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**Rethinking the Nature of Youth Smoking Behavior:
Investigating the Biopsychosocial Factors**

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**A thesis submitted to the Department of Education
in partial fulfillment
of the requirements for the degree of
Master of Arts in Education**

August, 2001

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Dedication

**This thesis is dedicated to my parents, Robert and Ann Clark,
whose love and support helped me to reach my goals
and fulfill many dreams.**

Abstract

The purpose of this study was to investigate the biopsychosocial factors that influence youth smoking behavior. Sixty-four high school students completed surveys for one phase of the study. Thirty-six other students participated in an interview phase, which in addition to questions on the influence of biopsychosocial factors, included questions pertaining to perceptions of other smokers and recommendations for school programming around youth smoking. Analysis of the data indicated that a combination of biological, psychological and social factors influence youth smoking behavior across smoking classifications (current smokers, ex-smokers and nonsmokers) and across gender although this was less apparent. Student perceptions of other smokers tended to focus on the notion that smoking is a personal choice as well as on the reality of smoking's negative health effects. Student's recommendations for schools centered on the following themes: real life examples, prevention, and support during the quitting process. The author also provides recommendations.

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CHAPTER I

Despite public knowledge about the serious health consequences of cigarette smoking, including addiction and causing strokes, mouth diseases, heart problems, cancers and breathing difficulties, (Health Canada, 2000) a large number of Canadians are smoking. A recent news release by Statistics Canada in May 2001 reported that 24% of Canadians aged 15 and older were considered to be current smokers in the year 2000. Nova Scotia ranked highest at 30% of the population considered to be current smokers while British Columbia ranked lowest with 20% of the population. Canada's young people rank high among the current smokers in the country with incidence rates of 32% for young adults aged 20 to 24 and 25% for adolescents' aged 15 to 19 (Statistics Canada, 2001). This represents a slight increase in adolescent smoking rates when compared to Health Canada's 1994 Youth Smoking Survey, which revealed that 24% of Canadian youth between the ages of 15 and 19 considered themselves current smokers. Roughly 75 % of these self-identified smokers were daily smokers. Seven percent of youth aged 10 to 14 were current smokers with 2% being daily smokers (Health Canada, 1994).

Over the past ten years, in the province of Nova Scotia, where smoking rates were recently found to be the highest in the country, three surveys on student drug use were conducted. The surveys were conducted in 1991 (MacNeil, Shaffelburg, Poulin, & Mitic, 1991), 1996 (Poulin & Wilbur, 1996) and 1998 (Poulin & Baker, 1998). A total of 3,775 students in grades 7, 9, 10 and 12 completed the most recent 1998 survey. Included in the survey were questions pertaining to the use of four different types of tobacco products including cigarettes, cigars or pipes, chewing tobacco and snuff. The results indicated an upward trend in the prevalence of students' use of cigarettes from 1991 to 1998. The

percentage of students who reported smoking increased from 1991 to 1998 by an astounding 40.0%. The 1998 survey results showed that more than one third (36.1%) of students in grades 7, 9, 10 and 12 reported smoking more than one cigarette in the course of a year, and 7.4% smoke more than ten cigarettes a day. Roughly 56.7% of students reported smoking an entire cigarette in their lifetime. The average age for first smoking an entire cigarette was 12.7 years. Gender was not found to be a significant factor in student smoking behavior. Cigarette smoking however was found to be positively related to age, grade, number of friends who smoke, and school academic averages of less than 60%. (Poulin & Baker, 1998).

A year 2000 survey of students in grades 9, 10, 11, and 12 at four schools in the Eastern Shore area of Nova Scotia revealed that 33% of the students smoked at the time of the survey. Factors found to be positively associated with smoking were higher grade levels and being female, these findings differed slightly from the Canadian Youth Smoking Survey (1994) which found age to be a factor in that older adolescents smoke more than younger adolescents but the survey did not find sex or gender differences. Among the current smokers 87% smoked at least one cigarette every day and an alarming 61% smoked twenty-five or more cigarettes weekly. Ninety percent of the smokers surveyed smoked during the course of the school day. In one particular high school, the statistics were even higher: 37% of the students surveyed smoked, 93% of these smokers smoked at least one cigarette every day, 71 % smoked more than twenty-five a week and 97% smoked during the school day (Nova Scotia School Smoking Prevention Coalition, 2000).

In the late 1980's, prevention and cessation were established as two of the pillars of Canada's national anti-tobacco strategy. These areas continued to be focal points in Health Canada's 1994 Tobacco Demand Reduction Strategy. Prevention programs aim to discourage young people from beginning to smoke and cessation programs strive to help youth reduce the number of cigarettes they smoke and eventually quit smoking altogether.

In 1994, a national survey conducted by Health Canada on school smoking prevention programs found that many of the existing programs had gaps such as limited ranges of issues, targeting general groups instead of diverse populations and little with regard to support and strategies outside the school setting (Health Canada, 1994).

A small body of research outside Canada suggests that smoking cessation programs are not among the primary methods of quitting as chosen by adolescents (Gillespie, Stanton, Lowe, & Hunter, 1995; Tuakli, Smith, & Heaton, 1990). Methods of quitting given in order of most preferred to least preferred were to cut down slowly, not buy cigarettes, change to lower nicotine cigarettes, go cold turkey, smoke other people's cigarettes and lastly use a program. Preferred methods of quitting in the second study included having a friend to quit with, medication and health information, ranking least preferable was stop smoking classes (Tuakli et al.).

Statement of the Problem

These recent survey results have shown that more and more young Canadians are smoking which is cause for great concern. It would appear that what has been done in the past and what is currently being done to fight the problem of youth smoking has not been and is not effective in reducing the number of current smokers among young Canadians.

It is possible that attempts to deal with the issue are not specific enough. These high numbers seem to indicate that a change is needed in the fight against young smoking.

The issue has been problematic for many years yet surprisingly the body of literature is limited. More recently research has aimed at identifying and understanding the underlying factors that contribute to youth smoking behavior but more research is needed particularly qualitative research to help develop new methods of dealing with the situation.

Purpose of the Study

The purpose of this study is to investigate the smoking behaviors of high school aged adolescents in order to further explore the biopsychosocial factors that cause youth to begin smoking, to continue smoking and to quit smoking. The biopsychosocial model of health research suggests that “one can understand health habits only in their psychological and social contexts” (Taylor, 1986, p. 13). The biopsychosocial model maintains that health is achieved through attention to biological, psychological and social needs and that recommendations for treatment must also examine all three of these factor sets and their interactions (Taylor, pp. 13-14). Biological factors are defined as those with a physiological origin. Psychological factors are defined as those that relate to behavior, affect, emotion, and/or cognition. Social factors are defined as those that are related to interpersonal relationships and/or situational/environmental influences (Feuerstein, Labbé, & Kuczmierczyk, 1986).

This study also aims to examine student perspectives on the current issue of smoking, what is currently being done in the schools and what could be done in the future. The information gained from the study will be used to make recommendations for

school programs, interventions and strategies that attempt to deal with the issue of youth smoking behavior.

Research Questions

- 1) What are the biopsychosocial factors that influence youth decision making around smoking behavior?**
- 2) A) Does the influence of specific biopsychosocial factors vary with gender?**
B) Does the influence of specific biopsychosocial factors vary with smoking classification (current smokers, ex-smokers and nonsmokers)?
- 3) What perceptions and attitudes do youth hold about smokers?**
- 4) What recommendations do youth have with regard to school programs and interventions for smoking usage?**

CHAPTER II

Literature Review

This chapter reviews the current literature in the area of youth smoking behavior with a strong focus on Canadian data and research. Areas discussed include research that has attempted to identify the biopsychosocial or psychosocial factors of youth smoking behavior; an overview of the stages of change model as it relates to smoking behavior and specifically how it is applied to youth smoking behavior; and information on past and present efforts to combat the number of young smokers. Recommendations offered within the literature for future methods of dealing with the issue of youth smoking are also discussed.

Biopsychosocial Factors of Youth Smoking Behavior

What seems to be lacking in a number of the current programs aimed at youth smoking behavior is an emphasis on the factors that cause young people to begin smoking, to continue smoking and to quit smoking. A small body of research, loosely based on the biopsychosocial model of research, has addressed these individual factors that surround youth smoking. By definition, “biopsychosocial research involves the study of the interactions of biological factors with behavioral (psychological) or social variables and how they affect each other” (Office of Behavioral and Social Sciences Research, 1995).

Beginning Smoking. The Youth Smoking Survey conducted by Health Canada in 1994 found that the most common reason both male and female adolescents start to smoke is having friends that smoke and peer pressure. Other common reasons given by adolescents included because it is cool and out of curiosity. Young females also reported

that they began smoking because the popular kids smoked (Health Canada, 1994).

Health Canada (2001 update) also reported that adolescents begin smoking as a way of rebelling against their parents, school and society and are strongly influenced by parental smoking behavior. Research under Health Canada's Tobacco Demand Reduction Strategy found that youth begin smoking due to predisposing factors such as linguistic and cultural background, family income and structure and academic performance. Additional reasons influencing smoking initiation include friends, family members and other adult role models that smoke, advertising and media images (Health Canada, 1999).

A survey of students in New Brunswick found similar results in both participants who identified themselves as smokers and those who identified themselves as experimenters. Both groups reported that they began smoking because their friends smoked, they were curious, they felt it was cool and to feel grown up (Morrison & Vautour, 1999).

Flay (1993) discussed the five primary stages of smoking initiation and associated psychosocial risk factors. The first three phases, preparatory, trying and experimentation, relate to youth beginning to smoke. Stages four and five, regular and addiction/dependent, relate to youth continuing to smoke and will be discussed later on.

Advertising and adult/sibling role models that smoke were found to influence adolescents in the first or preparatory stage when they are forming beliefs and attitudes about the habit. Peer influences to smoke, the perception that smoking is normative, and the availability of cigarettes were influential in adolescents' first trying cigarettes, this stage was termed the trying stage. Adolescents in the third or experimental stage who were smoking repeatedly but irregularly were influenced by social situations and peers that

support smoking, low self-efficacy in ability to refuse offers to smoke, and the availability of cigarettes.

A subsequent study in 1998 (Flay, Phil, Hu & Richardson) investigating the psychosocial predictors of the different stages of smoking among adolescents found that friends' smoking and approval, cigarette offers by friends, smoking intentions, school grade, and alcohol and marijuana use were significant predictors of the transition from trial to experimental use. Trial smokers were defined as having smoked part or all of one cigarette in a lifetime while experimenters were defined as having smoked more than one cigarette but not during the week prior to the survey.

Continuing Smoking. Research has indicated that students continue to smoke for a variety of biopsychosocial reasons. Among the reasons for continuing to smoke endorsed by adolescents on surveys investigating youth smoking were: habit, addiction, calming effects or stress relief, something to do, to keep weight down or to suppress the appetite, to be accepted and to enhance personal image (Health Canada, 1994; Morrison & Vautour, 1999). Health Canada views many of these reasons as being closely related to self-esteem and thus states self-esteem issues as predictive of current smoking behavior (1999).

Flay (1993) found that regular cigarette use by adolescents, stage 4 in the model of adolescent smoking behavior, was influenced by peers who smoke, the perception that smoking has personal utility, and few restrictions on smoking in school, home, and community settings. Addicted or dependent smokers, stage 5 of the model, continue to smoke because they have developed the physiological need for nicotine.

Flay, et. al. (1998) found gender differences within regular smokers. Girls were found to be more influenced by social or interpersonal factors such as friends' approval while boys were more influenced by intrapersonal factors such as risk taking. Parental smoking and family conflicts were also found to be predictive of regular use of cigarettes by adolescents.

