for School Health Programs to Prevent Tobacco Use and Addiction, 1994). In a study conducted by the Office of National Drug Control it was apparent that in order to promote a safe and healthy community, it would be more effective financially to prevent the use of drugs before it begins (Office of National Drug Control Policy, 2001). However, in that same study, it was noted that there was not significant impact due to programs that were poorly resourced, limited in their scope or not implemented long enough to make a lasting impact (Office of National Drug Control Policy, 2001).

Since the *Just Say No* campaigns led by Nancy Regan in 1982, research on prevention programs has yielded disappointing results. Though the campaign did not necessarily stop smoking in youth, it did raise parental awareness and the impact drugs had on their children and the lifetime repercussions of drug usage (Reaves, 2011). This awareness introduced a problem that underlined society and brought a voice to children being offered drugs in the neighborhoods and in the schools.

Researchers began to tie other factors to drug usage, such as risky behavior, aggressive behavior, lack of social skills, and low levels of academic achievement (Missouri Department of Health and Senior Services, 2009). The federal government, along with state governments, began funding prevention programs, like Drug Abuse Resistance Education (DARE) that stressed education, knowledge, and skills with school age children (Bergsma, n.d.). The DARE program also utilized police officers to deliver the curriculum, which was unique because it incorporated the community into the classroom (Bergsma, n.d.).

Currently, the only prevention program with a complete long term study evaluation is the DARE program because of its longevity of implementation in American schools and the large number of schools participating in the program. Over the years, it has been proven ineffective in its ability to prevent or stop drug use, smoking and drinking in children (Bovard, 2000). The previous DARE curriculum relied heavily on its message, *Just Say No*, and was based primarily on telling students about drug use. The program relied heavily on the hysteria that drugs were everywhere and students had to be aware because they were so prevalent. Retrospectively, researchers hypothesized that the message was too simple and the hysteria only contributed to the feeling that

drugs were the norm since it was everywhere. One researcher even believed that students may have actually been misled into thinking that drugs were acceptable since it was everywhere and even more appealing to kids who needed a place to fit in (Reaves, 2001).

In Flay's (2009a) review of the long term effectiveness of school-based smoking prevention programs, DARE displayed a small impact on elementary school students, but the long term impacts were nonexistent. In response to the negative data, DARE created a new program for junior high and senior high school students, however, the data displayed that the new program was also ineffective with no short or long term impact (Flay, 2009a).

Another program, "Tar Wars", implemented by the American Academy of Family Physicians (AAFP) targeted fourth and fifth grade students. The program consisted of one interactive 45 minute discussion on the consequences of tobacco usage, followed by lessons by the teacher and a poster contest. The AAFP implanted this program in over 50 states and over 8 million children were exposed to it. However, there was no evaluation data collected to determine if it was effective in the short and long term (Flay, 2009a).

Historically, prevention programs developed and implemented over the last 30 years fall underneath three category umbrellas. The categories for prevention programs include knowledge and information programs, effective programs, and social influence programs. The knowledge and information programs operate on the assumption that children begin using drugs because they do not have the knowledge about the negative consequences (U.S. Department of Health and Human Services, 1994). Therefore, once children learn about the dangers of drugs, tobacco being classified as a drug, they will not engage in any use. The key components of the knowledge and information curriculum

are presentations about the harmful effects of drugs, discussions, and audiovisual presentations (Ringwalt et al., 1994). The effective programs focus on the self-esteem of the student because it believes that personal and social deficits leads to drug use (U.S. Department of Health and Human Services, 1994). The effective curriculum focuses on personal and social development through the use of the same methods used in the knowledge and information programs, but also utilizes cooperative group work (Ringwalt et al., 1994). The main difference is that drug use is not mentioned at all within the curriculum. The social influence programs are the newest model of programs in the field and utilize components from the knowledge and information program as well as effective programs. The major difference in the social influence program is the belief that children cannot resist the social pressures of drug use because they do not have the social skills to resist (Ringwalt et al., 1994). Therefore, the programs focus strongly on developing the lacking social skills, increasing decision making skills, and improving communication (Ringwalt et al., 1994). The social influences model also empowers children to facilitate their discussions and take leadership roles within the group.

From a research standpoint, the three program models are not all effective in preventing drug use. Both knowledge and information and effective program models have not shown much success in preventing or reducing adolescent drug use (Ringwalt et al., 1994). The results for knowledge and information programs show an increase in student knowledge about drugs and the negative consequences of drug use. However, this did not prevent children from engaging in drug use (Ringwalt et al., 1994). The study results of effective programs showed a higher rate of drug use than the comparison groups (Ringwalt et al., 1994). The results of the social influences programs showed a

higher rate of success in drug use prevention (Ringwalt et al., 1994). With such compelling evidence of failures and success, it is clear the direction in which school-based prevention programs must proceed. A social influence based program with a media literacy component empowers the student to learn how to make good decisions and decipher the multitude of messages received on a daily basis through media.

While many prevention programs were created to change the individual, they rarely took into account the macro-environmental influences that surround the choices such as economic, social, and physical dimensions (Spooner & Hall, 2002). All of the risk factors are in the individual insinuating that the young person lacks *will power* and do not take into account the outside influences, causing the DARE program to be too simplistic. Data collected on the program showed that students "receive lots of information from their schools and the media about the unhealthy consequences of tobacco use, but 6,000 young people try a cigarette each day and 3,000 go on to be regular smokers" (Bergsma, n.d., p. 15). In addition, preventive campaigns happened after the behavior was established, making it more difficult for youth to quit smoking. Research has proven that the use of tobacco starts during childhood or adolescence and is impacted by family members and friends that smoke (Sargent & DiFranza, 2003). Within the last decade, research has shown that the use of some interventions such as fear-based tactics were not working (Missouri Department of Health and Senior Services, 2009) and that effective programs included community-based interventions along with state governance and enforcement of laws. In other words, laws needed to be enforced when under age youth were buying and smoking cigarettes. Research also began to take a look at how smoking was perceived in society.

Within a school-based program, fully engaging the youth is also a critical component for success. Media is a powerful medium to implement within a school-based prevention program because it is something children and adolescents engage in on a daily basis. To empower children and adolescents and hold their interest, it is important for a school-based prevention program to include media literacy within the program. The media literacy component can be divided into two areas, policy advocacy and media advocacy activities (Centers for Disease Control and Prevention [CDC], 2010). Policy-based activities allow students to understand how to advocate for what they believe in learn how to navigate the system. Media advocacy activities allow students to analyze and synthesize the information they learn and transfer into different outlets. Some examples of media advocacy activities include creating advertisements in school publications, creating anti-tobacco campaigns by producing public service announcements (PSAs), teaching each other about manipulative advertising tactics by tobacco companies, and creating tobacco control day activities (CDC, 2010).

If a school based tobacco prevention program is to be effective in reaching children and adolescents, all of the components must be implemented in a comprehensive manner. Additionally, actively engaging and involving children and adolescents in their learning is vital to sustain interest and true comprehension. Children and adolescents need to be empowered to advocate for change as well as learn about the dangers of tobacco and the use of media to manipulate consumers.

Rationale for Integrating Anti-tobacco Programming into the Educational Landscape

With the failed results from DARE, researchers began to evaluate where the gaps were within the programs. Focusing on the individual components did not stop youth from smoking. By 2004, researchers could link adult health issues back to behaviors established in adolescence (Higgins, Begoray, & MacDonald, 2009). With this realization, also came the realization that "children take up smoking in response to social influences: smoking by friends, parents, and family, and through exposure to smoking in media" (Sargent & DiFranza, 2003, p. 102). The review of the research also showed that tobacco prevention programs that only used school-based curriculum were consistently not effective (Blackinger, Fagan, Matthews, & Grana, 2003). Just *saying no* was not saying enough. The few programs that were effective had a combined social influence approach. But, the curriculum alone, did not guarantee success (Blackinger et al., 2003).

The social learning theory emphasizes that people learn within a social context (Ormond, 1999). For children and adolescents, school is one of the larger and influential social settings they are a part of throughout their lives (Thrasher, Niederdeppe, Jackson, & Farrelly, 2006). Therefore, the implications for the social learning theory in a school setting manifest in numerous ways. One of the key implications of the social learning theory states that students will learn a majority of the things they know by watching other people (Strasburger, 2004). Therefore, the best method to teaching children and adolescents is to model the desired behavior (Strasburger, 2004). Children and adolescents who do not have strong bonds with important people in their lives or with the usual social institutions, such as school, are more at risk to engage in behavior seen as

risky (Thrasher et al., 2006). Therefore, the day-to-day interactions with peers, teachers, and other adults greatly influence the behavior of students.

Another implication in the school setting is that students learn through modeled appropriate behaviors (Ormond, 1999). This idea reinforces that learning occurs whether it is taught in a classroom setting or in a social setting and students are influenced by each other (Akers & Lee, 1996). The social learning theory is an important aspect of school-based prevention programs because the principle components in the programs are about establishing appropriate social norms, modeling appropriate behavior, and utilizing peer relationships to empower and inform students about media and tobacco. School-based prevention programs are designed to be implemented in a social setting, allowing students to interact with each other and share their beliefs about a particular subject. In this study, the school-based prevention program focused on tobacco and the ways in which media manipulates viewers to entice new smokers.

Though millions of dollars had been used to prevent smoking, researchers began to understand how other factors influenced the choice to smoke. Higgins et al. (2009) began to link different components together by applying a social ecological model. Three main levels of influence are as follows

1. Intrapersonal factors, such as characteristics, knowledge, and skills;
2. Interpersonal factors, such as social support and influences; the quality and nature of human interactions, peers, family;
3. Community (environmental and structural) factors, such as health policy and a community's ability to promote health.

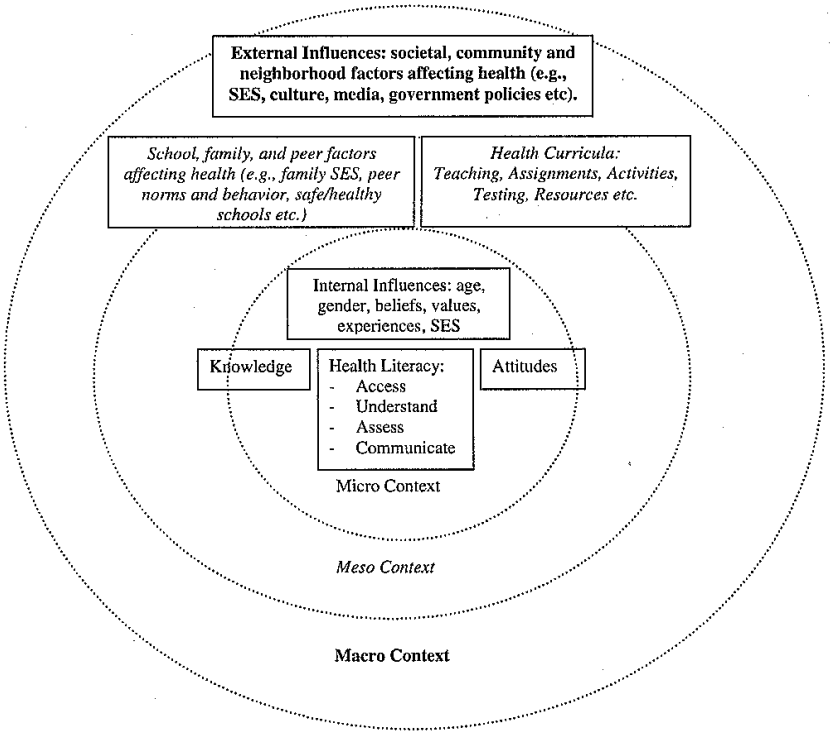

Figure 1. Social ecological model (Higgins et al., 2009, p. 355).

Based upon the social ecological model (see Figure 1), an effective program has to acknowledge the influence of the elements from all three of the contexts that surround a young person's life. In the Micro Context, the individual person is impacted on what he or she understands about society based upon the gender, age, values, and personal experiences. While influenced by those around him/her, the individual makes his/her decisions based upon how they interpret life. A youth may be more tempted to smoke if he or she sees the *glamour* of it, but unfortunately, the youth can become addicted after only smoking a few cigarettes (Blackinger et al., 2003; Sargent & DiFranza, 2003).

In the Meso Context, school, family, and peers have an effect and impact on student choices and in the Macro Context, the external influences of society, community, and neighborhood influences a student's life (Higgins et al., 2009). Instead of looking at only the individual, like the DARE program did, effective programming takes into

account everything that is surrounding a young person and not just the young person. The prevailing opinion in research is that “social influences are the primary motivating force behind adolescent experimental smoking” (Sargent, 2005, p. 347).

Research has validated the correlation between individual behaviors and what is occurring in the Meso and Macro Contexts. In fact, it has been proven that media not only provides entertainment, but “it is clear that they teach through repetition, with the ability to shape values and influence language and behavior” (Villani, Olson, Jellinek, 2005, p. 524). There is “increasing evidence that the macro-environment, which includes economic, social and physical dimensions, influences drug use and other health-related behaviors” (Spooner & Hall, 2002, p. 479). The most frightening research shows that the media is so pervasive that “youth, in particular, do not perceive their influence” (Bergsma, n.d., p. 13). Therefore, the child does not realize when they are watching and listening that he or she is indeed being affected, thus it is passively learned behavior (Villani et al., 2005).

In fact, these “influences are integrated best into a social-cognitive model in which adolescents are influenced by the actions and attitudes that are expressed by role models who they see in their immediate environment” (Sargent, 2005, p. 347) and they usually “imitate the behavior of their parents, peers and other role models, especially with those with whom they identify and admire” (Sargent, 2005, p. 347).