Quitting Smoking. Survey research suggests that significant proportions of young smokers seriously think about and make attempts to quit (Health Canada, 1994; Morrison & Vautour, 1999; Poulin, 1998). The 1994 Canadian Youth Smoking Survey found that 79% of the adolescent smokers aged 10-19 years surveyed had seriously thought about quitting. Among these smokers who had thought about quitting, 82% had made at least one attempt, 40% had made at least one attempt in the six months prior to the survey (Health Canada, 1994). Of the current smokers who completed the 1998 Nova Scotia Student Drug Use Survey, 52.0% reported that they had tried to quit in the six months prior to the survey (Poulin & Baker, 1998).

Morrison and Vautour (1999) found that adolescents' reasons for quitting included not enjoying it, negative health effects, the bad example they set for others, the pressure from others to quit, the expense of smoking and the diminished sense of taste and smell. Several other studies reported that the numbers of friends who smoke and peer influences are considered to be significant predictors of attempts to stop smoking among adolescents. For example, the fewer friends an adolescent has who smoke the more likely they are to quit smoking themselves and vice versa (Health Canada, 1997; Piko, 2001). A Health Canada review of six studies on self-initiated smoking cessation among adolescents (1997) found that in addition to the number of friends who smoke, the

number of cigarettes smoked by an adolescent was predictive of quit attempts. The lighter the smoker the more likely they were to quit smoking. An Australian study found the following reasons could convince students not to smoke: saving money, seeing a person ill from smoking, realizing the potential for better health, better fitness or a chance to make a sports team, dating a non-smoker, and better breath, taste and smell (Gillespie, et al., 1995). The research on adolescent quit attempts also points to a combination of biopsychosocial factors influencing the behavior.

Not Smoking. In one study conducted across Europe, adolescents who indicated they would never start smoking and those who indicated they definitely did not intend to smoke in the next year, were found to score lower on the pros of smoking, the perceived pressure to smoke and the perceived behavior of the social environment. They scored higher on the cons of smoking, the perceived social norm and on self-efficacy (Kremers, Mudde & de Vries, 2001). A second study conducted in Europe found that antismoking attitudes are influenced by social relationships and in girls and younger adolescents by mother's approval (Piko, 2001).

Qualitative Research on Biopsychosocial Factors. Qualitative research investigating the biopsychosocial factors of youth smoking behavior could not be found. Research of a qualitative nature seeks to better understand human behavior and experience. The primary goal is to add to knowledge by description, understanding or by generating theory (Bogdan & Biklen, 1992). It therefore seems that qualitative research would be a fitting approach to take when attempting to investigate the biopsychosocial factors of adolescent smoking and build upon the existing body of knowledge.

Interviewing is a particularly popular type of qualitative research. Interviewing individuals typically takes place in their natural environment and takes on the characteristics of a conversation in attempt to gain perspective on how people think about their lives, their experiences and particular situations (Bogdan, & Biklen, 1992). Based on this description of the nature and aim of interviewing, it would appear that interviewing students in their own environment such as at school, about their experiences and thoughts on a personal behavior such as smoking, would be an appropriate method of gaining qualitative data on the influence of biopsychosocial factors on youth smoking.

Stages of Change Model

The Stages of Change Model as presented by Prochaska and DiClemente (1983) suggests that changing a behavior that presents a risk to ones health, such as smoking, progresses through a series of five stages and that these stages are repeated until the risky behavior has changed. The five stages of change are described as follows:

- 1) Precontemplation: not seriously thinking about the behavior change
- 2) Contemplation: becoming aware of a risk behavior and seriously considering changing it
- 3) Action: trying to change a risk behavior
- 4) Maintenance: continuing changes made in the action stage
- 5) Relapse: returning to the earlier problematic risk behavior

Although this model was originally developed to help understand adult behavior change, such as smoking cessation, it has been adapted to adolescent populations.

Prochaska himself along with collaborating researchers found that the model could be

applied to adolescent smoking cessation (Prochaska, Velicier, Rossi, Goldstein, et. al, 1994).

More recently, Pallonen (1998) specifically applied the Stages of Change Model, otherwise termed the Transtheroretical Model of Change, based on studies of adult smoking cessation, to adolescent smoking cessation. The individual stages were described as:

- 1) Precontemplation: smokers who are not thinking about quitting in the next 6 months.
- 2) Contemplation: smokers who are thinking about quitting within the next 6 months.
- 3) Preparation: smokers who are planning to quit within the next 30 days.
- 4) Action: smokers who have quit smoking during the past 6 months
- 5) Maintenance: smokers who have remained non-smokers for more than 6 months.

Pallonen found that although smoking behavior among adolescents and adults differ in many respects including the number of cigarettes smoked and the length of lifetime exposure, both groups appear to be similar with respect of how smoking behavior relates to the Stages of Change Model. Similarities presented by Pallonen were that adolescent smokers vary in their intentions to change their current tobacco use as do adults. Among the differences discussed were that adolescents appear to be less prepared to take action to quit than adults. However, when adolescents do decide to do so, they move very quickly from the early stages to the action stage. This is thought to increase their chances of relapse. In addition to Pallonen, who concluded from his study that

programs for young smokers need to target individuals at the different stages, other researchers have made similar recommendations (British Columbia Ministry of Health, 2000; Coleman-Wallace, Lee, Montgomery, Blix, & Wang, 1999; Kremers, Mudde, & de Vries, 2001).

Past and Present Efforts to Combat the Number of Young Smokers

Smoking Prevention. In the past, the trend across Canada had been to focus efforts on prevention programs for young people which typically consisted of teacher delivered classroom sessions on the harmful effects of smoking and on refusal skills training (Best, Thompson, Santi, Smith, & Brown, 1988).

Canadian prevention programs outside classroom based instruction include: Stop Smoking Before It Starts: An Information Kit for Community Organizations Working with Adolescent Girls (date unknown)(M. Kiezerman, personal communication, August 7, 2001); and Improving the Odds (1996)(C. Moyer, personal communication, August 28, 2000), both developed by Health Canada; Break-Free All Stars developed by Health Canada, Fitness Canada, Canada Parks/Recreation Association and local health and recreation ministries (date unknown)(M. Kiezerman, personal communication, August 7, 2001); Health in Perspective (HIP) developed by the Canadian Intramural Recreation Association (1997)(R. Turnbull, personal communication, October 6, 2000); and TeenNet's CyberIsle (1996)(O. Maley, personal communication, August 25, 2000). Evaluations on the content and implementation of these programs are reported to have been carried out and appropriate changes were made based on these evaluations. However, the effectiveness of these programs on preventing young people from smoking

has not been measured (various personal communications). One would assume that these programs are delivered to specific groups of youth based on enrollment in different activities and groups, and, therefore, are not reaching a large population.

Smoking Cessation. Cessation programs are also somewhat popular within the schools and community organizations with a focus on helping and encouraging individuals to stop smoking. There is a limited amount of research on the topic of youth smoking cessation and programming which makes it difficult to develop new programs, evaluate their effectiveness and make changes (Badovinac, 1994 as cited in Health Canada, 1997). Among the limited number of Canadian cessation programs few have undergone evaluations and revisions, many are still in the pre-evaluation stages.

The Student Quit and Win Program developed by the Minnesota Heart and Health Program at the University of Minnesota in the 1980's has been adapted, implemented and evaluated within Canada. The peer led program offers prize incentives to students who are able to remain smoke free for four weeks (Nova Scotia Department of Health, 1994). An evaluation of the program conducted in Ottawa in 1993 found that 33% of the contest entrants were successful in quitting smoking for one month, however, at a six month follow-up only 2.4% remained smoke free (Baskerville, Hotte, & Dunkley, 1993). The Quit and Win Program was also evaluated in a small number of schools within the province of Nova Scotia from 1992 to 1993 and found 18.6 to 20% of the participants were successful in quitting for one month (Nova Scotia Department of Health, 1994).

The Quit 4 Life Program developed by Health Canada (1993)(B. Pichette, personal communication, August 30, 2000) is a self-help kit including information on the

health and social consequences of smoking, developing a plan and preparing for cessation and coping strategies for dealing with withdrawal and achieving initial cessation. The kit was made available to young Canadians by calling a toll free number. An evaluation of the kit indicated that 21.1% of those who received the kit reported that they had quit smoking (Peters, 1995). A Quit 4 Life facilitator's guide based on the self-help kit was developed to be used with small groups of adolescents who were interested in cessation. Findings from an evaluation of the use of a facilitator's manual found that 50% of the participants reduced their consumption of cigarettes by one-half immediately following the program and 7% were reported to have quit completely. At a one month follow-up, 40% of the participants reported to have had some impact on their smoking while 4% reported to have quit all together (Hotte, McCulloch, Welch, Lindsay, Bordeau, & Meloche, 1997).

The HIP Program or Health In Perspective Program designed by the Canadian Intramural Recreation Association (1997)(R. Turnbull, personal communication, October 6, 2000) is an active learning program for females focussing on smoking prevention and cessation through active living, respect for the environment, and an understanding of positive ways to deal with stress. The program is delivered by peer leaders who teach critical life skills under the guidance of a facilitator and a sponsoring organization or school (d'Avernas, Joza, McCuaig, & Payne, 1999). Site evaluations were conducted to investigate the effectiveness of increasing young woman's knowledge of the effects of tobacco and healthy lifestyle choices. The results indicated that 62.5% of the participants who smoked regularly planned on quitting after the program and qualitative data suggested that there were increased numbers among the participants who viewed positive

body image, handling stress and increased physical activity as important in their lives (Canadian Intramural Recreation Association, 1999).

The PITS program or Pack in Those Smokes (1996)(J. Mikkelsen, personal communication, August 29, 2000) modeled after the Canadian Cancer Society's Fresh Start adult quit smoking program takes into account issues teen smokers face when trying to quit such as peer pressure, self-esteem and decision making. Program evaluations were conducted in 1996-97 and found a decrease in smoking by males of 58% and a decrease in smoking by females of 68%. At a three month follow-up consumption of cigarettes was reduced from the original amount by 50% and by 46% at a six-month follow-up. Conclusions drawn from these results were that the PITS Program was successful in reducing smoking rates among youth and appeared to move the participants closer to a stage of change that would prepare them to quit smoking (J. Mikkelsen).

Many groups across the country continue to work hard on developing effective youth programs such as the British Columbia Ministry of Health with their Kick the Nic 2000 Program and TeenNet's CyberIsle's Smoking Zine online resource (2000)(O. Maley, personal communication, August 25, 2000), as there is an apparent desire among young smokers to quit.

Harm Reduction. Harm Reduction has grown out of the realization that traditional approaches to drug and alcohol problems are not effective and that new strategies and interventions need to be developed. The primary principle behind Harm Reduction is to help individuals identify and reduce the harm or negative consequences associated with their behaviors. While abstinence is the most certain strategy to protect a person from harm, Harm Reduction accepts the reality that individuals do engage in high-

risk behaviors and therefore views any effort aimed at reducing harm as a step in the right direction and worthy of assistance. Harm Reduction believes that high-risk behaviors not only affect individuals but also families and society. The Harm Reduction philosophy views addiction as a biopsychosocial phenomenon wherein it is recognized that an individual has many internal and external factors that initiate and maintain drug and alcohol problems (Denning, 2000).

Originally developed in Europe in direct response to the HIV epidemic, Harm Reduction strategies have been used with a wide range of behaviors. For example: providing needle exchange programs for injection drug users, methadone substitution therapy for heroin users, pharmacists filling out prescriptions for smokable drugs as an alternative to injections, server intervention and preventive education for alcohol problems (as cited by Riley, 1993). Harm Reduction philosophies are also behind campaigns for the use of seat belts, vaccination programs in schools, health screening fairs and new smoking policies (Denning, 2000).

Harm Reduction strategies have also been implemented within some schools. The most common Harm Reduction strategy used in schools is the inclusion of a designated smoking area on school grounds and policies formed around these areas. This type of strategy is typically only implemented at the high school level and is often a reflection of difficulties experienced with zero tolerance policies or concerns for student safety or the protection of nearby property (Bowen, Kinne, & Orlandi, 1995; Rhymes, 2000).

The Harm Reduction approach or philosophy has also been proposed as a method of educating young people about risky behaviors such as drug use, which includes tobacco use. This approach to education proposes to reduce the harm by providing

accurate information about drug use and its risks including medical, social and legal consequences rather than information against drugs (Riley, 1993). Furthermore the aim of Harm Reduction education is to help develop the skills needed for safer and more responsible drug use (Clements, Cohen, & Kay, 1990 as cited by Kay, 1994; Erikson, 1997). Harm Reduction views addiction as a biopsychosocial phenomenon (Denning, 2000) and therefore Harm Reduction education takes into account why young people take drugs including the associated pleasures and benefits they are seeking and appreciates adolescent psychosocial development in which curiosity, experimentation and risk taking is normal (Kay, 1994; Erikson, 1997).

Currently within the Harm Reduction literature there are no proposals wherein tobacco use would be isolated from other drug use, the Harm Reduction education plans are all encompassing of drug use including tobacco. However, it must also be noted that there is no rationale against the idea of distinguishing between the two.

Conflicting views exist around the idea of implementing Harm Reduction approaches in the schools. Critics are concerned that the approach will increase drug use by providing information about the attractions of drugs and by setting the stage for viewing drug use as acceptable and expected (Tupker, Poland & West, 1997 as cited by Erikson, 1997). Advocators of the approach believe that the availability of drugs and the reality that young people are using drugs demand the need for programs that promote less harmful use (Poulin & Elliot, 1997). The debate will likely continue for some time.

Recommendations Contained within the Literature for Adolescent Program Development

Health Canada has offered a number of recommendations based on various research projects. Recommendations include longer cessation programs with strategies to

deal with relapse, information about the anti-social aspects of tobacco use (i.e. bad breath and tooth decay), exposure to what is in a cigarette, an emphasis on the role of peers and their influence on smoking as well as pressures experienced during adolescence and the impact of self esteem issues (1997;1999). It was suggested that introducing activities such as physical activity, drama, peer-to-peer education, and communication and relationship skills into intervention programs could develop self-esteem (1999).

Interventions should add the inclusion of high-risk groups of youth as well as junior and senior high school students in program delivery (1997). Efforts should be culturally, age and gender appropriate (1999). Research by Health Canada under the Tobacco Demand Reduction Strategy initiative (1999) indicated that prevention efforts need to work together with protection (i.e. second hand smoke initiatives) and cessation programs within schools and communities as well as within mass media approaches and environmental actions (i.e. packaging, price, selling, policies...). A more collaborative and inclusive effort is needed. Programs should be enticing to young people and include elements such as peer led sessions, opportunities to be creative and involved in social activities, attractive packaging and presentation, concrete, fun and interactive, and involve multimedia (1999).

Upon completion of a study on attitudes and smoking, Piko (2001) suggested that antismoking interventions should be adapted to different target groups such as boys and girls, and different age groups. Piko argued that the impact may differ among the groups due to differences in attitudes toward smoking. Piko further suggested that girls and younger adolescents may benefit from programs encompassing skills training on

recognizing and resisting social pressure and introducing these skills through modeling and role-playing. Boys and older adolescents may benefit from programs that teach alternatives such as involvement in recreational activities and community improvement projects.

Programs for young smokers need to target individuals at the different stages of change. Pallonen (1998) emphasized that cessation programs need to recognize that adolescent smokers are at different stages with their intentions to modify their smoking. Those in the preparation stage, including those smokers who are planning to quit in the next 30 days, would be well suited for an action orientated smoking cessation program while those smokers in the precontemplation stage who are not thinking about quitting need a program focussing on stage progression. Talking about the stages adolescents go through when trying to quit using tobacco may help teens in the process of becoming tobacco free (British Columbia Ministry of Health, 2000).

Summary of the Research

A review of the current statistics and literature on adolescent smoking indicates that attempts to combat the high percentages of young smokers are not highly effective in their present forms, as a decline in these numbers has not been found. Prevention programs have limited information and typically target general populations. Cessation programs are mildly effective in reducing the number of cigarettes consumed by participants yet are not appealing to adolescents. Harm reduction strategies are controversial and therefore not generally implemented within schools at this point in time. Only a small body of survey research has attempted to identify the biopsychosocial factors that influence youth smoking behavior. Most of this research focuses on

psychosocial issues and smoking initiation and not so much on the biological factors or the reasons why these young people are continuing to smoke, why some quit and why some never start smoking. Qualitative data has not been published with regard to these biopsychosocial factors therefore, it seems necessary for future research to further explore these areas and to do so from the perspective of the adolescent. This type of research could help to support and expand the current survey research.

With regard to youth programming, Health Canada and other organizations and individuals have attempted to take into account many of the recommendations suggested from past research yet have not fully included the biopsychosocial factors that have been identified. It is the belief of this researcher that the greater the number of contributing biopsychosocial factors that can be incorporated into a program, the better equipped we will be in the fight against youth smoking.

CHAPTER III

Methodology

Phase I: Development of the Survey

A preliminary survey on the biopsychosocial factors influencing youth smoking was developed by the researcher based on information contained within the current body of research. A copy of the survey can be found in Appendix A.

Phase II: Pilot Study

The preliminary survey was piloted with a group of five individuals currently enrolled in the Choices Program. Within the pilot group were 2 female students aged 15 and 17 and 3 male students aged 13, 17 and 18. One male teacher also participated.

The goal of the pilot study was to refine and enrich the preliminary survey prior to administration at a local high school. The intent was to have a small group of high school aged students complete the preliminary survey and to have them comment on its structure and organization as well as the individual questions.

Contact was made with the Director of Central Region of the Central Regional Health Board requesting permission to access high school aged students from the Nova Scotia Drug Dependency Services' Choices Program and seek their participation in the pilot study. See Appendix B for a copy of the contact letter. The Choices Program is a residential program for adolescents dealing with personal drug use. In addition to the fact that the majority of these adolescents have had experience with tobacco use, they also come from a large geographical area within the province of Nova Scotia and were therefore considered to an appropriate group for the pilot study. Permission was granted. Contact was then made with the program coordinator of the Choices Program and a time

was set to speak to a group of adolescents, seek their written consent to participate in this portion of the study (see Appendix C) and to administer the survey.

The rules of confidentiality and a participant's personal right to withdraw from the study at any time were explained to the group by the researcher. Participants were also assured that their responses to the questions on the survey were not to be used as data but merely for the purpose of refining the survey presented to them.

Phase III: Survey Administration

Contact was made with a local school board and the principal of a high school in rural Nova Scotia and permission was granted to access the students for the purpose of this study. A copy of the school board contact letter can be found in Appendix D.

Students were accessed through the English department teachers as a large majority of the students in all three grade levels (10, 11 and 12) were enrolled in classes instructed by these teachers. The researcher entered individual classes to explain the basis of the study and the role of the participants which involved signing a personal consent form, having a parent or guardian sign a consent form, and then completing the survey. Students and parents or guardians were also given the option of signing consent for the students' participation in interviews. The researcher also explained the rules of confidentiality and the student's right to refuse participation or to withdraw at any time.

A total of 300 consent form packages, each containing one student consent form and one parent consent form, were distributed (see Appendices E and F). Students were asked to read the student consent form, sign it if they so chose to participate and have a parent or guardian sign the parent consent form. Both completed consent forms were to be returned to the English teachers at which point the researcher or the teacher would

give the student a copy of the revised survey to complete. A copy of the final revised survey can be found in Appendix G. All students were to specify their age, grade and gender at the top of the survey and then to complete question #1. Upon completion of question #1 the students were asked to complete one of three sections depending on their current smoking status. Section I was to be completed by students who considered themselves to be current smokers. Section II was to be completed by students who felt they were ex-smokers and Section III was to be completed by those who considered themselves nonsmokers.

Individual classifications as defined by Health Canada (1994) are as follows. Current smokers are those who presently smoke cigarettes either daily or non-daily. Ex-smokers are those who presently do not smoke cigarettes but have smoked at least one hundred cigarettes in their lifetime. Nonsmokers are those who presently do not smoke cigarettes and have smoked fewer than one hundred cigarettes in their lifetime. For the purpose of this study the students were asked to classify themselves.

Phase IV: Interviews

Interviews were conducted with students of the selected high school who were self-classified as current smokers, ex-smokers, and nonsmokers. The students interviewed had previously signed and returned the consent forms described in Phase III and had indicated they were interested in being interviewed by checking that option on the consent form. Students were interviewed with a set of questions specific to their smoking classification. Copies of the interview questions can be found in Appendices H, I and J. The interview questions aimed to qualitatively explore the biopsychosocial factors of youth smoking behavior and their perceptions and attitudes about smokers. The

interviews were also intended to discover the students' opinions and recommendations with regard to school programs and interventions for smoking usage. Each interview session was audio-recorded and the researcher took personal notes.

Participants

The research participants included grade 10, 11 and 12 students from a high school in rural-suburban Nova Scotia.

In the third phase, students completed the survey portion of the study. A total of sixty-four students returned their signed consent forms (21.33 % return rate) and completed the survey. Among the 64 students were 41 females, 20 males and 3 students who did not identify their gender. The mean age of the group was 16.19 years. The group included 22 students who were self-identified as current smokers (11 females, 9 males and 2 not identified); 13 self identified as ex-smokers (9 females and 4 males), and 29 self identified as non-smokers (21 females, 7 males and 1 not identified).

In the fourth phase, students participated in the interview portion of the study. This included 36 students. Among the 36 students, 24 were female and 12 were male. The mean age for the group was 17.06 years. The 36 students were equally divided among the three classifications of current smokers, ex-smokers and non-smokers with 8 females and 4 males in each group, for a total of 12 participants per group.

Phase V: Data Analysis

Survey Data. The survey data was analyzed by hand, using frequency counts of the number of times each survey item was endorsed by the participants. Means were calculated for survey questions demanding a numerical response (i.e. age, number of cigarettes). All survey data was analyzed by total number of participants, total number of

female participants and total number of male participants, therefore, gender differences could be explored. All analyzed data is represented in a table, which can be found in the Appendix K.

Interview Data. The descriptive data gathered in the form of audio-recordings and personal hand written notes during interviews were analyzed qualitatively. Qualitative analysis included repeatedly sifting through the data and looking for specific words and phrases that represented recurring topics, themes, patterns, and ideas. A coding system was developed based on these topics, themes, patterns, and ideas, which helped to organize the data by concept and ensure that if others were to investigate the data or ask similar questions of the participants, corresponding concepts would be discovered. The coded and organized data was then written in narrative form with quotes taken directly from the interviews so that the reader may come to understand and appreciate the experiences of the participants as they relate to smoking behavior (Bogdan, & Biklen, 1992).

The procedure used to analyze the interview data modeled the Constant Comparative Method outlined in Grounded Theory. Grounded Theory seeks to discover and generate theory from data systematically obtained through qualitative research (Glaser & Strauss, 1967, p. 2) rather than obtaining data to prove or disprove existing theory. The method of analysis termed the Constant Comparative Method involves four stages: (1) comparing incidents applicable to each category, (2) integrating categories and their properties, (3) delimiting theory, and (4) writing the theory (Glaser & Strauss).