Closely related to the social ecological theory, the heuristic model is the “idea that media and peers influence adolescent self-concept” (Sargent, 2005, p. 349). This theory shows that the child is directly influenced by his/her peers, parents, and the media, by

assigning his/her interpretations of norms and beliefs coupled with the desire to fit in making him/her more susceptible to a behavior.

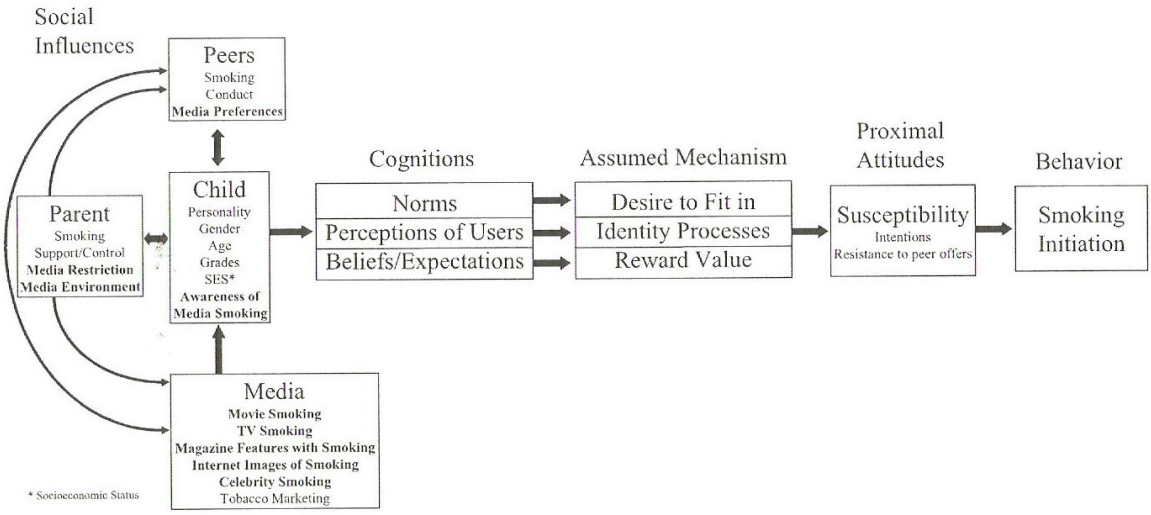

Figure 2. Heuristic model for the effect of media exposure on smoking initiation (Sargent, 2005, p. 348).

The heuristic model implies that the media and peers influence adolescent self-concept. "The model indicates that in the search for identity, adolescents adopt behaviors that are consistent with the image that they wish to have for themselves and covey to others – images of persons that are acquired from their social and media environment" (Sargent, 2005, p. 349).

There are different approaches to how children learn. The social learning theory emphasizes that people learn within a social context (Ormond, 1999). For children and adolescents, school is one of the larger and influential social settings they are a part of throughout their lives (Thrasher et al., 2006). Therefore, the implications for the social learning theory in a school setting manifest in numerous ways. One of the key implications of the social learning theory states that students will learn a majority of the things they know by watching other people (Strasburger, 2004). Therefore, the best

method to teaching children and adolescents is to model the desired behavior (Strasburger, 2004). Children and adolescents who do not have strong bonds with important people in their lives or with the usual social institutions, such as school, are more at risk to engage in behavior seen as risky (Thrasher et al., 2006). Therefore, the day-to-day interactions with peers, teachers, and other adults greatly influence the behavior of students.

Another implication in the school setting is that students learn through modeled appropriate behaviors (Ormond, 1999). This idea reinforces that learning occurs whether it is taught in a classroom setting or in a social setting and students are influenced by each other (Akers & Lee, 1996). The social learning theory is an important aspect of school-based prevention programs because the principle components in the programs are about establishing appropriate social norms, modeling appropriate behavior, and utilizing peer relationships to empower and inform students about media and tobacco. School-based prevention programs are designed to be implemented in a social setting, allowing students to interact with each other and share their beliefs about a particular subject. In this study, the school-based prevention program focused on tobacco and the ways in which media manipulates viewers through a variety of marketing techniques to entice new smokers.

There will always be challenges to evaluating the success of prevention programs. The study of media and tobacco is challenging for many reasons. Many times, it is difficult to pinpoint how media affects youth for the following reasons

- Media effects are complex and multidimensional because media can have a short-term effect such as the impact of a short burst of advertising on consumer attitudes and behaviors
- It is difficult to establish control groups because in regards to the topic of media it is difficult to confine the spread of messages to specified geographic areas or control for prior exposure or background knowledge
- Media effects may take longer to establish, specifically in the complex domain of health
- Media effects can be selective for certain population subgroups; that is, not all groups are equally influenced by the media
- Media effects are not always direct, but instead may be diffused through others
- The all-pervasive nature of the media environment includes both messages of interest as well as background "noise". (NCI, 2008, p. 8)

It is important to keep these factors, which also serve as limitations, in mind when evaluating the effectiveness of prevention programs.

In order to understand how the media impacts youth, it is important to understand how much media youth are exposed to. Historically, media and advertising in the United States did not begin until the 1920's when leaders in advertising realized that a society of consumers would yield a large market for selling the surplus of mass products. To ensure that consumers would buy goods quickly, the advertising leaders created a strategy in which they exploited any feelings of inadequacy in consumers. Boosting their success even more was the invention of the television, which reached out to viewers all across the

country (Calvert, 2008). Today, the works of those advertising leaders in the 1920's is wildly successful and consumerism permeates almost every aspect of our daily lives. It is impossible to escape advertisements as they are so engrained in the decisions we make from the clothes we wear to the food we eat.

The Impact and Implications of Media for Children and Adolescents

In a 1999 report by the Kaiser Family Foundation titled *Kids and Media,* it was reported that on average, children between the ages of 2 and 18 are exposed to about seven and a half hours of media each day (Rideout, Foehr, Roberts, & Brodie, 1999). In 2004, the Kaiser Family Foundation generated an updated report titled *Generation M: Media in the Lives of 8-18 year olds*. It was then reported that children between the ages of 8 and 18 were exposed to about eight and a half hours of media on a daily basis (Roberts, Foehr, & Rideout, 2005). In the recent 2010 Kaiser Family Foundation report titled *Generation M2: Media in the Lives of 8-18 year olds*, the media exposure and consumption increases to 10 hours and 45 minutes per day (Rideout, Foehr, & Roberts, 2010). The research clearly shows the growth of media exposure over the last 10 years. Today's child will have consumed seven to 10 years of their lives watching television by the time they are 70 years old (Strasburger, 2004). Media exposure and consumption is defined as watching television and movies, surfing the Internet, playing video games on the computer or television, text messaging, listening to music, and any other activity that requires media (Clay, 2003). In all of these examples smoking is presented as a social norm. Researchers have become increasingly interested in discovering the effect of media on the cognitive, emotional, and social development of children as media exposure and consumption continually increases (Clay, 2003). This recent interest has begun to

generate a plethora of research focused on media consumption in children and adolescents.

In the previous two Kaiser Family Foundation reports, children went from seven and a half hours of media in 1999 to about eight and a half hours in 2005 (Roberts et al., 2005). Even more surprising was how the hours grew in 2009 with children consuming 10 hours and 45 minutes of media (Rideout et al., 2010). The great increase in media consumption now outweighs the time children spend on average with their parents, which is 17 hours a week and only 30 hours a week at school (Nunez-Smith et al., 2008). With the disparaging amount of quality time children spend with their parents versus media consumption, the impact, negative or positive, does exist.

The mass exposure and consumption of media does affect our children in a variety of ways. Some of the ways in which heavy media consumption impacts our children include an increase in attention problems, increase in alcohol and drug use, weight issues such as obesity, poor performance in school, increase in smoking, and sex at an earlier age (Nunez-Smith et al., 2008). Media impacts children in these negative ways because they do not have as much real life experience to compare what they see and hear (Strasburger, 2004). Therefore, the limited experiences with real life sometimes hinder their ability to make appropriate decisions. Children are also vulnerable to media because they are still developing their critical thinking skills, therefore, they are more likely to believe what they see or hear instead of questioning the content (Strasburger, 2004). In a recent review of media and adolescent health, researchers at Yale examined the impact of media on adolescent health in seven categories. These seven categories included: obesity, tobacco use, drug use, alcohol use, low academic achievement, sexual

behavior, and attention deficit disorder with hyperactivity (ADDH) (Nunez-Smith et al., 2008).

Media impacted all seven categories but for the purpose of this study, I looked at the specific impact on tobacco use. In relation to tobacco use, the review discovered that there was a statistically strong relationship between media consumption and increased tobacco use, specifically an 88% correlation (Nunez-Smith et al., 2008). In this review, smoking was defined as either trying a cigarette of the age of the adolescent's first cigarette. Furthermore, the systematic review also discovered that there was a strong association between viewing tobacco use in media and actually using tobacco in real life as well as a relationship between the amount of media exposure and the increase of tobacco use behavior (Nunez-Smith et al., 2008). The most profound finding discovered in this review was that the more time spent daily watching television as a child, the higher the likelihood of smoking as an adolescent and adult (Nunez-Smith et al., 2008). Specific to television viewing, it was discovered that children who consume more than four hours a day were five times more likely to become smokers as adults than children who consumed less than two hours a day (Strasburger, 2004). Thus, it is no surprise that media is the most effective means of promoting tobacco products for the companies.

In the United States, direct tobacco advertisements through the use of commercials were banned in 1971 (Hanewinkel, 2009). With media being the most established, effective means to promote tobacco consumption, it is no surprise that cigarette smoking is seen in a variety of mediums from advertisements, television shows, movies, and video games. Through the use of movies, television shows, and video games, tobacco companies are able still able to bypass the ban and infiltrate the market

through the glamorous characters that are depicted in movies (Hanewinkel, 2009). These characters reinforce the image and idea that smoking is powerful and sexy which is enticing to young people. In addition, the characters who smoke in television shows and movies tend to be associated with success and good health and smoking is rarely seen negatively (Cady, Jackson-Harris, Hermesch, & Pettus, 2005). Therefore, the use of smoking as a method to develop the character's personality only reinforces that smoking is a normative social behavior, sending the message that smoking is both cool and acceptable.

Although television and movies are influential avenues for tobacco companies to promote the glamour of smoking, print advertisements in magazines and on the Internet are another powerful method of subtle advertisement. On average, children and adolescents see 3,000 ads every day on television, in magazines, and on the Internet (Strasburger, 2004). This is an astounding number and particularly disturbing because children under the age of eight are virtually defenseless against the ads (Strasburger, 2006). Children under the age of eight accept the message of advertisements because they do not understand that ads are designed to sell the product (Strasburger, 2006). They have not yet developed the cognitive ability to decipher the intent of the advertisements; therefore they believe the message given is a fact and are influenced by it.

Even more disturbing is the fact that there are more than 160 magazines created to target children and adolescents (Strasburger, 2006). Of those youth targeted magazines, tobacco companies spend millions of dollars, specifically 217 million dollars, to advertise in 38 of them (Strasburger, 2006). The Internet is also another effective means to

advertise to children and adolescents and tobacco companies spend 21.6 million dollars on Internet advertisement banners (Strasburger, 2006). Tobacco companies spent an enormous amount of money to promote their products through advertisements and promotions. On average, they spend 30 million dollars a day for a total of 11.2 billion dollars a year to promote their products (Strasburger, 2006). Regardless of the Master Settlement Agreement of 1998, tobacco companies are proving that they are still aggressively finding ways around the agreement to continually lure new customers, specifically children and adolescents, to their products.

With such compelling evidence linking negative health outcomes for children with mass amounts of media consumption, it is difficult to think positively about media's impact. In fact, media is so powerful, over 20 studies have shown that children who have been exposed to cigarettes advertisements and promotions are most likely to become addicted smokers (Strasburger, 2006). However, there is a positive role to media and it is currently being used to educate children and the overall general public about health related issues such as the negative effects of tobacco addiction (Kaiser Family Foundation, 2004). To counter the tobacco media campaign, there are now programs specifically designed to educate and inform children and adolescents about media and how it is used to manipulate consumers in the form of school based tobacco prevention programs with a media literacy component.

In today's educational landscape, the idea of being literate goes well beyond the ability to read and write. Children and adolescents are growing up in a time where technology surrounds them and affords them few barriers to access information. However, as easily as they have access to the world, the world also has easy access to

them. Children and adolescents are bombarded with thousands of media images every day from company advertisements enticing them to desire and consume products. The messages in the ads are highly sophisticated and carefully crafted to manipulate young viewers into consumption. Therefore, the idea of children and adolescents being literate must broaden beyond the ability to read and write; but must include the ability to be media literate. Children and adolescents must understand and learn how to be media literate so they can decipher and understand how advertisements work and make informed decisions about products.

According to a study completed in 2003, "There is little evidence to suggest long term prevention effectiveness" (Backinger, Fagan, Matthews, & Grana, 2003, p. 46). It is difficult to prove that prevention and cessation programs actually work. Prevention does not take into effect the social influences that surround the individual children and youth, thus having no long term impact on preventing smoking. Instead, when partnered with the risks surrounding youth and teaching youth about the impacts of the media and the choices made, youth were able to make better decisions for their life.

Specifically to tobacco, media literacy education is critical because it teaches children and adolescents how tobacco companies use images to manipulate them to try their products (Strasburger, 2004). Media literacy education provides children and adolescents with the knowledge to think critically about the advertisements and not accept them at face value or be manipulated by the image of social acceptance.

In relation to tobacco use, the review discovered that there was a statistically strong relationship between media consumption and increased tobacco use, specifically an 88% correlation (Nunez-Smith et al., 2008). Tobacco companies are very savvy and

integrate these marketing techniques into their advertisements. Every year, tobacco companies spend 13.1 billion dollars, which translates to 35.9 million dollars a day in advertising their products. A majority of these advertisements are created specifically for children (Riordin, 2008). Historically, one of the most pervasive and recognized figures in tobacco advertisements is Joe the Camel who represented the R.J. Reynolds Company's Camel brand of cigarettes and was a very successful ad campaign that ran for nine years before retiring. The campaign logo was created by Trone Advertising located in Greensboro, North Carolina to commemorate the 75th anniversary of the brand (Elliott, 1997).