Stage 1 involves comparing incidents applicable to each category. The researcher begins the process by coding each incident in the data into many categories. Incidents are

simply coded by making notes on the actual data sheets or on separate cards and keeping track of the comparisons groups in which the incidents occur. As the process continues the researcher begins to start to view the categories as having different properties such as conditions where it is more pronounced or where it is minimal, consequences, and relationships with other categories. Specific categories are named based on the language used by the research participants or based on terms chosen by the researcher to explain the data. Throughout the process of coding for categories the researcher is encouraged to take notes on personal thoughts and ideas generated while sifting through the data which are typically useful when writing up the results (Glaser & Strauss).

Stage 2 involves integrating categories and their properties. The researcher continues to code the data and make notes yet the comparisons made while going through the data are no longer comparisons of incidents to incidents but comparisons of incidents to properties of the different categories. The different categories and their individual properties become integrated through constant comparison and theory or concluding propositions begin to develop (Glaser & Strauss).

Stage 3 involves delimiting the theory. At this stage the researcher starts removing nonrelevant properties within categories, integrating details of the existing properties, and making generalizations. The researcher also begins filtering and cutting down the original list of categories according to boundaries of the emerging theory or propositions (Glaser & Strauss).

Stage 4 is the final stage of the process and involves writing the theory. The researcher compiles the coded data, personal memos and the notes on the developing

theory or propositions and pulls out the major themes that are to be used as section titles in the narrative write up of the results. The write up often includes quotes taken directly from interviews or conversations, quotes dropped by informants, summaries of events or persons by constructing case studies, descriptions of the events, acts, places and spaces, and personal accounts of the researcher's experience throughout the study (Glaser & Strauss).

CHAPTER IV

Analysis

Survey Data

Survey results are provided in Table 1 (Appendix K). Of the 64 adolescents who completed the survey on tobacco use among teens, 41 were female and 20 were male. Three did not identify their gender. Of those who completed the survey, 47 stated that they had tried smoking before while 17 stated that they had not. Of the 47 who had smoked 29 were female, 16 were male and 2 did not identify their gender. The age range for first trying smoking was 8 to 16 years, with an overall mean age 12.45 years. The mean age for females was found to be 12.03 years with a range of 8 to 16 years. Males were a little older at mean age of 13.88 years and a range of 11 to 16 years. The most frequent locations adolescents first tried smoking were at a friend's house, school and home. The locations varied with gender in that most females started at home or at a friend's house while males started at school or at a friend's house.

Reasons for beginning smoking. The reasons for first trying smoking were similar for both females and males. The following reasons are listed from most frequently endorsed to least frequently endorsed by both genders: "I was curious"; "My friends smoke (d)"; "For something to do"; "My family members smoke (d)"; "Because I was stressed"; followed by "Smoking is cool" and other reasons such as pressure, weight loss, rebellious, drinking and taste and smell. The mean number of cigarettes smoked during the school day or weekday was 7.34 with a range of 0 cigarettes to 1 pack which contains 25 cigarettes. The mean number of cigarettes smoked by females on a school or weekday was 7.03 with a range of 0 cigarettes to 1 pack or 25 cigarettes. Males

smoked a mean of 7.88 cigarettes on a school or weekday with a range of 0 to 1 pack or 25 cigarettes. Both females and males were found to smoke over 26% more cigarettes during the weekend. The mean number of cigarettes smoked by females on the weekend was 26.24 cigarettes, equivalent to a 26.80% increase (range of 0 cigarettes to 4 packs or 100 cigarettes). Males smoked a mean number 28.25 cigarettes on the weekends, equivalent to a 27.89% increase (range of 0 cigarettes to 2 packs or 50 cigarettes).

Current Smokers. Twenty-two of the 64 adolescents who completed the survey classified themselves as current smokers (11 females, 9 males and 2 not identified). The most frequently endorsed reasons females gave for why they currently smoke included “it calms me down”; “it is a habit”; “it gives me something to do”; “I enjoy it”; and “it keeps my weight down”. Less frequently endorsed items included “my family members smoke”, “my friends smoke”, “I feel more accepted by my peers”, “addicted”, “stressed” and “it is cool”. Of the 9 current male smokers who were given the same question, the most frequently endorsed reasons included “it is a habit”; “it calms me down”; “it gives me something to do”; “I enjoy it” and “my friends smoke”. Less frequently endorsed reasons included “my family members smoke”, “it keeps my weight down”, “to feel more accepted by peers”, and “it is cool”. When presented with the question “are you thinking about quitting?” 2 females and 1 male said no, 8 females and 8 males said yes and 1 female did not know. The majority of those who think about quitting intend to do so soon and when asked “why?”, most responded because of health and money factors, bad habit or because of a friend. Six females and 5 males intended to quit cold turkey while 4 females and 4 males intended to cut down gradually.

Ex-Smokers. Thirteen of the adolescents (9 females and 4 males) who participated in completing the survey classified themselves as ex-smokers. When asked “how long ago was your last cigarette?”, 2 females replied less than one month ago, 2 females and 1 male said 1 to 6 months ago, for 1 female it was twelve to twenty-four months ago, 3 females and 3 males had their last cigarette more than twenty-four months ago. When asked to indicate the reasons they had smoked, females most frequently responded “my friends smoke (d)”; “it calmed me down”; “it gave me something to do”; “it was habit”; and “I enjoyed it”. Less frequently endorsed reasons included “it kept my weight down”; “my family members smoke (d)”; “I felt more accepted by my peers”; “I thought it was cool”; and “to defy parents”. Males most frequently endorsed “my friends smoke (d)”; “I thought it was cool”; “it calmed me down”; and “I was drinking” as reasons for why they smoked. The male participants did not endorse other items.

Reasons for smoking cessation. The most frequently given reasons for why the female participants quit smoking were “costs too much”; “negative effects on my health”; “someone wanted me to quit (parent or friend)”; and “did not enjoy it”. Other reasons given included “wanted to improve my sense of taste and smell”; “bad example to others”; “smell”; and “foolish”. Male participants listed “negative effects on my health” and “someone wanted me to quit” as reasons for quitting. Other reasons given included “costs too much” and “a bribe by a friend”. Females most frequently quit cold turkey, followed by cutting down. One female participant quit by substituted suckers for cigarettes while another was forced to quit when she got sick. Of the male participants 1 quit cold turkey and another quit because of a bet. Two males did not specify their

reason for ceasing to smoke. Females and males specified that friends were most helpful in the quitting process.

Non-Smokers. Twenty-nine participants who completed the survey classified themselves as non-smokers (21 females, 7 males and 1 who did not identify gender). Reasons most frequently given by females for never smoking included “negative effects on my health”; “smells bad”; “it is not cool”; “parents”; “bad example to others”; and “costs too much money”. Other reasons given were “no interest”, “parents do and it is gross”, “I like myself” and “friends”. Males indicated that they have never smoked due to “negative effects on my health”; “costs too much money”; and “smells bad”. Other reasons given included “friends”; “bad example to others”; “parents”; “it is not cool”; “no interest”; and “parents do and it is gross”. None of the female or male participants thought they would ever smoke in the future. One female said that maybe she would try smoking in the future. When asked why they would not smoke in the future females frequently responded “health”, “no interest”, “gross” and “negative effects seen in others”. Other reasons given were “self-respect” and “cost”. Males said they would not try smoking in the future because they had “no interest” and “health” concerns.

Interview Data

The coding process elicited a number of common themes, which were then categorized into biological, psychological or social factors. This stage of categorization was performed at the discretion of the researcher. Biological factors were those that pertained to health issues such as the potential for health risks, the perceived or noticed health consequences and the detrimental effects on the health of another individual, as

well as, personal addiction to cigarettes. Psychological factors were those where the origin of the statement or experience was of a behavioral, perceptual, emotional and/or cognitive nature. Social factors were those that were linked to interpersonal relationships or larger environmental or community issues. The data was further divided into the three smoking classifications, current smokers, ex-smokers and nonsmokers, to fit the proposed research questions and correspond with the division of classifications used in the survey phase.

Current Smokers

Twelve of the interviewees were classified as current smokers. Within this group 8 were female and 4 were male. The ages of the adolescents ranged from 16 to 19 years old. The female students ranged in age from 16 to 18 with a mean age of 16.88 years while males ranged from 18 to 19 years of age with a mean age of 18.50 years.

The mean age for first trying smoking was 11.19 for females with an age range of 9 to 14 years old and a mean age for males of 14.00 years with an age range of 12 to 16 years old. The majority of these adolescents first tried smoking at a friend's house, at school, or at home. Most were with a friend or friends, some were with family members such as a sibling or cousin and one of the interviewees was alone. Five of the students continued to smoke from their first try, 7 did not continue to smoke immediately following their first experience but started later on. At the time of the survey, 9 of the students smoked less than half a pack on a weekday, 2 smoked between half a pack and a full pack and 1 smoked more than a pack. On the weekends the numbers of cigarettes smoked increased for all but one student who said she did not smoke outside of school.

Ten of the current smokers are thinking about quitting, which is promising data. Even more promising is the fact that 9 of those who are thinking of quitting are planning to do so within 6 months following the interview.

When asked if any of their friends smoke, all the interviewees replied yes. Eight of the ten students reported that they also have immediate family members who smoke. Therefore these current smokers are frequently in the presence of other smokers.

Biological Factors. Biological factors did not influence these adolescents to first try smoking, however, biological factors did contribute to these young people continuing to smoke. Some students stated that they were currently addicted to cigarettes and continued to smoke because of their addiction although they did not provide any statements indicating physiological signs of addiction.

“I don’t know. It sort of became a habit and then I got addicted.”

Researcher: “So you feel you are addicted now?”. Participant: “Well yeah, I know I am.” (19 year old male)

“I can’t quit right now. I’ve tried to but I can’t. I am addicted.”
(16 year old female)

Biological factors were frequently given as negative aspects of smoking such as the negative effects noticed in one’s health, concerns about the possible health effects and physiological reactions such as bad taste. These negative biological factors were also the reasons many of the current smokers were thinking of quitting.

“I play sports and stuff and it is hard on me that way...out of breath really quick.” (18 year old male)

“Daddy is on oxygen right now...he has smoked for a long time...right now I am going through lung problems...asthma...” (16 year old female)

“Kills me. I realized that too late and I got addicted. When I play baseball I get tired easier...in a few years if I continue I may notice it even more.”
(19 year old male)

**“...I run out of breath a lot easier...I always cough in the mornings”
(16 year old female)**

**“When you do sports you get tired and out of breath. It kind of makes you feel queasy if you haven’t eaten and sometimes lightheaded.”
(17 year old female)**

“The negative effects on my health.”... “don’t see them right now but I am getting worried. Cigarettes are getting worse, lung cancer is increasing...” (16 year old female)

“health risks and stuff...I get tired faster, smoke gets in my lungs or something.” (19 year old male)

“after taste and the putrid smell” (18 year old female)

Psychological Factors. Psychological factors including curiosity, for something to do and to help manage ones weight contributed to a number of the participants’ initial experimentation with smoking.

“We (my friend and I) were just curious. We wanted to see what it was like.” (18 year old female)

“Wonders. Wondered why daddy always used to do it.” (16 year old female)

“It interested me, it was just something that...I never pictured myself smoking but it interested me” (16 year old female)

“I was kind of curious as I seen them all doing.” (18 year old female)

“Just for something to do basically. It was one of my friend’s parents and we stole it just to see what it was like, no pressure or nothing, we just tried it.” (19 year old male)

“It was the allure of being rebellious. Weight played a factor in it as well. I was told a lot as a child that smoking does in fact make you lose weight so I did it kind of as a diuretic...” (18 year old female)

Curiosity about smoking was most often linked to knowing individuals such as friends or family members who had tried smoking or were currently smoking. Therefore, it can be concluded that curiosity often had social precursors.

Many of the same psychological factors that influenced smoking initiation contributed to a continuation of smoking and were perceived by many young people as positives to smoking.

“It just gives you something to do. Like other than just standing there and noone saying anything. You just go outside and have a cigarette. It gives you something to do and something to talk about.” (17 year old female)

“It’s a pastime, it gives me something to do.” (19 year old male)

“I don’t know. Something to do I guess. I don’t get too much out of it... I do it all the time...it’s just something to do” (18 year old male)

“I find cigarettes to be a real wonderful repressant of food. I have to literally force myself to eat when I’ve been smoking. It totally crushes my appetite.” (18 year old female)

Some students continued to smoke because they were stressed and felt that cigarettes helped to calm them down and make them feel better. This calming effect to stress and other emotions was also listed as a positive aspect of smoking by many of the participants. Ironically according to Health Canada (2001) although smoking appears to help handle stress it only provides short bursts of energy and temporary feelings of calm smoking actually increases stress levels by raising individual’s heart rate and blood pressure.

“I wouldn’t say it is as much an addiction, it is just that through my life I have had some troubles and stuff like that and I found that when I smoked it helped relieve some of the stress. It would like calm me down because I would be like so overwhelmed with anger or happiness or whatever and I needed something to calm me down. I always felt that the nicotine just slowed me down a little and I needed that ‘cause I usually just bounce all over the place and stuff, you know. I was always a hyperactive person... and I needed something to calm me down and I always found that that helped and that is basically that.”... “keeps me level”... “it is just something that I do to help relieve stress in me” (18 year old female)

“Mainly stress and uh....it calms me down.” (18 year old male)

"I kind of enjoy it. It makes me feel better and like calms me down. I just like it." "If I am mad it just calms me down." (18 year old female)

"When I'm stressed, I feel like there is something to do that can take my mind off it. It doesn't relieve me of my stress, I know that but it takes my mind off it." (16 year old female)

"It relieves stress sometimes and it calms down people." (16 year old female)

Negative aspects of smoking and reasons for quitting with a psychological basis provided by the interviewees included personal thoughts, attitudes and feelings as well as those of the general public that smoking "is a disgusting or gross habit".

Psychological factors including the habit and routine of smoking, stress, boredom and the feelings one has when they don't have a cigarette were all perceived as issues that would make quitting difficult and for some have made it difficult to quit in the past.

"habits make it hard to quit like when I drink coffee, I always have a cigarette like right after my coffee" (18 year old male)

"right after meals...like the routine" (19 year old male)

"I've been smoking so long now, I'm kind of used to it. It is just a habit like chewing your nails or...it is hard to break." (16 year old female)

"...change my habits like not going outside in case I would want one and take one and I would just try to stay away from it." (17 year old female)

"Getting' use to not having a cigarette in my hand all the time." (18 year old male)

"you find yourself reaching into your pocket and you'll realize what I am looking for and then you realize I am looking for my smokes but I quit" (18 year old female)

"the time I put in on smoking and it has just become part of the routine now...it also has to do with the stresses" (16 year old female)

"...the stress..." (18 year old male)

"...stress..." (16 year old female)

“Just if I am bored, I will want to go have a smoke.” (16 year old female)

“when you don’t have one the whole world has to suffer for it because yah just go nuts” (16 year old female)

“...it (quitting) is so stressful...I was cranky all the time, I refused to do anything, I was fighting with everybody” (16 year old female)

Social Factors. Social factors greatly impacted the interviewees to try smoking.

Social reasons included the fact that friends were smoking, feeling pressured by friends or family members to try smoking, and the fact that family members smoked.

“Maybe I guess you could say peer pressure. I had friends that smoked. I saw them doing it.” (18 year old female)

“A little bit of peer pressure I guess...friends smoked.” (18 year old male)

“My friends were smoking around me...I guess a little bit of peer pressure.” (18 year old female)

“A couple of my friends were doing it so...not really pressured.” (18 year old male)

“My brother told me to...he smoked.” (16 year old female)

“My cousin told me to. She said I should try it.” (17 year old female)

“I first tried because I saw my mother doing it.” (16 year old female)

“...cause my dad always used to smoke.” (16 year old female)

When the students were asked why they continued to smoke at the time of the interview only two mentioned social factors.

“... I party quite a bit, when I drink, I smoke...it is like my lifestyle too. I go downtown a lot, I am always at bars or at pool halls and stuff like that and there is always smoke around me. There isn’t really much point in me quitting smoking if it is in my lifestyle. It is like a pass time...” (19 year old male)

“...I don’t smoke at all when I am at home, after school or on weekends... I just smoke at school...if I am in a social like setting I might smoke...” (18 year old female)

Among the positive aspects of smoking given by the students was that it is a social behavior.

“Kind of a social thing you do with your friends, something to do, something to talk about.” (17 year old female)

“Not many positives, somewhat of a social thing though.” (16 year old female)

Among the negative aspects of smoking a couple of the participants mentioned the negative opinions others had toward them because of their smoking and the smell which is offensive to themselves and others.

“People look at me and say oh you’re going die, you’re going to get cancer and everything but it doesn’t bother me a whole lot...” (18 year old female)

“People always look at you and say oh you’re stupid for going out and smoking” (16 year old female)

“It stinks. I can’t even stand it myself and I’m a smoker myself believe it or not. I’m the only smoker in my house and when I go home...you can smell it on me and it stinks.” (19 year old male)

“it smells bad” (18 year old female)(19 year old male)

“it is gross...and it smells...” (16 year old female)

When asked why they would think about quitting, only one student mentioned a social factor, which was because everyone else was trying to quit.

“There is no sense smoking. Everyone else is trying to quit now so what’s the sense being the only one smoking.” (16 year old female)

With regards to quitting many of the students felt that social support from friends, a boyfriend or girlfriend, and parents would be helpful. Having someone to quit with was also believed to make it easier to quit.

“My current boyfriend don’t smoke and I don’t feel right smoking around him because then there is the second hand smoke and I don’t want to bother

him...he'll help me." (16 year old female)

"Support from Quit & Win Program at school...support... the last time I tried to quit my daddy bought me a whole bunch of mints to give me something to do in case I wanted a cigarette." (16 year old female)

"My boyfriend is going to help. We are going to quit together." (17 year old female)

"My boyfriend is going to quit with me." (18 year old female)

"My girlfriend and I are going camping without taking no cigarettes with us. We are going to try to quit." (19 year old male)

"Maybe get my mom to quit down with me...I've talked to her about it." (16 year old female)

While discussing the process of quitting, several of the students mentioned that being in the presence of others who were smoking made it difficult for them to be successful in their past quit attempts and was perceived by others to be difficult in attempts they would make in the future.

"Everybody around me smokes." (16 year old female)

"School...there are a lot of people smoking and you just smell it and it's like oh my God I want one..." (16 year old male)

"It's difficult to try to quit now in school because all my friends smoke, standing around at break and stuff." (17 year old female)

"I was having to avoid the people that did smoke." (17 year old female)

Social factors with more of an environmental basis such as the current cost of cigarettes and the inconvenience of only being allowed to smoke in specified areas, were perceived as negative aspects of smoking and found to influence youth in their thoughts about quitting.

"I just want to save money." (18 year old female)

"I don't like spending my money on it." (19 year old male)

“It is too expensive.” (18 year old male)

“They’re expensive now, it depends on where you go but average it is \$6.50.” (16 year old female)

“It costs money, a lot of money...you have to go outside you know whatever the weather instead of staying in school and staying dry.” (16 year old female)

“I can’t be around my little nephew when I smoke and there are some places I can’t be in the house...You gotta pretty much figure out when yah smoke because it all has to do with the money you have that you put out for it...I want to quit before summer because we are suppose to go to B.C. and they are really expensive up there like 7 to 10 bucks a pack.” (16 year old female)

Ex-Smokers

Twelve of the interviewees were classified as ex-smokers. The group consisted of 8 females and 4 males aged 15 to 18 years. The age for first trying smoking ranged from 11 to 16 with a mean age of 12.92. Females began smoking between 11 and 14 years of age (mean age of 12.31 years) while males began between 11 and 16 years of age (mean age of 14.13 years).

The majority of these adolescents first tried smoking at school, out with friends or at a house with friends. Seven of the students continued to smoke immediately after their first cigarette. Prior to quitting smoking, 11 of the interviewees smoked less than half a pack during a weekday and smoked more on the weekends. One of the female participants smoked only when she was with her cousin, which was not on a daily basis.

At the time of the interviews, all of the students had friends that smoked and 8 of the students also had immediate family members who smoked. As was found in the group of current smokers, these ex-smokers were frequently in the presence of other smokers.

Biological Factors. Biological factors including addiction to the nicotine in cigarettes (physiological symptoms were not described), were reported to have had an impact on youth continuing to smoke while factors such as the negative effects on ones health were influential in young people's decision to quit.

"'cause I was addicted, it calmed me down a little and became my everyday life..." "I'm athletic and I want to stay that way. I don't want to be slow." (17 year old female)

"I was addicted I guess you could say to nicotine." (17 year old male)

"I got addicted after a while." (15 year old female)

"Got addicted pretty much." "It is not really good in my family because we have heart problems and stuff so..." "I found it was like affecting me more and I was sick and I didn't want to put up with it anymore I wanted to get rid of it. I'm young I still want to like live my life so ..."(18 year old female)

"It was bad for my health." (15 year old female)

"I went for tests and stuff and found my health was pretty bad." (16 year old female)

"It made me feel sick and I thought oh this is gross. I mean it made me feel sick so why do it..." (18 year old male)

"The main reason I quit was because of hockey. It felt right tight." (18 year old male)

Certain biological factors such as the negative effects on ones health and the physiological reactions some individuals experienced when smoking were viewed as cons to smoking.

"I'm very athletic, well I was and now am always just gasping for air and stuff like that. I cough up stuff." (17 year old female)

"I found that I couldn't do a lot of the activities that I used to do and that it was bad on my health." (15 year old female)

"I guess it is bad for your lungs and stuff. I was pretty much out of shape.

Every time I ran I was exhausted.” (17 year old male)

“Bad health. I could tell the difference when I went back to playing hockey after the summer.” (18 year old male)

“I always coughed. I always had like a raspy cough even when I didn’t have a cold. I play ringette so when I am on the cold ice I can notice it more because it makes you really itchy and stuff. I noticed it then.” (18 year old female)

“Can’t breathe when I do sports and stuff. I used to be in a lot of sports, track and stuff but I had to quit...I couldn’t breathe.” (16 year old female)

“Bad for my health, addictive. Noticed a little bit in my breathing.” (15 year old female)

“It made me feel sick...it made me feel dizzy.” (18 year old male)

“The coughing, what I would cough up would be really disgusting.” (17 year old female)

“Sometimes I found that if I hadn’t smoked in a day or so if I had another cigarette I would feel really dizzy and like whew I would have to sit down because of I don’t know lack of oxygen or something.” (17 year old female)

Psychological Factors. Psychological factors such as curiosity and to feel cool were among the reasons a number of the ex-smokers interviewed started smoking. As was found with the current smoking group, curiosity was typically linked with knowing people who smoked.