In 1998, Phillip Morris, owner of the brand Marlboro that is the most popular cigarette brand among teenagers, created and launched a 100 million dollar anti-tobacco campaign (Wakefield et al., 2006). The anti-tobacco campaign was focused on children and adolescents in the 10-14 year old age range and the main message of the television campaign was to "*Think. Don't Smoke"* (Wakefield et al., 2006, p. 2154). However, the anti-tobacco television campaign was ineffective and did not impact children and adolescents (Campaign for Tobacco-Free Kids, 2005). In 1999, a study conducted by Teenage Research Unlimited reported that the reason the anti-tobacco ads were not effective was because they failed to state any negative health consequences from smoking cigarettes (Campaign for Tobacco-Free Kids, 2005). Although Phillip Morris attempted to recreate their negative image with the 100 million dollar anti-tobacco program initiative for children and adolescents, the company still spent 12.4 billion dollars in advertising and marketing at the same time their anti-tobacco program was running (Campaign for Tobacco-Free Kids, 2005).

The scope of influence that tobacco companies have on consumers through the use of carefully crafted, strategically placed media is daunting. Though the Master Settlement Agreement attempted to even the playing field by trying to hold tobacco companies accountable and restrict media advertisements targeted at children and adolescents, tobacco companies are still finding loopholes to aggressively market and target impressionable children and adolescents. To counter the influence of tobacco media and arm children and adolescents with strategies to combat the daily assault of media and advertisement messages, it is imperative that the prevention programs focus on empowering them to think critically about what they see and the decisions they make.

In 2000, the American Legacy Foundation, developed and funded from the Master Settlement Agreement, launched an anti-tobacco advertising campaign known as Truth (Wakefield et al., 2002). The Truth campaign began airing commercials after the Phillip Morris's anti-tobacco program was developed and implemented. The primary difference between the anti-tobacco campaigns was the delivery of the message and the method of delivery. The Truth campaign was marketed as an actual brand, complete with a recognizable logo, promotional items, appearances on the street and at festivals, a website and television commercials (Institute of Medicine, 2007). The Truth message about tobacco was direct with graphic images of the negative health consequence of smoking (Institute of Medicine, 2007). The Truth campaign also focused on exposing the dark, manipulative side of tobacco companies and the tactics used to lure new smokers (Szczypka, Emery, Wakefield, & Chaloupka, 2003). In addition, the Truth campaign spent 100 million dollars a year on the program (Institute of Medicine, 2007). Studies on the effectiveness of the Truth campaign in 1999 through a survey resulted in an increase

of knowledge to the negative consequences of tobacco and also an increase in support for the campaign (Wakefield et al., 2006).

Both programs (*Think. Don't Smoke* and *Truth*) are compelling examples of how powerful tobacco counter marketing campaigns are and how easily they can reach children and adolescents. The Phillip Morris anti-tobacco program did not reduce the number of children and adolescents from smoking. Instead, they were able to manipulate a new image with an anti-tobacco program that appeared to look as though it was trying to decrease the number of young smokers but instead was not making an impact because it failed to address the negative health consequences through its program. On the other hand, the Truth campaign had successful results in reducing the number of children and adolescents who begin smoking with its counter marketing campaign (Evans, 2008). In one study on the Truth campaign, results showed that from 1999 to 2002, the number of adolescent smokers decreased from 25.3% to 18% (Evans, 2008). Furthermore, the study contributed 22% of the decline as a direct result of the Truth campaign (Evans, 2008). Anti-tobacco counter marketing campaigns are an integral element in reducing the number of adolescent's smokers.

Recommended Best Practices for Comprehensive Anti-tobacco Programs

While the media campaigns are powerful, they are not enough. Partnering the anti-tobacco campaigns with school-based tobacco prevention programs is another powerful vehicle for reaching children and adolescents before they even initiate their first cigarette. To counter the tobacco media campaign, there are now programs specifically designed to educate and inform children and adolescents about media and how it is used to manipulate consumers in the form of school-based tobacco prevention programs with a

media literacy component. Media literacy is defined as "the ability to analyze, and evaluate messages, as well as the ability to communicate in a variety of ways" (Lemish, 2007, p. 182) and has been recommended as an effective health promotion strategy by a number of respected organizations, including the American Academy of Pediatrics, the Office of National Drug Control Policy and the Centers for Disease Control (Bergsma & Carney, 2008). Done correctly, media literacy "allows the youth to reflect on important life choices and make decisions about their health behaviors. It allows young people to control the influences of media messages, instead of being controlled by them" (Bergsma, n.d., p. 14).

After a thorough investigation of media programs, Bergsma and Carney (2008) made the following suggestions for an effective media literacy component. Programs should have at least five interventions:

1. All media messages are constructed. The intervention taught about how the media differs from reality, evaluating what is shown compared with real life experiences, or the producer/production of media messages.
2. Media messages are created using a creative language with its own rules. The intervention taught youth about recognizing advertising/production techniques or creating/producing media messages.
3. Different people experience the same message differently. The intervention explored how media affects people, what people can do to avoid negative effects of media or that people can take action to change the media.

> 4. Media have embedded values and points of view. The intervention explored how media affect people, what people can do to avoid negative effects of media or that people can take action to change the media.
>
> 5. Most media messages are constructed to gain profit and/or power. The intervention taught about the purpose of advertising or marketing strategies, skepticism toward advertising or creating counter-advertising. (p. 529)

Specifically to tobacco, media literacy education is critical because it teaches children and adolescents how tobacco companies use images to manipulate them to try their products (Strasburger, 2004). Since there is an abundance of media, the media cannot be stopped. However, educating youth about the media and arming them with the knowledge to think critically about the advertisements and not accept them at face value or be manipulated by the image of social acceptance teaches them a skill to think critically about the media and messages they receive. Instead of protecting youth from harmful messages, media literacy "involves them in a critical examination of media messages that influence their perceptions and practices" (Bergsma & Carney, 2008, p. 523) and empowers them with control and independence instead of creating a dependence on media to assist them in making decisions (Thoman & Jolls, 2005).

Many researchers feel that media literacy can be a useful strategy for preventing unhealthy behaviors, but all conclude that not enough research has been completed on the subject (Bergsma & Carney, 2008; Franks et al., 2007; Primack & Hobbs, 2009; Spooner & Hall, 2002; Villani et al., 2005; Higgins et al., 2009). Research from the Netherlands indicated that the most effective programs have "two closely related domains (a) stimulating adolescents' attentiveness to interactional problems and strategies as they

occur in their own everyday talk, and (b) operating as a catalyst for developing participatory health activities aimed at peers" (Lamerichs, Koelen, & Molder, 2010, p. 1163).

The research collected by the Kaiser Foundation found that a program developed and taught by teen leaders (with guidance from adults), had a very positive effect. They focused on educating how the tobacco advertising targeted youth and taught youth (their peers) how to develop skills to be more aware of the persuasive tactics of advertising and influence youth their age not to smoke. Other studies have proven that "even a single media literacy intervention can help children and adolescents understand the persuasive appeals of tobacco advertising messages and make a difference in their intention to use tobacco, at least in the short-term" (Beltramini & Bridge, 2001, p. 6).

There is a debate regarding the age programming is most impactful. There seems to be a unified voice in research that suggests that tobacco prevention programs should focus on school-age children (Alburquerque, Starr, Schooley, Pechacek, & Henson, n.d.; Beltramini & Bridge, 2001; Bergsma & Carney, 2008; Franks et al., 2007; Higgins et al., 2009; Lamerichs et al., 2010; Primack & Hobbs, 2009; Sargent, 2005; Spooner & Hall, 2002; Villani et al., 2005). The Joint Committee on Health Education Terminology states that peoples' behaviors in regards to decisions made about their health outcomes may be impacted by the influence of their social structures (Gazmararian et al., 2005). Because youth are in school and a captive audience, schools can play a crucial role in improving the health of children. Youth generally attend school five days of the week and cater to all socioeconomic groups and all ethnic groups. Franks et al. (2007) believed that "in

addition to academic skills, students also learn cultural expectations and social norms that strongly influence health behaviors." (p. 1). The CDC agreed.

> Although ages and rates of initiations vary by race and ethnicity, tobacco use is a problem for all ethnic/racial groups. Given the diversity of cultures represented in many schools, it is important to tailor prevention programs for particular ethnic/racial subgroups of students. Effective school-based programs to prevent tobacco use are equally important for both male and female students. (1994, p. 4).

Pairing daily education with a media literacy program to educate youth on the impact of smoking could make a "substantial contribution to the health of the next generation" (CDC, 1994, p. 2) To be most effective, school-based programs "must target young persons before they initiate tobacco use or drop out of school" (CDC, 1994, p. 4).

Recommendations for the Future

As we move into the future, there is a need for more programs. One piece of research looked at program interventions between the years of 1985 to 2006, and revealed the need for more tobacco prevention programs because there were only 15 programs with published results over that span of time (Kanekar & Sharma, 2007). The study also revealed that out of the 15 studies, only two based the curriculum design on the social influence model with a media literacy component (Kanekar & Sharma, 2007). Overall, the review discovered that the programs with the social influence model and media literacy were most effective in reducing smoking rates among adolescents (Kanekar & Sharma, 2007). This review revealed the great need for not only more tobacco prevention programs across the country but also for more study evaluations to obtain an accurate picture of effectiveness.

The formula for an effective program not only entails a good program for school age youth, but also a partnership between parents, community and the local legal systems. In the logic model (see Figure 3) built for Tobacco Use Prevention and Control, inputs such as federal programs, state programs, and community and national partners must collaborate to provide counter-marketing, community mobilization, and policy action. The outputs would be exposure to pro-health messages, school-based prevention and education curricula, and the creation of smoking bans, regulations, and policies. If done correctly, there are short-term outcomes such as knowledge and attitude change and adherence to and enforcement of bans that eventually evolve into long-term outcomes of decreased smoking and reduced tobacco-related morbidity and mortality rates (Alburquerque et al., n.d.).

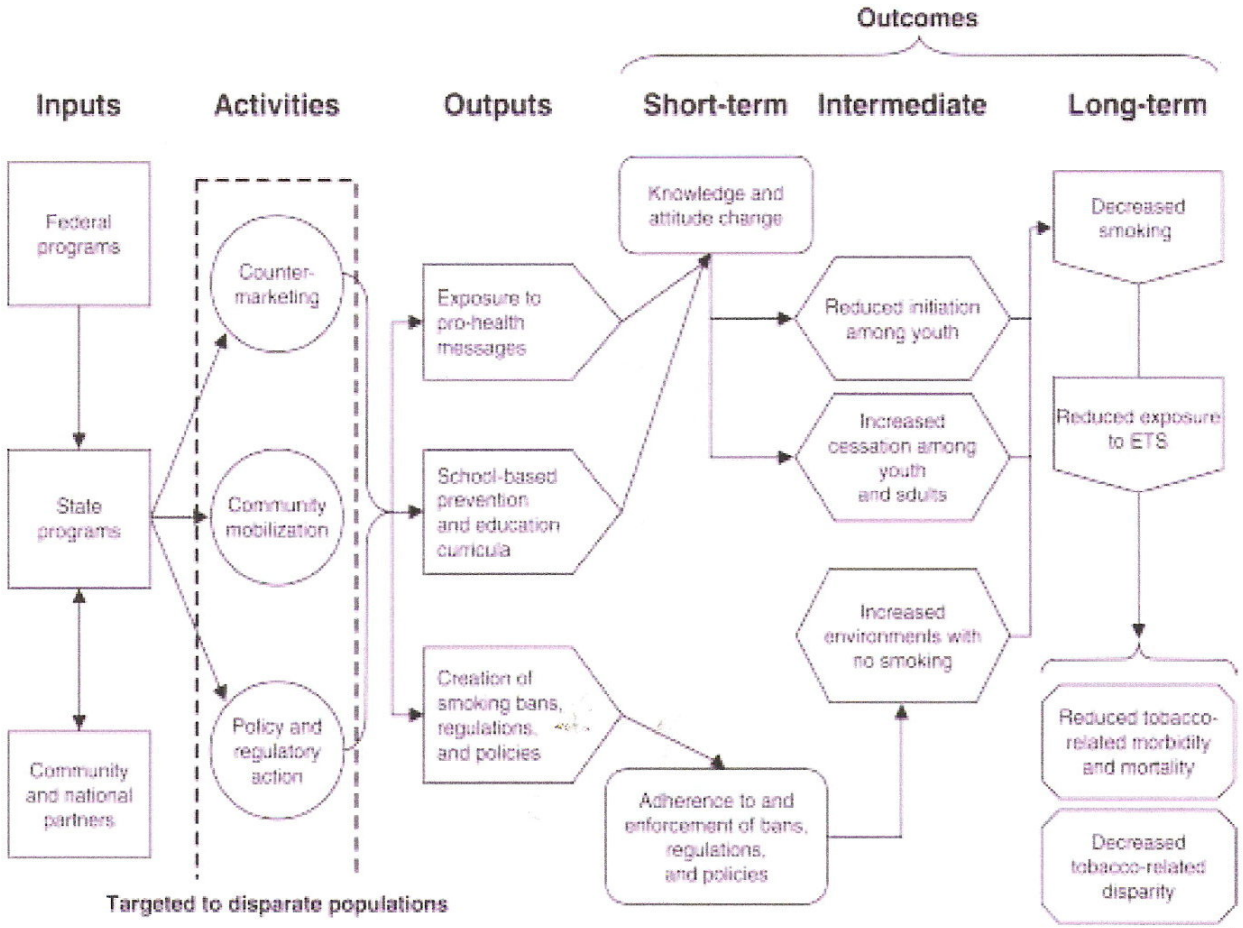

Figure 3. Logic Model (Alberquerque et al., n.d., p. 9).

In addition, the literature states that there needs to be a direction and a plan to study the various approaches on why youth smoke. Backinger et al. (2003) stated, “there is a need to examine factors associated with initiation rates and develop and test interventions for preventing initiation in the young adult population” (p. 51)

Some research has also stated that poorer populations, or youth that could be labeled as disadvantaged, have not been introduced to programs that stop smoking even though there is a socioeconomic link that reports there is a higher relative risk of smoking with higher at risk students (Kaestle & Wiles, 2009). This is an area that would require more research in the future.

Summary

If the battle to protect children and adolescents against manipulative tobacco media and advertisements is to be conquered, prevention programs must be equally aggressive and reach kids with a sense of urgency. Research shows that 9 out of 10 current adult smokers report that they began smoking before reaching the age of 19 years (Lantz et al., 2000). This literature review addressed the general health effects associated with tobacco use, the history of media and tobacco, the negative impact of media on children and adolescents, the recommendations for effective school based tobacco prevention programs, existing school based tobacco prevention programs with media literacy, and current media policy implications on programming. The studies discussed in this chapter also supported the need for the research conducted in this study by revealing the lack of research focusing on school based tobacco prevention programs with media literacy.

To provide a more accurate method of judging the effectiveness of school based tobacco prevention programs, the long term impact of the program evaluation is needed. The current research is limited in its research to analyze and evaluate the scope of effectiveness and needs more long term studies to truly evaluate the long term impact. Currently, the only prevention program with a complete long term study evaluation is the DARE program because of its longevity of implementation in American schools and the large number of schools participating in the program. Presently, the research that does exist on school-based tobacco prevention programs with a media literacy component clearly shows that they are effective.

Chapter Three – Methodology

The purpose of this study was to determine if the inclusion of a media literacy component within an anti-tobacco academic curriculum has an effect on tobacco use in regards to prevention. The YEA! TEAM program is a school-based program with a media literacy component. The YEA! TEAM program used in this study was developed by the Youth Empowerment in Action (YEA!) agency at the University of Missouri-St. Louis, headed by Principle Investigator Dr. Melinda Bier. The program was piloted for one year in a local St. Louis school district and implemented throughout school districts in the state of Missouri in the second and third year of the program. The goals of the YEA! TEAM program were to decrease tobacco use among students by increasing GML and SML, decreasing ATS, and lowering future smoking susceptibility. In order to evaluate the effectiveness of the YEA! TEAM program and analyze whether or not the program had an impact on student tobacco use and media literacy, a Likert scale pre- and post-survey-style assessment questionnaire was administered to students at the beginning and end of the program.

Prior to my study, data from the second year of the program was evaluated by YEA. The first year of the program was a pilot year and though a survey-style assessment questionnaire was administered at the conclusion of the program, a pre-survey was not. There was not enough data to analyze to compare outcomes from the first year to the second and third year of the YEA! TEAM program. Therefore, for the purpose of this study, data from the second year of the program was compared to the third year of the program in the areas of GML, SML, ATS, and future smoking susceptibility. The findings from the second year data will be discussed further in detail in the methodology

as comparisons are drawn from the second year findings to the third year results. Data was evaluated and analyzed from Cohort Three by conducting paired *t-tests* to measure whether students would exhibit higher GML and SML and a decrease in ATS upon completion of the program as a total scale and also through individual items on the survey. Data were also evaluated and analyzed by running frequencies to determine if future smoking susceptibility decreased upon completion of the complete YEA! TEAM program. Finally, a paired *t* test was conducted to determine if there was a difference in outcome for GML and SML based on gender.

Research Questions

This study addressed the research question, Can the media literacy component in the anti-tobacco prevention program have an effect than those without on preventing tobacco use? The research collected is an attempt to gain a better understanding of the impact of media literacy and tobacco use among adolescents.

The following sub-questions were specifically addressed in the study

1. Will students' knowledge of GML, as measured by the GML scale, increase upon completion of the program?
2. Will students' knowledge of SML, as measured by the SML scale, increase upon completion of the program?
3. Will students' positive ATS, as measured by the attitude scale, decrease upon completion of the program?
4. Will students' future susceptibility for smoking, as measured by the smoking susceptibility scale, change upon completion of the program?
5. Are outcomes the same for male and female students?

Independent Variable

The delivery of the complete Youth Empowerment in Action – Tobacco Education Advocacy and Media (YEA! TEAM) program (which is made of five components) served as the independent variable for this study. The components were teacher professional development, written curriculum, creation of student designed and produced public service announcements, Project Citizen, and parental involvement. The relationship between the complete YEA! TEAM curriculum program and student pre- and post-survey-style assessment questionnaire responses were conducted over a one-year period and analyzed.

Dependent Variable

The dependent variables for this study were to

- increase GML
- increase SML
- decrease positive ATS
- lower the future smoking susceptibility as compared to national data

The study examined the relationship between the independent variables and the dependent variable.

Hypotheses

Null hypothesis #1. For students exposed to the YEA! TEAM anti-tobacco curriculum, there will be no change in overall GML, as measured by student response to pre- and post-administration of the GML assessment scale.

Null hypothesis #2. For students exposed to the YEA! TEAM anti-tobacco curriculum, there will be no change in SML, as measured by student response to pre- and post-administration of the SML assessment scale.

Null hypothesis #3. For students exposed to the YEA! TEAM anti-tobacco curriculum, there will be no change in ATS, as measured by student response to pre- and post-administration of the ATS.

Null hypothesis #4. For students exposed to the YEA anti-tobacco curriculum, there will be no change in future smoking susceptibility as measured by student response to the post-administration of the smoking susceptibility scale.

Null hypothesis #5. For students exposed to the YEA! TEAM anti-tobacco curriculum, there will be no difference in outcomes for males or females.

YEA Program Curriculum Components

The complete yearlong YEA! TEAM curriculum was divided into 14 lessons (including sub-lessons). The curriculum contained lessons to be implemented in the classroom as well as community youth activism and media production of their own campaigns (Bier, Zwarun, & Fehrmann Warren, 2011b). The lesson plans were all connected to each other and aligned with the Missouri Show Me Standards and Missouri Educational Performance Standards.

In the first lesson of the YEA program, students were taught the eight core concepts of media literacy which were continually revisited and reinforced throughout the entire program. The media literacy theoretical framework is organized into the three domains of media literacy which includes Authors and Audiences (AA), Messages and Meanings (MM), and Representation and Reality (RR) (Primack & Hobbs, 2009). For

Authors and Audiences (AA), there are two core concepts. The concept of AA1 is when the author creates media messages for profit and/or to influence the consumer. The concept of AA2 is the author targeting specific audiences with media. For Messages and Meanings (MM), there are four core concepts. Concept MM1 is when the message contains value and specific points of view. Concept MM2 is when the media message is interpreted differently by individual people. Concept MM3 is when the media messages affect the attitudes and behaviors of the audience. Concept MM4 is when the media and messages use multiple production techniques. For the third media literacy domain, Representation and Reality (RR), there are two core concepts. Concept RR1 is when the media messages filter reality. Concept RR2 is when representation and reality changes because the messages omit information (Primack & Hobbs, 2009). The lessons were as follows

- Lesson 1: Me in Media
    - Subject Area: Health and Communication Arts
    - SML Core Concepts: AA1, AA2, MM1, MM2, MM3, MM4, RR1, RR2
    - This lesson raises awareness about the amount and types of media students use and introduces the 8 Core Concepts of Smoking Media Literacy. The 8 Core Concepts of Smoking Media Literacy are “authors create media messages for profit and/or influence, authors target specific audiences, messages contain values and specific points of view, different people interpret messages differently, messages affect attitudes and behaviors, multiple production techniques are used, messages filter reality and messages omit information.” (Primack & Hobbs, 2009, p. 193)

At the conclusion of this lesson, students will view media in a different way and will be challenged to question the motives behind the techniques used.

- Lesson 2: The Lizard Brain
    - Subject Area: Health and Communication Arts
    - SML Core Concepts: AA1, AA2, MM1, MM2, MM3, MM4, RR1, RR2
    - This lesson discusses the difference between active and passive media consumption and explains how persuasion techniques are used to sell products. Students will understand that most people are inundated with information from the media therefore experience an overload of information. When this overload occurs, most people do not question the motives behind the media messages, inadvertently becoming passive consumers. Students will learn that advertisers take advantage of this passive consumption and create media that is visually captivating, sparking an emotional reaction but do not require thinking on the part of the consumer.
- Lesson 3A: Tobacco and Organisms
    - Subject Area: Health, Communication Arts, and Science
    - SML Core Concept: RR1, RR2
    - In this lesson the students research the effects tobacco has on organisms. In a mock scenario, students will be given a letter from a fictional company that has asked them to conduct the research. In groups, the

students will create and conduct experiments that will show the effects of tobacco and nicotine on organisms.

- Lesson 3B: Clearing the Smoke
    - Subject Area: Health and Communication Arts
    - SML Core Concepts: RR1, RR2
    - Students explore the causes and effects of smoking in order to create anti-smoking ads geared towards other students.
- Lesson 4: Lungs of the Earth
    - Subject Area: Health, Communication Arts, Social Studies, and Science
    - SML Core Concepts: RR1, RR2
    - In this lesson students learn the impact the tobacco industry has on the environment. Students will understand that tobacco is not only detrimental to the health of organisms but also the environment, specifically deforestation.
- Lesson 5A: Where There's Smoke, There's Fire
    - Subject Area: Health, Communication Arts, and Social Studies
    - SML Core Concepts: AA2, MM1, MM2, MM3, RR1, RR2
    - Students will explore the impact of smoking in various workplaces through role play. Students will play the role of owners and managers of a variety of different businesses. In these roles, they will create smoking policies and present them to other students who will be playing the role of smokers and non-smokers. In these roles, the students will have to defend

or criticize the smoking policies. This allows students to understand the different perspectives of everyone involved.

- Lesson 5B: Mock City Council
    - Subject Area: Social Studies, Health, and Communication Arts
    - SML Core Concepts: AA2, MM1, MM2, MM3, RR1, RR2
    - Students participate in a mock legislative process and learn about lobbying, front groups, and issue advocacy. Students will be assigned different roles at a hypothetical city council meeting. The main issue at the city council meeting is a vote to consider a ban that would prohibit smoking in restaurants and indoor workplaces. While the teacher maintains the role of mayor, the students will be assigned various roles from the City Council Members, the Restaurant Owners Association, the Restaurant Employees Union, the Chamber of Commerce, television reporters, and the general public. In addition to the role playing, the students will also create persuasive posters to gather support for their side.
- Lesson 6A: Selling Tobacco
    - Subject Area: Health, Communication Arts, and Social Studies
    - SML Core Concepts: AA1, AA2, MM1, MM3, RR1, RR2
    - In this lesson, students explore how tobacco advertising has evolved over the past 60 years. Students will begin their study of advertisement by examining and comparing ads beginning in the 1940's to present day tobacco ads. Students will dissect what they learn even further by choosing a specific topic such as the advertising history of a specific brand

of tobacco and how it has changed over time to tailor to specific target audiences.

- Lesson 6B: Thinking Like Tobacco Company
    - Subject Area: Health and Communication Arts
    - SML Core Concepts: AA1, AA2, MM1, MM3, MM4, RR1, RR2
    - By assuming the roles of marketing personnel in a tobacco company, students learn why tobacco companies need to recruit youth as "replacement smokers". Once students understand why it is critical to target youth, they will become the advertisers and design their own marketing campaigns to lure in new young smokers using the advertising techniques they have learned about.
- Lesson 7A: Truth or Money
    - Subject Area: Health, Communication Arts and Social Studies
    - SML Core Concepts: AA1, MM1, MM3, RR1, RR2
    - Students explore how advertising leverage can lead to censorship of information about public health issues. In this lesson, students will learn about the power of different interest groups that focus on influencing public opinions about smoking by eliminating information about the health consequences associated with tobacco. Students will understand that tobacco companies devote a lot of resources to censor messages about the health risks associated with their product.
- Lesson 7B: Do You Believe This Camel
    - Subject Area: Health, Communication Arts and Social Studies

- SML Core Concepts: AA1, MM1, MM3, RR1, RR2
- This lesson shows how tobacco advertising creates a deceptive image of the consequences of smoking. Students will examine popular tobacco ad campaigns that make smoking look like a desirable, *cool* activity. Students will demonstrate an awareness of strategies, an understanding of the gap between ad messages and reality and how advertisers target different groups by deconstructing successful real-life ad campaigns.

- Lesson 8: Magazine Dollars and Sense
  - Subject Area: Health, Communication Arts, and Science
  - SML Core Concepts: AA1, RR1
  - In this lesson, students will examine the process advertisers use to decide which magazines to advertise in. After learning about the process, students will work in groups and pretend they are members of an advertising team with a set budget. They will create advertising plans targeting the teen audience while staying within the budget.
- Lesson 9: Smoking: The Real Cost
  - Subject Area: Health, Communication Arts, and Science
  - SML Core Concepts: RR2
  - Students will discuss the negative effects of smoking focusing on the financial burden smokers incur. In this lesson, students will research current pricing for a pack of cigarettes and calculate the cost of smoking over a period of time based on the number of packs an average smoker consumes daily.