“My friends had already tried it and I was curious.” (15 year old female)

“I was just curious because my friends were doing it.” (15 year old female)

“I kind of wanted to know why everyone wanted to do it.” (16 year old female)

“I just wanted to see what it was like, curious...I just wanted to see what was the fun of it.” (18 year old male)

“I was curious to see.” (18 year old female)

“Curiosity I guess. I wanted to know what it was like.” (17 year old female)

“Started ‘cause I thought it was cool...a little curious...” (18 year old male)

“I thought it would be cool.” (17 year old male)

“To be cool really.” (17 year old female)

Among the psychological reasons given for why they continued to smoke and the positive factors associated with the behavior were the perception that smoking was cool and the feeling of being rebellious. Other factors included that smoking became a habit, smoking was a way of dealing with stress and had a calming effect for some students, and it was something to do.

“I thought it was cool.” (18 year old male)

“Because I was bad, I was like ‘Whew I’m bad’ I was breaking the rules... defying my parents...” (17 year old female)

“After a while it was just habit, it kind of calmed me down sometimes.” (15 year old female)

“When I was stressed out it relaxed me and I don’t know it kind of kept my weight down a bit and stuff.” (18 year old female)

“I found it relaxed me and calmed my nerves and stuff.” (17 year old male)

“Calmed my nerves I guess.” (17 year old female)

“It was kind of relaxing, I guess.” (18 year old male)

“It helps with stress sometimes I guess and it calms you down.” (15 year old female)

“It gave me something to do I guess.” (16 year old female)

When the students were asked about the negative aspects of smoking and their personal reasons for quitting they included the realization that smoking was not for them. These thoughts and newfound beliefs are considered to be psychological factors influencing smoking behavior.

**"I just realized it was dumb, there was really no point in me smoking."
(18 year old male)**

"It wasn't worth it for me." (18 year old male)

"I didn't see any positives so I quit." (18 year old male)

The substitution of other substances for cigarettes was suggested by many of the interviewees as a helpful way to quit smoking. The concept of substituting a positive behavior such as chewing, sucking or eating a food product for a negative behavior such as smoking follows the behavior modification technique known as differential reinforcement (Spiegler & Guevremont, 1993) and is thus considered a psychological factor contributing to quitting smoking.

"Food helped." (17 year old female)

"Chewed a lot of gum." (16 year old female)

"I am kind of eating more." (18 year old female)

"I would have suckers instead. They were better tasting" (17 year old female)

"I would find some gum or something to eat." (15 year old female)

Habit, emotions, and stress made it difficult for many of these now ex-smokers to quit smoking.

"You just get this tendency, like a physical habit just like to have a cigarette and smoke." (17 year old male)

"Stopped going to the smoking area...I had to go find something else to do at lunch now." (16 year old female)

"If I got upset I would want to go back to it." (15 year old female)

"Stress, everyday stress and stuff like that like tests and all that stuff and I think oh I need a cigarette to calm my nerves." (17 year old female)

"Uh stress, that's hard 'cause you get really moody and stuff." (15 year old female)

**“Sometimes I get really stressed out and I think ‘Oh I want a cigarette’.”
(18 year old female)**

Social Factors. Social factors including having family and friends who smoked, being in social situations where people were smoking, and peer pressure were all contributing factors to initially trying cigarettes.

“My family did it.” (17 year old female)

“All my friends were trying it and I just wanted to know what it was like. My dad used to smoke too so I wanted to try it.” (18 year old male)

“Friends. My parents smoke to and would always see them so I figured there must be something to it.” (17 year old female)

“With my friends, they had already tried it.” (15 year old female)

**“I guess because my friends were smoking...they didn’t pressure me though.”
(15 year old female)**

“I was at a party and tried it...peer pressure and stuff” (17 year old male)

“I was at a cabin in the woods with friends and I had some alcohol to drink and you know...and I thought well ok why not and I guess I was a little bit impaired and I tried it.” (18 year old male)

“I was with other people...a little pressured.” (18 year old male)

“My cousin made me. She said I am going to get in trouble if you rat on me so here smoke this. She forced me to do it.” (16 year old female)

**“It was there and I was like ok let me try it. It was kind of pressured but...”
(18 year old female)**

“I was offered one and I took it.” (15 year old female)

With respect as to why this group of teens continued to smoke and the positives they felt were associated with smoking they gave the following explanations: smoking is a social thing, it helped them to fit in and others were smoking around them.

“At first it was just a social thing I would say like just around with my friends and stuff.” (15 year old female)

“It would be the social aspect that was the positive. I can’t think of any other positives.” (18 year old male)

“It’s a social thing.” (15 year old female)

“It helped me fit in with everyone else.” (18 year old male)

“I could hang around with my friends that smoke right and I wouldn’t have to feel out of place.” (17 year old male)

“I was with smokers I smoked more...most of my friends that live around me smoke or came over to my house and so yeah we would spend all day outside and just ...smoke all day.” (17 year old female)

“I would smoke when I would go somewhere with my friends. Not usually when I was by myself...We didn’t smoke at school, we went out.” (15 year old female)

“The people I hung out with smoke.” (15 year old female)

“All my other friends started smoking so I started smoking again too.” (16 year old female).

“I was just around it all the time ‘cause all my friends smoked and I thought to myself, I thought ‘if I am getting second hand smoke anyway, first hand smoke is better for yah than second hand smoke so...” (18 year old male)

“I usually only smoked around people that smoked too. Friends kept smoking so I did.” (17 year old female)

Parents and other authority figures, such as school staff, finding out that they were smoking and then getting in trouble or being reprimanded for smoking were frequently listed as negative aspects of smoking according to this group of adolescents. The smell of cigarette smoking was also seen as a negative.

“When you walk into a room your parents know you smoke...Getting caught at school. Getting in trouble. Getting grounded by my parents.” (16 year old female)

“Never smoked at school because I was always like Oh I am going to get caught. I was all afraid of authority figures. Tried to keep it from my parents.” (17 year old female)

"I was always scared I would get caught by my parents. I was always like 'I can't get caught by my parent'. I wouldn't smoke on the road or anywhere where someone I knew would come and tell my parents."
(15 year old female)

"I didn't want my parents to find out." (15 year old male)

"My parents didn't know about it but they were always curious and that was kind of stressful." (18 year old female)

"It stinks afterwards." (18 year old male)

"It makes you smell bad and when you walk into a room...it is hard to hide." (16 year old female)

"It smells bad." (15 year old female)

Among the reasons these ex-smokers quit smoking were parents finding out about the smoking, disapproval of parents and friends, friends quitting at the same time and realizing that the cons of smoking outweigh the pros.

"My parents found out and they got really mad and I promised them to quit." (17 year old male)

"My parents found out and they let me smoke so it wasn't bad anymore. They were like 'oh yeah, you can smoke if you want to. We can't stop you' and then it just kind of lost its appeal..." (17 year old female)

"My dad asked me. My dad let me smoke when I lived with him for a while but he asked me to stop smoking so I did." (16 year old female)

"A lot of my other friends who didn't smoke didn't like it because they could pick me out of a crowd of nonsmokers." (15 year old female)

"my other friends that weren't smokers, they didn't like it at all" (15 year old female)

"Changing friends who didn't smoke." (15 year old female)

"Me and one of my best friends, we've been friends since we were like three, we made like a big bet that we were going to quit smoking." (18 year old male)

"My friends just all kind of quit smoking so..." (15 year old female)

“Boyfriend. When I started going out with him I turned more so into a social smoker and I was getting really tired of it and I was sitting down thinking what is the sense of me smoking and when I started going out with him his father smoked like a pack a day, his father had two strokes and I just kind of went and thought why am I putting myself through this. This is really stupid and I quit cold turkey...back when I started I was doing the whole identity thing and now I am just like if you don’t like me for who I am, you can just go away.” (17 year old female)

Social factors that helped in the quitting process included support and encouragement from family and friends, having others around them quit and hanging out with people who did not smoke.

“My dad encouraged me. My friends if they went out for a cigarette I would be sitting in the car with them and they would all be smoking and I would be like ‘Oh my God’and they would say you are doing so good, we are so proud of you.” (16 year old female)

“A couple of my friends that don’t smoke helped me through and parents’ support.” (17 year old male)

“My friend helped me.” (17 year old female)

“Those friends that didn’t like it and they encouraged me not to.” (15 year old female)

“My dad used to chew gum and stuff when he stopped so that’s what I tried and it actually worked...my dad and my grandmother quit so that really helped.” (18 year old male)

“I have another friend that quit too and she is like...me and her are doing it together...My sister used to smoke so she is kind of like helping me like ‘Oh that’s so good’.” (18 year old female)

“Friends accepted it and stopped offering me.” (17 year old female)

“Changing friends, because they didn’t smoke and they weren’t around it a lot.” (15 year old female)

“I kind of started hanging around people who didn’t smoke and so then I didn’t want to go like all by myself and have a cigarette so I would just stay in and not have one.” (15 year old female)

Many of these students found that being around other people who were smoking was very difficult for them during the quitting process.

“Being around the people that did smoke.” (15 year old female)

“You just see everyone like smoking and stuff and you always want one.” (17 year old male)

“Being around my friends. Just so much that my friends would be like we are going to go outside and smoke and I would be like ‘I can’t’.” (16 year old female)

“I was still always around it...like all my friends still smoked even to today.” (18 year old male)

“At that time, all my friends that I hung around with, all of them smoked. On weekends we used to always hang out and we used to smoke and now they’re smoking and I am off on the sidelines maybe talking to the one other person that doesn’t smoke and the rest of them are over there smoking ...my parents smoke and so I used to be in the house and they’d be smoking.” (17 year old female)

“The fact that my parents smoke and my friends that did smoke would always offer me cigarettes.” (15 year old female)

The current expense of cigarettes was an environmental factor viewed by a couple of students as a negative aspect of smoking and was also found to influence a few students to try to quit.

“It’s expensive...” (15 year old female)

“It is a waste of money...no point in wasting my money on it.” (18 year old male)

“I wasn’t willing to spend the money.” (15 year old female)

Nonsmokers

The nonsmoking group consisted of 12 students, 8 females and 4 males, who classified themselves as nonsmokers. The group ranged in age from 16 to 19 with the females ranging from 16 to 18 years of age (mean age of 16.89 years) and the males ranging from 16 to 19 years of age (mean age of 17.25 years). Eleven of the twelve students had friends who smoked at the time of the survey and only 4 had immediate

family members who smoked. Two of the students had tried smoking before. One girl tried at school at the age of 13 out of curiosity but did not like it. The second girl tried once when she was 11 or 12, out of curiosity, however she did not try again as she thought it tasted bad and did not like it.

When asked why they had never smoked before and the reasons they would not smoke in the future this group of nonsmokers listed the biological factors of personal health risks and the negative effects on health as seen in others. Psychological factors including self-respect, personal disapproval of smoking, and disinterest were influential in the decisions these young people made about choosing not to smoke. Among the social factors influencing the behavior of these nonsmokers was not feeling pressured by others to try smoking, not having family or many friends who smoked, the expense of cigarettes and the smell.

Biological Factors.

"It's really bad on your health. It makes you smell. It gets in your clothes and your hair." (17 year old female)

"Never tried because of the health risks." (18 year old female)

"I don't feel it would be good for me. I have too much respect for my health to do something like that to it." (17 year old female)

"I don't think smoking is ever going to be healthy for you. It is never going to have any health benefits. There is never going to be like...a point to start smoking. There are never going to be any positives." (18 year old male)

"I don't see the point. I hear that lung cancer is a pretty painful way to die and I would rather not try...I think if I wanted to breath in smoke I would just stick my head over a bbq or something. I just don't see the the point at all." (17 year old female)

"My health...I don't really want to depend on something like that." (17 year old female)

“My mother used to tell me, when she was a nurse, some of the stories of people who get cancer, throat cancer, it’s bad.” (19 year old male)

“My mom used to smoke and it was pretty gross. I know a lot of people that smoke and it didn’t seem all that interesting to me. My aunt actually lost her legs from smoking, it cut off the circulation.” (16 year old female)

“Both my parents smoke and they have lung problems and I just don’t think it helps anything.” (16 year old male)

“My father is a smoker and my sister smoked and my father smokes two packs a day and everyday I wake up and I hear him coughing. It smells bad and it costs a lot of money and I personally don’t want to get cancer or anything. I want to diminish my chances as much as I can.” (17 year old female)

Psychological Factors.