- Lessons 8-12: Project Citizen Curriculum – The lessons provide the core ideas for learning about public policy and civic engagement. Schools complete the Project Citizen curriculum and present the project portfolios in Jefferson City in the spring 2009.
    - Project Citizen is a national program that helps students in Grades 6-9 become effective, responsible citizens by developing the necessary knowledge, skills and confidence. The Project Citizen curriculum provides activities, lesson plans and assessment tools. YEA selected five core lessons from the Project Citizen curriculum to provide the theoretical and practical foundations of the policy-making process.
        - ☐ Lesson 8 – Selecting a Problem (focus on tobacco issue)
            - Students choose which part of the tobacco issue they want to focus on:
                - Sales to minors
                - Sale of loose cigarettes
                - Marketing to youth
                - Low tobacco tax
                - Lack of Missouri state spending of tobacco settlement money on tobacco prevention
        - ☐ Lesson 9 – Explaining the Problem
            - Students gather information about the tobacco problem they have selected.
        - ☐ Lesson 10 – Policy Research and Development

- Students identify alternative policies addressing the issue they chose. Students also include their own ideas for policies to address the problem.

☐ Lesson 11 – Developing an Action Plan

- Students develop an action plan designed to get their policy adopted by the appropriate governmental agency.

☐ Lesson 12 – Portfolio Production

- Students create a four panel portfolio displaying their problem, alternative policies to the problem, students' choice of policy and how the policy will be developed and supported.
- Students travel to Jefferson City to present the Portfolios for a panel of judges. Students will also have an opportunity to examine other presentations from students within the state of Missouri.

The YEA! TEAM program also connected each of the eight core concepts with the Missouri Show Me Standards and the Missouri Educational Performance Standard. For AA 1, the Show Me Standard (SMS) is Communication Arts (CA): Goal 1.7 which is to evaluate the accuracy of information and the reliability of its sources. The Missouri Educational Performance Standard (MEPS) is Information Literacy 1B, which is to evaluate the reliability of information. For AA 2, the SMS is CA: Goal 1.9, which is to identify, analyze, and compare the institutions, traditions and art forms of past and present societies. The MEPS is Information Literacy 1B, which is to acquire relevant

information and also Reading 1Ab, which is to compare, contrast and analyze connections (text to text, text to self, text to world).

For MM 1, the SMS is CA: Goal 2.3, which is to exchange information, questions, and ideas while recognizing the perspectives of others. The MEPS is Reading 3Ce, which requires students to determine or compare authors' viewpoints. For MM2, the SMS is CA: Goal 2.3, which is to identify and evaluate relationships between language and culture. The MEPS is Reading 3Aa, which requires students to explain and analyze text features to clarify meaning, emphasizing consumer texts. For MM3, the SMS is CA: Goal 1.10, which requires students to apply acquired information to ideas and skills to different contexts as students, workers, citizens, and consumers. The MEPS is Reading 3Aa-c, which is to identify an ad, explain examples of sensory details, figurative language, and basic literacy. The other MEPS is Listening IA, which asks students to listen critically to recognize and interpret propaganda techniques. For MM4, the SMS is CA: Goal 1.4, which requires students to use technological tools and other resources to locate, select, and organize information. The MEPS is Information Literacy 2A, which asks students to identify and explain media techniques used to convey messages in various media (e.g. videos, pictures, websites, artwork, plays, or news programs).

For RR 1, the SMS is CA: Goal 1.6, which is to discover and evaluate patterns and relationships in information, ideas and structures. The MEPS is Information Literacy 1B which requires students to locate and use multiple resources to evaluate the reliability of information. For RR2, the SMS is CA: Goal 1.2 which requires students to conduct research to answer questions and evaluate information and ideas. The MEPS is

Information Literacy 1B, which requires students to locate and use multiple resources to evaluate the reliability of information (Bier et al., 2011a).

In addition to the curriculum that was taught in class, the students also created their own anti-tobacco media productions which were short PSA's. In small groups, they created an anti-tobacco production that utilized the eight core principals and wrote a detailed script. Once the script was finalized, the students were responsible for gathering any props they would need for production and also chose where the filming would take place. Each student group had their anti-tobacco productions filmed and edited. The students were a part of every aspect of their productions from creating the message to editing the short production. Once the productions were completed, the students were able to showcase their work for the other students and their parents. The short productions utilized the same media methods used by marketing companies to lure children to try tobacco products.

Population and Sample Size

During the first pilot year, the program was delivered, evaluated and changed based on recommendations made by teachers and students in the program. Following the first pilot year, YEA branched out across the state of Missouri and delivered the program to 5, 500 middle school students in Grades 6 to 8. Data from student responses to pre- and post-survey questions from years two and three were collected and analyzed.

During Cohort One (2006-2007), YEA reached out to the Suburban One School District and created a three-year partnership to deliver and implement the program for students in the Suburban One Jr. High School, serving Grades 7 to 8. The YEA! TEAM program was administered to students in the after school program. YEA also

collaborated and piloted the program with Suburban Two Jr. High School, Rural One Jr. High School and Urban One Jr. High School. In Cohort One (2006-2007), the program was in its pilot year and student participants were only administered the survey upon completion of the YEA program. Therefore, there is not enough data to compare to Cohort Two and Cohort Three.

In Cohort Two (2007-2008), the number of participating schools grew to include participants from a larger demographic range. The schools participating in Cohort Two were Urban Two Jr. High School, Rural Two Jr. High School, Rural Three Jr. High School, Rural One Jr. High School, Suburban Three Jr. High School, Rural Four Jr. High School, Suburban Three Jr. High School, Suburban One Jr. High School, Suburban Four Jr. High School, and Urban Three Jr. High School. Suburban One Jr. High School and Rural One Jr. High School also participated in Cohort One. In Cohort Two, there were a total of 754 total surveys administered to student participants but the total number of matched participants (pre- and post-survey) was 204 (N=204). The average age of the participants surveyed was 11.5 years of age. Respondents were racially diverse; with 76% indicating that they were White, 15% indicating that they were African- American and 9% indicating that they were “other”.

In Cohort Three (2008-2009), the schools participating in the YEA program came primarily from the rural school districts in southeastern Missouri. The schools participating were Rural Five Jr. High School, Rural Six Jr. High School, Rural Seven Jr. High School, Rural Eight Jr. High School, Rural Nine Jr. High School, Rural Ten Jr. High School, Rural Eleven Jr. High School, Suburban Five Jr. High School and Rural Twelve Jr. High School.

The student participants were exposed to the YEA! TEAM program through their classes during the school day or in an after-school setting. The students exposed to the program through their classes received the lessons in a cross-curricular unit taught through three core classes. The core classes included Communication Arts, Social Studies, Health, and Science. The teachers were trained on the implementation of the program and received ongoing professional development and support. The lessons were delivered by teachers in the classroom setting. The program was delivered in an after-school setting in Suburban One Jr. High School and Urban One Jr. High School.

Schools were recruited through phone calls made by the YEA staff. Once the initial contact was made, follow-up calls and meetings were set to start the collaborative relationships between the schools and YEA. Participation by the schools, teachers, administrators and students was voluntary.

Data Gathering Instrument

The instrument used to gather data in this study was a pre- and post-survey-style assessment questionnaire. The survey-style questionnaire had six sections which were comprised of demographic data, general media literacy, smoking media literacy, attitudes towards smoking, attitudes toward intervention, and smoking susceptibility. The general and smoking media literacy scales were assessed for reliability and validity in prior research by Dr. Brian Primack and his research team at the Center for Research on Health Care in Pittsburgh, Pennsylvania (Primack et al., 2006). A four point Likert scale scored the responses and the scale ranged from strongly disagree (1), disagree (2), agree (3), and strongly agree (4). Student ATS were also scored on a four point Likert scale ranging from strongly disagree (1), disagree (2), agree (3), and strongly agree (4). The attitude

towards smoking questions were pulled from several widely used tobacco surveys (Bier et al., 2011a). Student susceptibility to future smoking was measured using Pierce's three item scale (Primack & Hobbs, 2009). Based on the responses to the three-item scale, a student is not susceptible to future smoking only if the questions were answered with "definitely no" to all three of the items (Primack & Hobbs, 2009). The questions in Pierce's susceptibility scale also measured responses using a four point Likert scale with responses ranging from definitely no (1), mostly no (2), mostly yes (3), and definitely yes (4) (Primack & Hobbs, 2009).

Before the survey was administered, a letter was sent home informing parents of the purpose of the program and pre- and post-survey-style questionnaire. Completion of the survey-style questionnaire was completely voluntary. The survey-style questionnaire was coded to ensure anonymity. The only identifying factors were the student's first, middle, and last initial of his/her name and his/her birth date along with gender. The purpose of the initials was to match up the pre- and post-survey results. Surveys without name initial matches were not included. The surveys collected in the first year were not utilized in the overall analysis because it was the pilot year and post-survey questions were not administered. The pre- and post-survey-style questionnaires in the second and third years of the program yielded critical data to analyze if the complete YEA program curriculum was effective.

The complete YEA! TEAM program curriculum administered in this study was the primary vehicle by which students were exposed to the program lessons. The exposure to the lessons in the YEA! TEAM program allowed the pre- and post-survey-style questionnaire data to be collected. The complete YEA! TEAM program curriculum

was delivered during the school day or in an after-school setting. Participation was voluntary and student grades were not affected by participation.

Data Analysis Procedure

The pre- and post-data for GML, SML, and ATS in the study was analyzed using a four point Likert scale with a scale ranging from strongly disagree (1), disagree (2), agree (3), and strongly agree (4). The data for susceptibility for future smoking was analyzed using a four point Likert scale with a scale ranging from definitely no (1), mostly no (2), mostly yes (3), and definitely yes (4). All of the pre- and post-survey data analyzed was secondary and I did not create or implement the surveys. The GML, SML, and susceptibility questions were analyzed for this study. The overall results of the data were analyzed using a paired *t* test for difference in means to measure change in knowledge of GML and SML. The ATS data was also analyzed using a paired *t* test to measure for change in attitude.

The susceptibility questions were analyzed to determine future smoking for the participants. If the participant answered yes to any of three items, he/she would be classified as a higher risk for future smoking based upon John Pierce's susceptibility scale (Primack & Hobbs, 2009). The overall data for GML and SML were analyzed using a paired *t* test to determine for any outcome differences based on gender.

Data Analysis

In the exploratory analysis, paired *t-tests* for a difference in means were conducted to measure whether participants would exhibit higher GML and SML after completion of the program as a total scale and also as individual items. Attitudes towards

smoking were explored by analyzing the individual attitude questions. Finally, the susceptibility of future smoking using Pierce's three-item scale was examined.

There were 11 responses to statements analyzed to measure GML in the survey-style assessment questionnaire. The statements were as follows

1. Most of the time, when people advertise products they are more concerned about making money than giving correct information.
2. People who advertise think very carefully about the people they want to buy their product.
3. Two people may see the same movie or TV show and get very different ideas about it.
4. Two people may see the same advertisement and get very different ideas about it.
5. People are influenced by TV and movies, whether they know it or not.
6. People are influence by advertisements, whether they know it or not.
7. When people make movies and TV shows, every camera shot is very carefully planned.
8. When people make advertisements, every camera shot is very carefully planned.
9. Movies and TV shows don't usually show life like it really is.
10. Advertisements usually leave out a lot of important information.
11. When you see an ad, it is very important to think about what was left out of the ad.

There were also 11 responses to statements analyzed to measure SML in the survey-style assessment questionnaire. The statements were as follows

1. To make money, tobacco companies will do anything they can get away with.
2. Certain cigarette brands are especially designed to appeal to young children.
3. Cigarette ads try to link smoking to things that people want (like love, good looks, and power).
4. Wearing a shirt with a cigarette logo on it makes you a walking advertisement.
5. There are often hidden messages in cigarette ads.
6. Movie scenes with smoking in them are made very carefully.
7. When people see smoking ads, they are more likely to start smoking themselves.
8. When people see movies with smoking in them, they are more likely to start smoking themselves.
9. Cigarette ads show healthy people in pleasant places to make people forget about the health risks.
10. Most movies and TV shows that show people smoking make it look more attractive than it really is.
11. When you see a smoking ad, it is very important to think about what was left out of the ad.

There were nine responses to statements analyzed to measure ATS in the survey-style assessment questionnaire. The statements were as follows

1. Smoking cigarettes is not as bad as everyone makes it out to be.
2. Smoking cigarettes is enjoyable.
3. Smoking helps you deal with problems or stress.
4. Smoking helps you stay thin.
5. There is no harm in having a cigarette once in a while.
6. Smoking helps you feel more comfortable at parties.
7. If you start smoking every day, it is very hard to stop.
8. Smoking makes you look more mature.
9. Smoking makes you look more attractive or sexy.

Question number 7 is a reversed question, which means the expected response was opposite those expected for the other questions.

There were three questions analyzed to measure future smoking susceptibility in the survey-style assessment questionnaire. The questions were as follows:

1. Do you think you will smoke a cigarette soon?
2. Do you think you will smoke a cigarette in the next year?
3. If one of your best friends were to offer you a cigarette, would you smoke it?

Summary

The survey tool used with the YEA! TEAM program collected data from students on a Likert scale. While there is some evidence that youth are honest when reporting on surveys, the data gathered is still limited to scales and subscales that were implemented to

assess media literacy and tobacco usage. For the purpose of this study, the data collected was limited to focus on the specific areas such as GML, SML, ATS and future smoking susceptibility.

The YEA! TEAM program was crafted to ensure a cross disciplinary curriculum that aligned with state standards and grade level expectations. There were measures put in place to ensure that the curriculum used for the study was consistent in the delivery across all participating sites. This was done through weekly and biweekly meetings, onsite support by YEA staff, administering of pre- and post-surveys, and teacher training.

Chapter Four – Results

In an effort to prevent tobacco use among adolescents, the YEA! TEAM developed the YEA! TEAM program. The YEA! TEAM program is a school based tobacco prevention program and was implemented in middle schools throughout the state of Missouri for three years. The purpose of developing and implementing the YEA! TEAM program was to prevent student tobacco use in the middle school grades (6 to 8) by empowering students to make informed choices about tobacco use after examining media practices utilized by tobacco companies. The complete YEA! TEAM program provided lessons that allowed students to learn about the media literacy domains, media literacy core concepts, the hidden practices behind advertisements, and the various lengths that tobacco companies go to in order to recruit new smokers, specifically adolescents.

The complete YEA! TEAM program was implemented over a three-year period to over 5,500 middle school students throughout the state of Missouri. Each year of the YEA! TEAM program implementation was identified as Cohort Year One, Two, and Three. Data for the YEA! TEAM program was compiled by pre- and post-survey-style questionnaires with six sections, which were comprised of demographic data, general media literacy, smoking media literacy, attitudes towards smoking, attitudes toward intervention, and smoking susceptibility. For the purpose of answering the research questions for this study, I analyzed Cohort Three data for increase general media literacy (GML), increase smoking media literacy (SML), decrease positive attitudes towards smoking (ATS), and smoking susceptibility based on gender. I did not analyze the data from Cohort Two because it was already analyzed by YEA. I also did not analyze the

data from Cohort One because it was a pilot year and though a post-survey was administered, a pre-survey was not administered. For this study, I did compare the data from Cohort Two and Cohort Three for GML, SML, and ATS. I did not have data from Cohort Two to compare smoking susceptibility and differences in gender outcomes. A *z* test for difference in means was applied to responses given to a Likert-type survey of attitudes for each Cohort and a *z* test for difference in proportion was applied to compare the percentage of students with future susceptibility for smoking to the percentage of students with lessened susceptibility for smoking.

Survey Results – Cohort Three

To analyze whether or not there was an increase in general media literacy (GML), the Null Hypothesis was: For Cohort Three students exposed to the YEA! TEAM anti-tobacco curriculum there will be no change in overall general media literacy (GML), as measured by student response to pre- and post-administration of the GML assessment scale.

In the overall scale of GML for Cohort Three data, there was an increase from 3.03 to 3.20 on a four-point scale over the course of the YEA! TEAM program ($p<.001$). Individual score changes are detailed in Table 1.

There were significant increases in the following statements:

- "People who advertise think very carefully about the people they want to buy their product." 2.53/2.81, .00
- "People are influenced by TV and movies, whether they know it or not." 3.01/3.25, .00

- "People are influenced by advertisements, whether they know it or not." 2.79/3.08, .00
- "When people make advertisements, every camera shot is very carefully planned." 2.84/3.04, .005
- "When you see an ad, it is very important to think about what was left out of the ad." 3.07/3.28, .001

Table 1

General Media Literacy Results

	Cohort 3						
	Time 1		Time 2			95% CI	
Variable	M	SD	M	SD	P	LL	UL
GML	3.03	.61	3.20	.62	.00	-.25	-.08
Making Money (PR2)	3.26	.89	3.42	.83	.01	-.29	-..04
Think carefully	2.53	.98	2.81	1.05	.00*	-.43	-.14
Different Views TV	3.31	.82	3.39	.80	.16	-.20	.03
Different Views Ad	3.24	.85	3.34	.80	.10	-.22	.20
Influenced TV	3.01	.86	3.25	.83	.00*	-.36	-.10
Influenced Ad	2.79	.94	3.08	.87	.00*	-.42	-.16
TV Camera Planned	3.12	.93	3.18	.86	.39	-.18	-.07
Ads Planned	2.84	.99	3.04	.93	.005*	-.35	-.06
Life Like It is	2.98	.93	3.11	.96	.073	-.28	-.12
Ad Leave Out	3.19	.95	3.29	.91	.15	-.22	.034
Think Ad	3.07	.90	3.28	.89	.001*	-.34	-.09

Note. * represents significance. Reject Null. Support alternate. Not due to chance. Alpha: .05. p = -.08.

To analyze whether or not there was an increase in smoking media literacy (SML), the Null Hypothesis was: For Cohort Three students exposed to the YEA! TEAM anti-tobacco curriculum, there will be no change in smoking media literacy (SML), as measured by student response to pre- and post-administration of the SML assessment scale.

Table 2

Smoking Media Literacy Results

	Cohort 3						
	Time 1		Time 2			95% CI	
Variable	M	SD	M	SD	P	LL	UL
SML	2.85	.80	3.10	.66	.00	-.35	-.14
Money Tobacco	3.33	.97	3.5	.80	.010	-.30	-.04
Cig Brands Young Children	2.96	1.01	3.26	.86	.000*	-.44	-.17
Cig People Want	3.20	.98	3.46	.85	.000*	-.39	-.13
Shirt Logo	3.02	1.04	3.30	.87	.000*	-.41	-.15
Hidden Messages in Cig Ads	3.04	1.07	3.26	.95	.003*	-.37	-.80
Movie Scenes	2.64	1.09	2.96	1.02	.00*	-.46	-.17
Ads Start Smoking	2.39	.96	2.56	.97	0.02	-.31	-.033
Movies Start Smoking	2.13	1.04	2.31	.96	.015	-.33	-.035
Cig Ads Health	2.90	1.18	3.13	1.03	.001*	-.38	-.093
Movies More Attractive	2.85	1.21	3.14	.992	.00*	-.44	-.14
Left Out of Ad	2.95	1.24	3.25	.99	.00*	-.46	-.153

Note. * represents significance. Reject Null. Support alternate. Not due to chance. Alpha: .05. p = .00.

In the overall scale of SML for Cohort Three data, there was an increase from 2.94 to 3.15 on a four-point scale over the course of the YEA! TEAM program ($p<.001$). Individual score changes are detailed in Table 2.

There were significant increases in the following statements:

- "Certain cigarette brands are especially designed to appeal to young children." 2.96/3.26, .000
- "Cigarette ads try to link smoking to things that people want (like love, good looks, and power)." 3.20/3.46, .000
- "Wearing a shirt with a cigarette logo on it makes you a walking advertisement." 3.02/3.30, .000
- "There are often hidden messages in cigarette ads." 3.04/3.26, .003
- "Movie scenes with smoking in them are made very carefully." 2.64/2.96, .00
- "Cigarette ads show healthy people in pleasant places to make people forget about the health risks." 2.90/3.13, .001
- "Most movies and TV shows that show people smoking make it look more attractive than it really is." 2.85/3.14, .00
- "When you see a smoking ad, it is very important to think about what was left out of the ad." 2.95/3.25, .0

To analyze whether or not there was a decrease in positive attitudes towards smoking (ATS), the Null Hypothesis was: For Cohort Three students exposed to the YEA! TEAM anti-tobacco curriculum, there will be no change in attitude toward

smoking (ATS), as measured by student response to pre- and post-administration of the ATS.

In the overall scale of ATS for Cohort Three data, there was an increase from 1.2745 to 1.360 on a four-point scale over the course of the YEA! TEAM program ($p<.064$) but was not significant. Individual score changes are detailed in Table 3.

Table 3

Attitude toward Smoking (ATS)

Cohort 3			
	Time 1	Time 2	
Variable	M	M	P
ATS	1.2745	1.360	.064
Smoking Not as Bad	1.29	1.35	.042*
Smoking is Enjoyable	1.20	1.33	.875
Smoking Helps with Stress	1.35	1.50	.000*
Smoking Helps Stay Thin	1.31	1.42	.020*
No Harm in Cig Once in a While	1.27	1.32	.027*
Smoking Helps Feel Comfortable	1.26	1.34	.218
Start Smoking Hard to Stop (reverse)	3.27	3.28	.007*
Smoking Makes Look Mature	1.23	1.31	.246
Smoking Makes Look Sexy	1.19	1.24	.524

Note. Do not reject null. Reject alternate. Not due to chance. Alpha: .05. p = .064.

There were significant increases in the following statements:

- "Smoking cigarettes is not as bad as everyone makes it out to be." 1.29/1.35, .042

- "Smoking helps you deal with problems or stress." 1.35/1.50, .000
- "Smoking helps you stay thin." 1.31/1.42, .020
- There is no harm in having a cigarette once in a while." 1.27/1.32, .027
- "If you start smoking every day, it is very hard to stop." 3.27/3.28, .007 (This question was a reverse question).

To analyze whether or not there was a change in future smoking susceptibility the Null Hypothesis was: For Cohort Three students exposed to the YEA anti-tobacco curriculum, there will be no change in future smoking susceptibility as measured by student response to the post- administration of the smoking susceptibility scale.

A frequency test for difference in proportions was used to compare post-test percentage to pre-test percentage for susceptibility for future smoking. The null hypothesis was rejected. In the overall scale of future smoking susceptibility for Cohort Three data, there was an increase in future susceptibility over the course of the YEA! TEAM program. Individual changes are detailed in Table 4.

Table 4

Future Smoking Susceptibility Pre-Survey

Cohort 3	Frequency	Percent
None	238	82.4
Yes	51	17.6
Total (N)	289	100.0

Note. Do not reject null. Reject alternate. Not due to chance. Alpha: .05

According to the data, susceptibility for future smoking increased by 13 participants or 4.5% and susceptibility for future smoking decreased by 13 participants or 4.5%.

Table 5

Future Smoking Susceptibility Post-Survey

Cohort 3	Frequency	Percent
None	225	77.9
Yes	64	22.1
Total (N)	289	100.0

Table 6

Cohort Three Gender Outcomes

		General Media Literacy (GML)			
	Gender	N=289	Time 1	Time 2	P
GML	Male	121	3.000	3.1848	0.970
GML	Female	164	3.0538	3.2129	0.974

Note. Do not reject null. Reject alternate. Not due to chance.

		Smoking Media Literacy (SML)			
	Gender	N=289	Time 1	Time 2	P
GML	Male	121	2.9343	3.1608	0.963
GML	Female	164	2.9565	3.1488	0.967

Note. Do not reject null. Reject alternate. Not due to chance.

Overall, there were no significant differences in GML and SML outcome for male and female participants in Cohort Three over the course of the YEA! TEAM program. Individual changes are detailed in Table 6.

Survey Results – Cohort Two

Although the data for Cohort Two was previously analyzed by YEA, the results of the data were used to compare for any significant differences in outcomes from Cohort Two to Cohort Three.

In Cohort Two, there were a total of 754 total surveys administered to student participants but the total number of matched participants (pre- and post-survey) was 204 (N=204). The average age of the participants surveyed was 11.5 years of age. Respondents were racially diverse; with 76% indicating that they were White, 15% indicating that they were African American, and 9% indicating that they were "other".

To analyze whether or not there was an increase in general media literacy the Null Hypothesis was: For Cohort Two students exposed to the YEA! TEAM anti-tobacco curriculum there will be no change in overall general media literacy (GML), as measured by student response to pre- and post-administration of the GML assessment scale.

There were significant increases in the following statements:

- "Two people may see the same movie or TV show and get very different ideas about it." 3.32/3.52, .001
- "Two people may see the same advertisement and get very different ideas about it." 3.25/3.40, .007
- "People are influenced by TV and movies, whether they realize it or not." 3.20/3.32, .04
- "People are influenced by advertisements, whether they realize it or not." 2.93/3.12, .003

- "When people make advertisements, every camera shot is very carefully planned." 2.92/3.09, .005
- "Movies and TV shows don't usually show life like it really is." 3.11/3.29, .02
- "When you see an ad, it is very important to think about what was left out of the ad." 3.22/3.41, .004

Table 7

General Media Literacy Results

	Cohort 2		
	Time 1	Time 2	
Variable	M	M	P
GML	3.11	3.25	<.001
Making Money (PR2)	3.32	3.44	.09
Think carefully	2.34	2.44	.24
Different Views TV	3.32	3.52	<.001*
Different Views Ad	3.25	3.40	.007*
Influenced TV	3.2	3.32	.04*
Influenced Ad	2.93	3.12	.003*
TV Camera Planned	3.18	3.22	.54
Ads Planned	2.92	3.09	.005*
Life Like It is	3.11	3.29	.02*
Ad Leave Out	3.38	3.49	.08
Think Ad	3.22	3.41	.004*

Note. *represents significance. Reject Null. Support Alternate. Alpha = .05. p <. .001.

In the overall scale of GML for Cohort Two data, there was an increase from 3.11 to 3.25 on a five-point scale over the course of the YEA! TEAM program ($p<.001$.) Individual score changes are detailed in Table 7.

To analyze whether or not there was an increase in smoking media literacy the Null Hypothesis was: For Cohort Two students exposed to the YEA! TEAM anti-tobacco curriculum, there will be no change in smoking media literacy (SML), as measured by student response to pre- and post-administration of the SML assessment scale.

In the overall scale of SML for Cohort Two data, there was an increase from 2.97 to 3.18 on a five-point scale over the course of the YEA! TEAM program ($p<.001$.) Individual score changes are detailed in Table 8.

There were significant increases in the following statements:

- "To make money, tobacco companies would do anything they could get away with." 3.43/3.60, .008
- "Certain cigarette brands are specially designed to appeal to young children." 3.14/3.33, .004
- "Cigarette ads link smoking to natural things that people want (like love, good looks, and power)." 3.09/3.41, .001
- "There are often hidden messages in cigarette ads." 3.13/3.30, .02
- "Movie scenes with smoking in them are constructed very carefully." 2.58/2.81, .002
- "When people see movies with smoking in them, they are more likely to start smoking themselves." 2.38/2.63, .001

- "Cigarette ads show scenes with a healthy feel to make people forget about the health risks." 3.07/3.32, .001
- "Most movies and TV shows that show people smoking make it look more attractive than it really is." 3.07/3.35, .001
- "When you see a smoking ad, it is very important to think about what was left out of the ad." 3.24/3.47, .001

Table 8

Smoking Media Literacy Results

Cohort 2	Time 1	Time 2	
Variable	M	M	P
SML	2.97	3.18	<.001
Money Tobacco	3.43	3.60	.008*
Cig Brands Young Children	3.14	3.33	.004*
Cig People Want	3.09	3.41	<.001*
Shirt Logo	2.94	3.08	.07
Hidden Messages in Cig Ads	3.13	3.30	.02*
Movie Scenes	2.58	2.81	.002*
Ads Start Smoking	2.57	2.59	.82
Movies Start Smoking	2.38	2.63	<.001*
Cig Ads Health	3.07	3.32	<.001*
Movies More Attractive	3.07	3.35	<.001*
Left Out of Ad	3.24	3.47	<.001*

Note. *represents significance. Reject Null. Support Alternate. Alpha = .05. p < .001.