“I respect myself. I just didn’t see the point.” (17 year old female)

“My parents smoke and I disapprove of it and I always wanted them to stop.” (16 year old female)

“It didn’t appeal to me.” (17 year old female)

“Never tempted.” (19 year old male)

“I haven’t tried it now, I mean all through school. It’s not going to be out there as much outside of school.” (18 year old female)

Social Factors.

“Never really got in the situation where I had to try it. No one tried to pressure me.” (16 year old male)

“No one in my family smokes and not many of my friends smoke so no.” (16 year old male)

“After talking to some of my friends they say it is hard when you have a part time job and you’re in school and you’re spending everything they have on cigarettes.” (19 year old male)

“It smells bad.” (17 year old female)

“It smells and stuff.” (19 year old male)

Perceptions of Smokers

The students were asked to give their opinions or state any concerns they had about people they knew, both family and friends who smoked, and about smokers in general.

Twenty-one of the interviewees made reference to the fact that smoking is a matter of personal choice. Some of these students felt that because, it was a personal choice, there was very little that they could do themselves to influence the behavior of others around them. Some students even felt that there was nothing they could or even should do because it is a matter of choice. Others mentioned that although it is a matter of choice they strongly feel that those who do smoke have made the wrong choice.

**"I wish that they (my friends) didn't but it is a choice that they made and I can't do anything about that. You can only give somebody your advice."
(17 year old female; nonsmoker)**

"That's their choice, something that they chose to do...that they chose to try and it stuck with them. It is something that they decided to do... I don't know but that was their choice and they chose to do it." (18 year old female; current smoker)

**"I can't really do anything. There is nothing that I can really do for them."
(16 year old female)**

"It doesn't really matter. They can do whatever they want." (18 year old male; current smoker)

"I am kind of self absorbed in that I feel that what they do on their own time really has no impact or really does not concern me in the least." (18 year old female; current smoker)

**"Right now it is their (friends) choice but when they get older they are going to wish that they didn't." (16 year old female; current smoker)
"They are old enough to know better." (17 year old male)**

"I think if they want to shorten their lives then they can go ahead and shorten their lives. My friends who smoke, I am like if you want to smoke then smoke. I am not going to encourage you to smoke but if that is what

you choose to do then you can choose to do that.” (15 year old female)

“They are just people but when I hear smokers I automatically think negative. I don’t disrespect them, I just think that they made a bad choice...” (17 year old female; nonsmoker)

Many of the students were concerned about the health of family members who were currently smoking and many of who were showing signs of deteriorating health.

“I tell them not to. My mom gets mad at me sometimes...I’m concerned they are going to get lung cancer and cancer of the mouth...I think it’s pointless because they didn’t need to start in the first place.” (16 year old male; nonsmoker)

“I worry about my mom because she coughs and stuff and has high blood pressure which probably has to do with her smoking. It upsets me.” (17 year old female; nonsmoker)

“Concerned for my grandmother because she smokes like two packs a day and she can hardly breathe...” (18 year old male; current smoker)

Five of the interviewees said that they did not like people smoking and that they would like to see the people they care about stop smoking.

“I would like to see my friends quit.” (18 year old male; ex-smoker)

“I think if I could get one thing in the world, I would wish that my dad didn’t smoke...” (17 year old female; nonsmoker)

“I don’t like it and I don’t want them to.” (17 year old female; nonsmoker)

Other responses shared by the students were that smoking is a bad and disgusting habit, it is a waste of money, and that some of them are bothered when they see and hear of young kids smoking.

When asked about their general thoughts on smoking the students gave a variety of responses and brought a number of issues surrounding smoking behavior within the larger public including bans on smoking in public places, the current prices of cigarettes

and the legal age for purchasing cigarettes, as well as the recent pictures that are on the cigarette packages.

“I think that it’s really sad and I am really outraged by the fact that the government has really repressed smokers from being able to just enjoy their actual rights that nonsmokers are able to enjoy. I think that the government is really violated our rights a lot in that sense. In that sense I’m really upset and I am outraged by that fact...” (18 year old female; current smoker)

“I think the bans on smoking are good. Like to go into a restaurant and start smoking and not really knowing who is in that restaurant is kind of disrespectful to that person that could be allergic to smoke. If you want to smoke do it in your own house.” (18 year old female; current smoker)

“I would like to see more place go nonsmoking...I think they should push more nonsmoking laws.” (18 year old male; nonsmoker)

“I think it’s a bad habit and I think they should ban cigarettes period.” (18 year old female; ex-smoker)

“It’s costly. It’s a waste of money.” (18 year old female; current smoker)

“I think it is a waste of money. It’s not really worth it.” (18 year old male; ex-smoker)

“They should lower the age to buy them because it’s pointless. I mean most of our parents buy them for us anyway and if they don’t we have older friends...we’ll end up having it. I know people whose parents don’t buy them for them and they still smoke.” (16 year old female; current smoker)

“I think the things they are putting on packs are good because it makes you think about them.” (16 year old female; current smoker)

Fifteen of the students chose to comment on the negative aspects of smoking including the bad example it sets for younger kids, the smell, the difficulties in trying to quit, the negative health consequences and the opinion that smoking is a disgusting and gross habit.

“It is something you don’t want to set an example for. You try to set a good example for kids. You wouldn’t want them to see someone like in

my position (lifeguard) and think it is the right thing to do...I don't think it is right to do it around little kids." (18 year old female; current smoker)

"I think it is disgusting. I think it is just a disgusting habit. You always smell like it. You can't get the smell off unless you haven't had a cigarette in a long time. I wouldn't suggest it to anybody." (16 year old female; current smoker)

"It's bad. I don't recommend anyone smoking ever. Once you start, you can't stop." (16 year old female; current smoker)

"I can't see the use of it because our bodies weren't made for cigarette smoke. I mean what do you get from it. It just deteriorates your health and your body and it is money wasting. There are so many more negatives." (18 year old male; ex-smoker)

"It stinks. It's bad for yah. It is not cool or nothing." (18 year old male, current smoker)

"I think it's pretty stupid because like it doesn't really help anything. I don't recommend it." (16 year old male; nonsmoker)

Recommendations for Schools in Dealing with Youth Smoking

The students were asked to provide recommendations for elementary and junior high schools as well as high schools including specifics to their own high school, that could potentially help the issue of youth smoking.

Elementary school level. Recommendations for the elementary schools dealing with younger children included class wide discussions and education around the negative effects smoking. Other suggestions provided by students were to try using graphic pictures depicting the effects of smoking on the human body, showing the students real specimens of human organs effected by smoking, and having speakers come in and talk to the kids about how smoking effected their lives.

"I think that education really needs to be implemented about the facts and trials and tribulations of smoking at younger levels of school. If any young child came up to me and stated that they were experimenting with smoking, I would basically state to them that I really regret the day that I picked up the

habit, and my advice would be for them to kind of abstain from smoking, and to stay away from it, and that it is not cool. The detriments of smoking, you know, really outweigh the positives of it.” (18 year old female; current smoker)

“Keep putting the knowledge into their brains and they will have to think about what they want to do.” (15 year old female; ex-smoker)

“I think all kids will try it but they could maybe encourage the fact that it is not good for you, it is bad for your health and a lot of people don’t like it.” (15 year old female; ex-smoker)

“I think you should teach them like, more about how bad smoking is maybe, and put it into classrooms and into education, maybe hopefully at a younger age so they will learn when they get older not to do it.” (17 year old male; ex-smoker)

“I think maybe they should teach us more about what to do. Use some really graphic pictures like on the packs...I think they should start at like grade 6 ‘cause that’s when people start trying it ‘cause they see the older kids doing it and they want to do it...they could try to ban it but I don’t know if that would go over well.” (18 year old female; current smoker)

“I think for kids and things like that you should try scare tactics. There was this girl that I know, and she took a puff from a cigarette, and breathed on a Kleenex, and it was very gross. I think we should let people know from young young ages...show them these pictures like this is what your lungs will look like. When I was in elementary they had people that came in that had throat cancer, and people that have lost their vocal boxes, and they had to speak with machinery. I think scare tactics would probably work.” (17 year old female; ex-smoker)

“Get real people to come in who have problems with it like teenagers... Get junior high students, ‘cause you know how like little kids look up to older kids. Have the ones that are not smokers come in and explain why they are nonsmokers.” (17 year old female; nonsmoker)

Junior high school level. When asked about possible recommendations at the junior high level the students offered many of the same suggestions as those given for the elementary level. For example, bringing in speakers to discuss the effects smoking has had on their lives; showing material such as commercials that will make people think about smoking and how it may effect them; discussions on peer pressure; and tougher rules.

“You should show them what would happen, what will happen, and what could happen, and all that stuff and that would help a lot...maybe getting a guest speaker who maybe has a hole in their throat from smoking at any level...you just gotta make it interesting to hold people’s attention and stuff.” (16 year old female; current smoker)

“They need to like implant it into the brains of like junior high because I didn’t think of smoking, and when I got to junior high that’s when it hits you, and everyone is just trying it. That’s why we need to implant it. Like those commercials that are on tv, in my cadets they are now like afraid to smoke. There is one with this girl sitting in the hallway and her mother doesn’t get to see her graduation or get married and stuff. When they actually sit down and think about it, it’s scary.” (17 year old female; ex-smoker)

“I just don’t think they should go ‘oh don’t smoke’. They should talk about why you smoke and why you shouldn’t and let them know that it is your choice, and figure out what choice you should make...maybe in grade 7 or earlier.” (17 year old female; current smoker)

“I think at junior high is probably when most people start. I wonder now if it could be gotten in their heads that it is not cool at all. Somehow maybe if we had a lot more direct education perhaps that would help deter. I think schools should be education and I think it should be in there for sure.” (18 year old male; ex-smokers)

“In junior high, I think since peer pressure probably has a lot to do with it, they could probably find somebody well known in the school who is not a smoker to come talk to the kids.” (17 year old female; nonsmoker)

“Have more rules I guess for it but I don’t think that would really work.... I guess trying to get those that do smoke not to smoke on school grounds (younger grades), selling cigarettes and stuff they should really watch out for that and they should be suspended if they are caught selling them...” (15 year old female; ex-smoker)

High school level. Recommendations for high schools included presenting students with real life examples of the negative effects smoking has on ones’ health and well being, providing alternate activities for students at lunch time, support within the school for those that want to quit and banning smoking all together on school property.

“I think if they put like the real message right in people’s face like this is what your lungs look like and stuff. It would shock everyone. I think probably at grade 9 until grade 12.” (19 year old male; current smoker)

“People are usually pretty informed about smoking...really talk about personal effects...make sure that it is really into the health program. I have seen some commercials that are really impacting and I think they should have a lot more like educational videos of that sort.” (16 year old female; nonsmoker)

“More activities during lunch or something like that to give you something to do or just a place to sit that is nice...a place to go hang out and sit...a place to go and talk if you want to smoke and maybe give them something like candy or something and just talk about it because as soon as you talk about it you think I shouldn’t smoke and you won’t smoke...” (17 year old female; current smoker)

“I think there should be a school wide support like I think we should have like a big rally with like all the people that want to quit smoking and support and egg them on and stuff...” (17 year old female; ex-smoker)

“I think they should ban it from school because we are young teenagers and we shouldn’t be able to smoke.” (18 year old female; ex-smoker)

“They could probably try not letting them smoke at school. Could have some of those programs...get them aware of what smoking is. A lot of the public places aren’t smoking anymore so it shouldn’t be at school.” (16 year old male; nonsmoker)

Recommendations specific to their own high school typically revolved around an existing cessation program, Quit & Win (Nova Scotia Department of Health, 1994), which many felt could use some revisions and around the school’s designated smoking area. A few students also mentioned enforcing tougher rules around smoking on school property.