To analyze whether or not there was a decrease in positive attitudes towards smoking the Null Hypothesis was: For Cohort Two students exposed to the YEA! TEAM anti-tobacco curriculum, there will be no change in attitude toward smoking (ATS), as measured by student response to pre- and post- administration of the ATS.

In the overall scale of ATS for Cohort Two data, there was an increase from 1.26 to 1.36 on a four-point scale over the course of the YEA! TEAM program ($p<.004$). Individual score changes are detailed in Table 9.

Table 9

Attitudes Toward Smoking

Cohort 2	Time 1	Time 2	
Variable	M	M	P
ATS	1.26	1.36	.004*
Smoking Not as Bad	1.29	1.35	.30
Smoking is Enjoyable	1.25	1.36	.04*
Smoking Helps with Stress	1.41	1.56	.02*
Smoking Helps Stay Thin	1.42	1.61	.007*
No Harm in Cig Once in a While	1.39	1.53	.02*
Smoking Helps Feel Comfortable	1.34	1.51	.007*
Start Smoking Hard to Stop	3.33	3.42	.32
Smoking Makes Look Mature	1.28	1.42	.03*
Smoking Makes Look Sexy	1.24	1.27	.52

Note. *represents significance. Reject Null. Support Alternate. Alpha = .05. p = .004.

There were significant increases in the following statements:

- "Smoking cigarettes is enjoyable." 1.25/1.36, .04
- "Smoking helps you deal with problems or stress." 1.41/1.56, .02
- "Smoking helps you stay thin." 1.42/1.61, .007
- "There is no harm in having a cigarette once in a while." 1.39/1.53, .02
- "Smoking helps you feel more comfortable at parties." 1.34/1.51, .007
- "Smoking makes you look more mature." 1.28/1.42, .03

Summary from the Data

For this study, the Cohort Three data was analyzed using *t-tests* to compare each of the individual GML, SML, and ATS questions from the pre- and post-survey. The surveys with missing data were eliminated from the overall analysis. I defined statistical significance as a two-sided test with a confidence interval of 95%. The paired *t-tests* indicated that a correlation exists between the independent and dependent variables.

The paired *t* test revealed a significant difference between the pretest (Time 1) and posttest (Time 2) constructs in several cases for both GML and SML, thus indicating an increase in GML and SML over the course of the YEA! TEAM program. For the dependent variable of an increase in GML and SML, I rejected null hypothesis 1 and null hypothesis 2. In those cases, I supported alternative hypothesis 1 and alternative hypothesis 2 and the difference between pretest (Time 1) and posttest (Time 2) was not due to chance. For GML, there were five questions that showed a significant difference and for SML there were eight questions that showed a significant difference.

For the dependent variable of decreasing positive ATS, the paired *t* test for difference in means also revealed a significant difference between the pretest (Time 1)

and posttest (Time 2) constructs in several cases, thus indicating a decrease in positive attitudes towards ATS over the course of the YEA! TEAM program. For the dependent variable to decrease positive ATS, I rejected null hypothesis 3. In this case, I supported alternative hypothesis 3 and the difference between pretest (Time 1) and posttest (Time 2) was not due to chance. For ATS there were five questions that showed a significant difference.

For the dependent variable to lower future smoking susceptibility (as compared to national data), the Null Hypothesis was: For students exposed to the YEA anti-tobacco curriculum there will be no change in future smoking susceptibility (as compared to national data) as measured by student response to the post- administration of the smoking susceptibility scale. I ran frequency analysis on the data because the only possible answers were "yes" or "definitely no". According to Pierce's susceptibility scale, a participant is not susceptible only if the answer is "definitely no" to all three questions (Primack & Hobbs, 2009). The frequency was administered on the data to determine if there was a change in response over the course of the YEA! TEAM program. For the dependent variable to lower future smoking susceptibility as compared to national data, I did not reject the null hypothesis 4. In this case, I did not support alternative hypothesis 4 and the difference between pretest and posttest frequency analysis was not due to chance. For susceptibility, future smoking increased by 13 participants or 4.5%.

To determine if there were any differences in outcome based on gender, the paired *t-test*s administered to the null hypothesis, for students exposed to the YEA! TEAM anti-tobacco curriculum, there will be no difference in outcomes for males or females, revealed that there were no significant differences based on gender, therefore, I did not

reject the null hypothesis 5. For GML in males, the p-value was .970 to an alpha value of ,05, and the GML in female p-value was .974 to an alpha value of -05. For SML in males, the p-value was .963 to an alpha value of .05, and the SML in female p-value was .967 to an alpha value of .05. In this case, I did not support alternative hypothesis 5 and any difference between pretest (Time 1) and posttest (Time 2) was due to chance.

Results of this study indicated that there was a significant increase in overall GML and SML as well as changes in individual scale items under each category. The data results also indicated that there was not a significant increase in overall ATS, however, there were changes in individual scale items under each category. For future smoking susceptibility, there was an increase in susceptibility upon completion of the complete YEA! TEAM program. Overall, there was no significant difference in outcome in overall GML and SML for male and female participants.

For the dependent variable to increase GML and SML, I rejected the null hypothesis and supported the alternate hypothesis and determined the significance was not due to chance. For the dependent variable to decrease positive ATS, I did not reject the null hypothesis and did not support the alternate hypothesis and determined the significance was not due to chance. For the dependent variable to lower the future smoking susceptibility of participants upon completion of the program, I did not reject the null hypothesis and did not support the alternate hypothesis and determined the significance was not due to chance.

Therefore, the following conclusions for Cohort Three data were made: For all the participants, there was a significant contribution by the complete YEA! TEAM program to increase in overall GML and SML as well as individual scale items. There

was not a significant contribution by the complete YEA! TEAM program to overall decrease in positive ATS. However, there was significant contribution to individual scale items. At the conclusion of the program, there was an increase in future smoking susceptibility; therefore, there was not a positive contribution by the complete YEA! TEAM program to future smoking susceptibility. Overall, there was no significant contribution by the complete YEA! TEAM program to differences in gender outcomes for overall GML and SML.

In comparison to Cohort Two data, which was previously analyzed by YEA, there were similar outcomes in the areas of overall GML and SML as well as individual scale items. However, there was a difference in the area of ATS. There was no impact in overall ATS for Cohort Three, but there was an impact in overall ATS for Cohort Two. However, there were similar results in individual scale items. The summary conclusions focus specifically on the data contained from the study. However, I need to reconsider the possibility that this study has hidden limitations.

Chapter Five – Discussion

This study examined the correlation between the delivery of the complete YEA! TEAM program and the increase in GML and SML. The study also examined the data for any future indication of smoking susceptibility among the participants. Pre- and post-survey style questionnaires were administered at the start of the program and at the conclusion. The responses from the pre- and post- surveys provided the data for the study. The independent variable for this study was the delivery of the complete YEA! TEAM program conducted at middle school grades (6 to 8). The YEA! TEAM program was administered over a three year period in middle schools across the state of Missouri. Data from the third year, Cohort Three, were analyzed for this study because the (YEA) agency conducted their own analysis of the data from the second year, Cohort Two. Data from the first year, Cohort One, were not analyzed because the survey was only administered at the end of the program; therefore, there was no data to compare the results for any significance in change of perception and attitude. The dependent variables for this study were the pre- and post-survey data that indicated if there was an increase in GML, SML, ATS, and future susceptibility for smoking. The post- survey data was used to evaluate susceptibility for future smoking.

For this study, the data analyzed was secondary data from the Youth Empowerment in Action (YEA!) agency at the University of Missouri-St. Louis. I matched the pre- and post-survey data from Cohort Three for this study. After the surveys were matched, I ran paired *t-tests* to determine if there was a significant correlation between the independent and dependent variables. Once I finished running the data, I compared the results to the data from Cohort Two. The data from Cohort Two

was already analyzed by YEA. Although the YEA! TEAM program was delivered over the course of three years, data from the first year, Cohort One, was unavailable because a survey was administered only at the end of the program rather than the application of both a pre- and a post-survey.

The data from Cohort Three showed an increase in GML and SML. For GML, the data showed an increase in literacy for five of the 11 questions. For SML, the data showed an increase in literacy for eight of the 11 questions. Susceptibility for future smoking was also measured using the post-survey data.

Although I did not analyze the data from Cohort Two for use in this study, analysis by YEA! indicated an increase in GML and SML (Bier et al., 2011a). For GML, the data showed an increase in literacy for seven out of the 11 questions. For SML, the data showed an increase in literacy for nine out of the 11 questions.

Answering the Research Question

This study answers the overarching question, Can the media literacy component in the anti-tobacco prevention program have a greater effect at preventing student tobacco use? The research collected is an attempt to gain a better understanding of the impact of media literacy and tobacco use among adolescents.

The following sub-questions were specifically addressed in the study:

1. Will students' knowledge of GML as measured by the GML scale increase upon completion of the program?

   The students' knowledge of GML did increase upon the completion of the YEA! TEAM program, as indicated through *t* test for difference in means evaluation of Alternative hypothesis #1: For students exposed to the YEA! TEAM anti-tobacco

curriculum there will be a change in overall general media literacy (GML), as measured by student response to pre- and post-administration of the GML assessment scale.

2. Will students' knowledge of SML as measured by the SML scale increase upon completion of the program?

   The students' knowledge of SML did increase upon the completion of the YEA! TEAM program, as indicated through *t* test for difference in means evaluation of Alternative hypothesis #2: For students exposed to the YEA! TEAM anti-tobacco curriculum, there will be a change in smoking media literacy (SML), as measured by student response to pre- and post-administration of the SML assessment scale.

3. Will students' positive ATS, as measured by the attitude scale decrease upon completion of the program?

   The students' positive ATS did decrease upon the completion of the YEA! TEAM program, as indicated through *t* test for difference in means evaluation of Alternative hypothesis #3. For students exposed to the YEA! TEAM anti-tobacco curriculum, there will be a positive change in attitude toward smoking (ATS), as measured by student response to pre- and post-administration of the ATS.

4. Will students' future susceptibility for smoking as measured by the smoking susceptibility scale change upon completion of the program?

   The students' future susceptibility for smoking did change upon completion of the YEA! TEAM program, as indicated through *t* test for difference in proportions evaluation of Alternative hypothesis #4. For students exposed to the YEA anti-tobacco curriculum there will be a change in future smoking susceptibility, as

measured by student response to pre- and post-administration of the smoking susceptibility scale.

5. Are outcomes the same for male and female students?

   The outcomes for male and female students participating in the YEA! TEAM program are the same with little difference, as indicated through *t* test for difference in means evaluation of Alternative hypothesis #5. For students exposed to the YEA anti-tobacco curriculum, there will be a difference in outcomes for males and females.

Overall, participants seemed to respond to the YEA! TEAM Program. In Cohort Three, there was a significant increase in the SML and GML scores between the pre- and post-surveys. Not only did most participants seem to enjoy the program, they seemed to comprehend that the messaging is all intentional throughout the media.

The goal of the YEA! TEAM Program was to educate participants with the resources to analyze and understand the media. Unlike the DARE programs that began in the 1980's, the YEA! TEAM Program focused on more than *just saying no*. Through the activities and the civic engagement program that was based from a national program, YEA! TEAM participants discovered that they have a voice in what is occurring in the world today.

In addition, YEA! TEAM participants were exposed to the underlying messaging in the media and taught the skills to understand what some of the subtle intentions and messages that run throughout today's media. Seeing a movie star smoke and knowing that he/she is portraying the Phillip Morris's of the world is a different message then seeing a movie star smoke and thinking that it is *cool* and the *in thing to do*. By arming

participants with tools to diagnosis the actual messaging, media literacy becomes a powerful catalyst for potential change across the United States.

Interpretation

Within the delivery and implementation of effective programming, programs must first start with a mission and a set of guidelines to measure its effectiveness. The CDC (1994) has created recommendations for the implementation and delivery of school-based prevention programs and has created guidelines for schools to follow. The general guidelines for a comprehensive tobacco control program include: preventing the use of cigarettes among children, adolescents and adults, encouraging and promoting cessation among smokers of all ages, eliminating second-hand smoke exposure and focusing on tobacco disparities among population groups, and identifying and eliminating these disparities (Pechacek et al., 2007). Perhaps these guidelines are too general and therefore make it difficult for schools to implement.

From a delivery standpoint, schools make the ideal place to reach all children (up until the drop out age of 16 years), in turn allowing every child to receive exposure. To be an effective school-based prevention program, the program needs to focus on targeting children and adolescents before they begin smoking or drop out of school. The YEA program did this by targeting youth in grades sixth to eighth grade across diverse socioeconomic areas within Missouri (Bier et al., 2011b). This was critical because the developmental stage generally begins during the ages of 10 and 15 years (Bier et al., 2011b). It is during this time that adolescents are vulnerable because their attitude towards smoking becomes more positive as they become more aware of the image they want to project to their peers (Bier et al., 2011b). The images projected by marketers

about the lifestyle as a smoker appears ideal because it conveys the image of looking *cool* (Bier et al., 2011b). Youth in these grades are susceptible to smoking, but also have the ability to make positive decisions. In addition, youth understand the impact when they have the chance to "explore the concept under the guidance of teachers and parents who fully understand the concepts of media and literacy and have the patience to allow youth to discover for themselves" (Bergsma, n.d., p. 16).

According to the results of this study, there were enough survey items that demonstrated a significant change between the pretest and the posttest to suggest that the YEA! TEAM program positively influenced the perception of media influence. This program has had the ability to impact participants' knowledge of general and smoking media. "This program reaches youth at a crucial age, in an environment that cuts across socioeconomic lines. It teaches skills that extend beyond the length of the program and that take students out of the classroom and into their own communities" (Bier, 2011b, p. 5).

As Higgins et al. (2009) suggested, there are multi-layered components in the environment that influence students from intrapersonal factors, interpersonal factors and community factors. The YEA! TEAM was able to successfully transfer classroom curriculum to the community. In particular, the student created media production campaigns that the students developed from the beginning to the end empowered and allowed them to become advocates against tobacco media messages targeting children and adolescents. Students were able to recognize media elements in their communities in billboards, magazines, and advertisements in gas station windows. Their media campaigns ranged from satires about smoking and the positive effects of smoking to

straightforward productions that exhibited the negative health consequences. This was a powerful component that allowed them to transfer the media techniques deployed by marketers and flip the techniques to convey their own messages about the dangers of tobacco. Creating their own media messages was also effective because it helped them internalize, reflect, and develop their own skills to recognize risky behaviors that are exhibited in advertisements as desirable (Bergsma, n.d.).

The positive reception at the school by peers and the community helped alter each person's interpretation of norms and beliefs, as proposed by Sargent (2005), thus influencing the adolescent self-concept. As students became more engaged in the YEA! TEAM program, and began to perceive it as a *cool thing* to be a part of, other students began to shift their perceptions about the program.

More data is needed to further explore the impact on youth in the areas of tobacco use and media influences, perhaps in the form of collecting more qualitative information such as long term research on school-based programs with a media literacy component. Another suggestion to further validate the results would be to compare YEA! TEAM participants with a control group. This would test whether or not the program actually impacted the way participants viewed media, or if the change in media was due to a natural progression of understanding society through regular classes within the school day.

Further break downs within the group, focusing on ethnicity, socio economic status and gender would also enhance the current study. Though the research has reflected that all youth could benefit from learning more about the effects of smoking, specific data has

not been collected to see how and when specific groups are impacted. The majority of the participants for this study were white youth, living in heavily rural areas.

In addition, it would be very interesting to continue to follow members of this group as they move through middle school into high school and track the use and susceptibility to tobacco. The program was set up to target participants before they became engaged with smoking, but there are no resources in place to follow the group over a long period of time. Though survey results illustrated that participants understood the messaging, there was actually an increase in participants becoming smokers, when the susceptibility scales was applied, if they were not already. Further longitudinal study would track the actual number of participants who do end up smoking as they grow older.

The components of the YEA! TEAM program did teach participants about the media. However, revisiting the socio ecological theory of individuals being impacted by those around, including peers, family and social norms, the individual is still impacted by those around him or her (Higgins et al., 2009). So, if his or her parents smoke and do not believe that smoking is bad, then the social norm for that participant is to accept smoking. The YEA! TEAM programming can teach elements of media literacy, but cannot remove the individual from his or her environment where smoking may be accepted.

School Based Tobacco Prevention Programs

With the overwhelming evidence supporting the negative health impact of tobacco use, it is imperative that prevention programs be implemented and delivered. Specifically, it is critical to deliver these programs to children and adolescents before they even have the opportunity to become addicted. However, it is not enough to just implement and deliver programs that relay the facts. It is crucial that our young people

understand how to think critically for themselves to make well informed decisions. The nation not only has a responsibility to deliver facts but also teach young people how to analyze the messages in media and our society so that they disseminate the information and think about what they are told before making a decision.

A 1992 survey of high school students in their senior year revealed that 18% had their first cigarette in elementary school (CDC, 1994). Additionally, the survey also revealed that 30% of the high school seniors smoked their first cigarette from the seventh to ninth grade (CDC, 1994). These survey results provided data that showed most of the students began smoking at or after they turned 15, therefore, the need for school based prevention programs to continue through high school was evident (CDC, 1994).

As a general guideline, school based tobacco prevention programs should not just encourage children and adolescents to abstain from smoking but also provide support for quitting. Cessation is also important to include because smokers who started smoking at a young age have been shown to have a difficult time quitting as adults (CDC, 1994). These young smokers also have a higher likelihood of becoming heavy smokers and developing smoking related diseases (CDC, 1994). Even more compelling is that 75% of smokers who had smoked daily as high school students were still smokers seven to nine years later (CDC, 1994). However, of those high school students, only 5% had accurately predicted that they would still be smoking seven to nine years later (CDC, 1994). We know that smoking is highly addictive and is so addictive that three out of four adolescents have made a serious attempt to quit (CDC, 1994). Unfortunately, most of those attempts are unsuccessful and raise light on the issue that cessation support must also be included in school based tobacco prevention programs.

Recommendations

Realistically, the only way to ensure that young people never pick up the habit of smoking is to team up with a diversity of stakeholders within the community and within the government to work together to find solutions and answers to the problem at hand. The YEA! TEAM program displayed short-term, positive results, but it still only can influence the individual participating in the program.

Collaboration with federal programs, state programs, community and national partners focusing on specific activities on smoking, such as counter-marketing, community organization, and policy and regulatory action will be one of the ways to produce positive long term outcomes. In order to change a social norm, the community has to have (a) exposure to pro-health messages; (b) school-based prevention and education curricula; and (c) creation of smoking bans, regulations, and policies (Alburquerque et al., n.d.). Therefore, a holistic approach that includes all stakeholders as recommended by the logic model (Figure 3) is key to creating a comprehensive and successful prevention program (Alburquerque et al., n.d.).

In the areas that the YEA! TEAM Program is running in St. Louis, a student could be participating in the program, and then be able to go across the street and purchase a single cigarette from the local youth or vendor. Then, he or she could go home and be around a sibling that is under age and smokes and parents that smoke. If there are no consequences within the community for breaking the laws around underage smoking and no incentive for parents to enforce the laws, then the pattern may continue year after year. The only way to change the social norm is to change the knowledge and attitudes of those in the community. Messages may be interpreted differently by each young person based

upon his or her experiences, but each one can learn to "accept healthy media messages, challenge unhealthy messages, and make good decisions for themselves" (Bergsma, n.d., p. 17).

If communities could unite and enforce the ban of smoking, produce and promote healthy lifestyles and change the attitude about smoking, then there may be hope for a program like YEA! TEAM. If there is no community support, the effect will remain at an individual level with little change in the community.

Conclusion

If there are not programs in place to stop youth from smoking, the impacts of smoking long-term will continue to be a burden on society. While I had a vested interest in the program, throughout this study, I realized that not only does it take education, but the community has to be mobilized to address the issues at hand.

In Illinois, there is a no-smoking policy in public places. Because this is recent, there is no data to suggest that it has an impact on youth smoking yet, but I believe that it does have an impact. If youth see fewer people smoking and attribute negative behaviors or consequences to smoking, like being asked to leave a restaurant, not being able to smoke in bars and clubs, and having to limit the areas where smoking is allowed (usually outside), then the message that the community is saying is that smoking is not socially acceptable.

Missouri has a longer way to go. There have been failed initiatives to make St. Louis a non-smoking environment because the public has voted it down. However, the public, perhaps, does not realize the long-term financial burden of cancer, emphysema, lung problems, etc., that will be the result.

I do feel that the YEA! TEAM program had a positive effect on the youth within my program, but I also realize that it is going to take more to mobilize the community and to change the social norms. Perhaps, increasing the tobacco tax per cigarette will help curb some of the use. According to national statistics, Missouri has the lowest tax in the United States. I also believe that the CDC has issued proven guidelines that may have a positive impact on programs that are being implemented for youth and across the state.

There is a recorded disparity on the programs offered to low income and at-risk youth. It is important to identify the risks associated with the communities and understand that when there are higher risk factors, the environment may be more conducive to youth smoking and further impact the gap in long-term health status. (Kaestle & Wiles, 2009). More programs and research needs to encompass these areas to ensure that the youth in Missouri are educated to make better decisions.

Though it will take a lot for Missouri to stand up and ban smoking, it is my hope that one day, the youth in the YEA! TEAM Program will unite to send a common message to the St. Louis community and eventually begin the process of promoting a non-smoking future. It is through the youth that the movement may begin to see the social norm change around smoking. The participants were very engaged and empowered throughout the program to make a difference, not only their lives, but in the communities in which they live.

There have been some efforts to minimize the impact of tobacco advertisements on children and adolescents. In fact, on August 23, 1996, President Bill Clinton announced that cigarettes would be placed under the control of the Food and Drug

Administration (FDA) (Institute of Medicine, 2007). This was historic because this was the first time that the FDA would be able to regulate and limit access to tobacco advertising and promotions that were targeted specifically for children and adolescents. However, tobacco is still a critical issue with adolescents who are continually vulnerable to the barrage of media messages they receive on a daily basis. Reviews of successful school-based interventions are programs that allow youth to implement the skills they learn about with each other (Institute of Medicine, 2007). Using this premise, the YEA! TEAM program implemented a curriculum that combines general and smoking media literacy knowledge to empower students to think critically about the media they consume. This knowledge allows students to understand how they are coerced into believing that risky behavior such as smoking is acceptable. At this point, students are able to make an informed decision and evaluate if participating is right for them. Empowering students with media literacy is vital because for every dollar that states spend for tobacco prevention, tobacco companies counter it with $28 of marketing tobacco products aimed at children and adolescents (Institute of Medicine, 2007).

Federal regulation of tobacco has been debated and Congress has limits on what can be done. One recommendation states

> Congress should repeal the existing statute preempting state tobacco regulation of advertising and promotion “based on smoking and health” and should enact a new provision that precludes all direct state regulation only in relation to tobacco product characteristics and packaging while allowing complimentary state regulation and all other domains of tobacco regulations, including marketing and

> distribution. Under this approach, federal regulation sets the floor while allowing states to be more restricted. (Institute of Medicine, 2007, p. 275)

I believe the methodology will yield positive results for the YEA! TEAM program and will continue to provide direction for prevention programs in the future. The implications of positive results leads to further investigation and discussion about how general media literacy components in prevention programs can move beyond the level of tobacco into other societal issues (CDC, 1994). Some of these issues include drug and alcohol abuse, obesity, body image, bullying, and consumerism just to name a handful (CDC, 1994). The effectiveness of prevention programs such as the YEA program is that it allows students to think critically about issues to make informed decisions. These decisions, negative or positive, will continue to impact society in many ways.

In the same regard, it is important to stay innovative and keep up with the ever-changing landscape of media, particularly social media. Social media, such as Twitter, Facebook, YouTube and a myriad of others keep people connected in ways that we have never experienced before. The world is completely interconnected and messages are able to get to groups of people in a matter of seconds, regardless of location or time. Just like the other media outlets, social media can be utilized by young people positively and negatively.

Recently, a nonprofit group called Invisible Children released a 30 minute film about Joseph Kony, a Ugandan warlord accused of heinous crimes against children (Perry, 2012). This short film briefly depicted how Kony has been terrorizing the children and families in Uganda for the past 26 years and ended with a call to action,

asking young people to make a difference and *stop a war* (Perry, 2012). Within 24 hours after it was released on YouTube, the film was viewed by one million people. After two days, it received one million views every 30 minutes. By the sixth day after being released, over 85 million people had watched it and by then it had already been translated into 50 languages (Perry, 2012).

Though the short film drew lots of controversy because of the oversimplification of a complex issue, the end result was a global community embroiled in passionate conversations. For young people, specifically students in my classroom, they were completely engaged in the film and immediately after viewing it, they began mobilizing efforts to raise money to *free* Kony's child soldiers from oppression**.** Their excitement and compassion was contagious. They talked about it constantly with each other and even set up a school-wide Twitter feed and Facebook page so they could communicate their efforts with each other. After days of discussion, it became clear that the students in my school were invested in the Kony 2012 campaign because the short film made them feel like they could make a difference and they wanted to be a part of something big that would change the world. They were empowered.

Kony 2012 was a clear example of how far reaching the hands of social media can be and how much media has evolved from the days of television, movies, music videos, print ads and the internet. On the negative side, tobacco marketers can utilize social media to promote the usage of tobacco as desirable with a larger platform. Just as the filmmakers of Kony 2012 used images of young people uniting to fight for change, with background music and horrific images purposefully placed to extract an emotional reaction; tobacco companies have the ability to do the same.

Media is a powerful medium that has the ability to cross different dimensions, socioeconomic barriers and age groups. The power that Kony 2012 had with the youth today could easily be utilized by tobacco marketers who can and will also use the same techniques to manipulate children and adolescents. As the world progresses, music videos, movies, and advertisements will become ingrained with the popular social media that students consume on an ongoing basis. This constant saturation of images of smoking may eventually desensitize the student from the negative consequences of tobacco usage. While media literacy appears to be effective with the YEA! TEAM program, there has not been any studies on how the tobacco companies have begun to target Facebook, Twitter, Google, and so forth.

Media literacy needs to remain current and innovative in its approach as the tobacco companies continue to evolve and change their tactics to children and adolescents. Tobacco companies have a continuous source of income to study, plan, and strategize their marketing techniques to entice the next generation of replacement smokers. In short, it is even more imperative that tobacco prevention programs reflect the most current advertising methods. It is also important to remember that differentiation is needed in these programs because not all tobacco prevention programs yield the same results for all children (Beltramini & Bridge, 2001). There is no greater time than the present to implement prevention programs that teach children to critically analyze the messages they receive so they are capable of making informed, healthy decisions.

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Vitae

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