“We have a Quit & Win Program here and to me, honestly, I think that it was stupid because, like you have to quit and stuff like that, and by a certain date, and they gave them something to go for like a Discman, or something, but you don’t know what people are going to do after that date, and when they go home...I believe it is good. They give them a goal but I know a lot of people who would pretend to quit to get that prize.” (18 year old female)

“I think the Quit & Win Program wasn’t all that good because the people who did it weren’t really all in to it. They’d be late for meetings or they wouldn’t want to do them or they would talk about what they were doing on the weekend and that wasn’t helping us. If there was someone that was willing to help that would help.” (16 year old female; current smoker)

"I like the way our school has it now with the Quit & Win Program. You have to have the will power because what you do is you cut down on smoking until your quit day, but if you are not going to have the will power, than you are not going to do that anyway. But I like the way they got that because I know that like some of my friends wanted to quit but they were kind of nervous about what their friends would think and so this way they kind of have a reason to quit or an excuse to quit and then they win stuff out of it."
(17 year old female; ex-smoker)

"Stop promoting it. Get rid of the smoking area. Get a little more stricter on the smoking policy in the school." (18 year old male; current smoker)

"Maybe say that they can't smoke on school property 'cause they are pretty close to the school so if they had to go further away, try to discourage them maybe be...if they had to go out of their way to smoke. Tougher sentencing when they get caught instead of one day suspension or something make it longer or something. I think it is too lenient and they need to toughen up." (18 year old male; ex-smoker)

"I think it (designated smoking area) sets a bad example for the school to a certain extent. It doesn't look good for anybody else who doesn't go to this school. They just drive into the school and they see a bunch of people smoking. For the grade 10s that come up next year like for orientation day they come up and see it." (18 year old male, current smoker)

"I think it is good because if there wasn't one they would just be piling up along the streets or whatever." (18 year old male; current smoker)

"I think it's a good idea because there would be more suspensions and stuff if there wasn't." (19 year old male; current smoker)

"I don't think it should be allowed. I think that is like promoting it." (16 year old female; nonsmoker)

CHAPTER V

Summary and Discussion

The present study was developed to explore the biopsychosocial factors that influence adolescent smoking behavior and to investigate whether these factors vary with gender or smoking classification (current smoker, ex-smoker or nonsmoker). The study further aimed to qualitatively examine youth's perceptions and attitudes about smokers and their views on how schools could help the current situation here in Canada in which we find high percentages of young smokers. It was the hope of the researcher to expand upon existing literature in the area of youth smoking behavior and to generate recommendations for schools dealing with the issue of youth smoking.

Given the small sample sizes involved in the survey and interview phases of the study and the fact that females outnumbered males by two to one in each of these phases the data comparing gender similarities and differences must be interpreted with caution. Due to the small number of male participants, gender differences were not examined in the interview phase of the study. Data collected in the study is reflective and representative of the experiences and opinions of the adolescents who participated in the study and may not resemble those of the general population. However, it should be noted that given the small body of existing research on the topics explored within this study, the results should lend themselves to helping individuals understand youth smoking behavior and assisting in future directions for programming, interventions and other research projects.

Biopsychosocial factors. Survey data collected from 64 high school aged adolescents revealed both similarities and differences between the genders and smoking

classifications. Similarities were noted among the group of females and males who had tried smoking (N= 47) with respect to their reasons for initially trying smoking and with the number of cigarettes they smoked. Curiosity, having friends who smoked, and for something to do were listed as the top three reasons both genders tried smoking. The mean number of cigarettes consumed by the group was just above 7 on a weekday and increased by slightly more than 26 % on the weekends, for both females and males. The females in this study experimented with smoking at an earlier age than the males, 12.03 years compared to 13.88 years. The most popular locations for females' first experimentation with smoking was at a friend's house, at school or at home while males initially tried at school or at a friend's house.

Female and male current smokers indicated that they currently smoked because it calmed them down, it was a habit, and it gave them something to do. Ex-smoking females and males indicated that they used to smoke because their friends smoke (d) and it calmed them down. Female ex-smokers also listed because it gave them something to do, it was a habit, and because they enjoyed it. In addition to the above-mentioned reasons, male ex-smokers also smoked because they thought it was cool.

Slightly greater than 72% of the adolescent smokers were thinking about quitting and the majority of them were thinking of doing so soon. Reasons for thinking about quitting included health, money, personal beliefs that smoking is a bad habit, and because of a friend, for both female and male current smokers. These reasons were similar to those given by ex-smokers as for why they quit. Female ex-smokers quit because of money, health, a parent or friend who wanted them to quit, and because they didn't enjoy it. Males quit for health reasons and because someone wanted them to. Similarly

nonsmoking adolescents suggested that they had never smoked due to the negative effects of smoking on ones health. Female nonsmokers added that they had not smoked in the past because it smelled bad, it was not cool, parents, it would set a bad example for others, and the cost. Male nonsmokers also listed the smell and the cost of cigarettes as reasons for not smoking. Health concerns and the lack of interest were the top reasons both female and male nonsmokers would not try smoking in the future.

The survey results indicated that a combination of biopsychosocial factors contributed to various patterns in adolescent smoking behavior and that theses factors were similar across both gender and smoking classification.

Qualitative data collected in the form of interviews reflected themes similar to the biopsychosocial factors identified in the survey results. Current smokers and ex-smokers most frequently began smoking because they were curious, they had friends that smoked, and they felt pressured. Among the current smokers, the three most popular reasons for continuing to smoke included because they felt they were addicted or because of habit, to help with stress, and for something to do. The most popular reasons among the ex-smokers for continuing to smoke included: their friends smoked, they felt they were addicted or because of habit, followed by the thought that smoking was cool, to fit in, and to calm them down which were equally mentioned by interviewees. When asked about the positives associated with smoking, as perceived by the current smokers, equal numbers of interviewees mentioned stress and smoking's calming effects, as did those that mentioned that there really were not many positives. Other positives included that smoking is a social "thing", it gives them something to do and they like it. Ex-smokers felt that the social aspects of smoking were positive along with the effects on stress and

calming one down. Upon close examination of these results and the most popular emergent themes, it appears that the students who were ex-smokers at the time of the survey were most influenced by social factors relating to the smoking. For example, many of these students identified that they started and continued to smoke because friends did, and many viewed the social aspects of smoking as positive. Current smokers mentioned psychological factors including curiosity and habit as the most common reasons for starting and continuing to smoke. As a positive, they mentioned using smoking to cope with stress as they perceived that nicotine had calming effects on the body. Although both groups mentioned a combination of psychological and social factors in their responses to questions pertaining to their personal experiences with smoking, the above mentioned observation, of the apparent stronger social influences on students who had quit smoking and the common psychological factors influencing those who continued to smoke, may be something to consider when discussing school programming and interventions.

The most common negative aspect of smoking given among both current and ex-smokers was the effect on one's health, a biological factor. Current smokers also mentioned that cigarettes are expensive, they smell, and smoking is gross and disgusting. The ex-smokers discussed the smell, the taste and bad breath and the fear of being caught as negatives associated with smoking. The most popular reasons why current smokers are thinking about quitting included health and the monetary expense. Ex-smokers decided to quit for health reasons and because of friends, they didn't like it, they got caught, or because of the expense. Many of the nonsmokers also mentioned similar biopsychosocial factors as reasons why they had not smoked in the past and would not

smoke in the future. In addition to personal health concerns, the nonsmokers were frequently deterred from smoking due to the negative health effects that smoking had had on family members. The nonsmokers also mentioned lack of interest, the smell and the money as negatives associated with smoking.

Social factors including support from individuals such as friends, boyfriends, girlfriends, parents and a guidance counselor were considered by both current and ex-smokers to be helpful in the quitting process. Social factors such as being around other smokers and psychological factors including habit and stress were considered by both groups to make quitting smoking difficult.

The current findings from both the survey and interview data on the biopsychosocial factors influencing youth smoking behavior seem to support several conclusions drawn from other researchers in the field. Health Canada (1994) as well as Morrison and Vautour (1999) found that adolescents began smoking for a variety of psychosocial factors including out of curiosity and because they had friends who smoked, factors which also influenced the students in this study. The same researchers (Health Canada; Morrison & Vautour) found that youth continue to smoke because of habit, addiction, stress and for something to do, again factors that were influential in the behavior of the young participants in this study. Among the reasons for quitting as found by Health Canada and Morrison and Vautour were the negatives health effects, pressure from others to quit, the expense and not enjoying it, again factors mentioned by the current and ex-smokers in this study. Although not specifically given the titles, by the other researchers, the reasons for beginning to smoke, continuing to smoke and quitting

smoking are a combination of biological, psychological and social factors, as the findings of this study also suggest. The idea of multiple influences from these three types of factors parallels the biopsychosocial model which states that health habits are influenced by biological, psychological and social factors and the interactions between these factors (Taylor, 1986). The current study was also able to discover additional biopsychosocial factors influencing youth smoking behavior and expand upon the existing research in the area as well as looking at other dimensions of smoking behavior such as those biopsychosocial factors that help and hinder the quitting process.

Gender differences such as females smoking behavior being most influenced by social and interpersonal factors and males being influenced more so by intrapersonal factors (Flay et al., 1998) were not found within the context of this study. However, it should be reemphasized that the small number of male participants makes for a cautious interpretation of data on gender differences and is not likely to represent the population as a whole.

In looking at the results of the present study as they relate to the Stages of Change Model (Pallonen, 1998) it can be concluded that most of those students who were classified as current smokers were within the Precontemplation (not thinking about quitting in the next 6 months) and Contemplation (thinking of quitting in the next 6 months) Stages of the model. The results showed that most current smokers surveyed indicated that they were planning on quitting "soon" ("soon" was not defined) and 9 of the 12 current smokers who were interviewed indicated they were planning on quitting within the next 6 months. What can be derived from these numbers is that a high percentage of young smokers do not see themselves as being smokers in the future which

leads to the fact that schools, especially high schools, seem to be suitable environments in which to conduct cessation programs. If these students are thinking about quitting they need information, encouragement and support along the way.

Perceptions and attitudes of adolescents toward smokers. The perceptions and attitudes of the youth interviewed in this study toward smokers, including people they knew who smoked and smokers in general, seemed to be similar across smoking classification. Participants primary response toward smoking in each of the three groups of smoking classification, current smokers, ex-smokers and nonsmokers, was that it was an individual's choice whether they smoke or not. Other frequently discussed issues were that they do not like smoking and they are concerned about the health of those they know who smoke. Many of the students across the groups agreed that smoking is a bad habit.

Published studies specifically investigating young people's perceptions of smokers could not be found, however, an abstract from a dissertation by Schwarz (1990) reported to have investigated the issue. The results were unclear in the published abstract and were therefore unable to be used as a comparison study. However, these results do support the findings of a study by Sun, Anderson, Shah and Julliard (1998) which concluded that youth are aware of the harmful effects on one's health. Ninety percent of the junior high kids surveyed in the above mentioned study recognized the seriously harmful effects that cigarette smoking had on their health. The information they had gained on these harmful effects came mainly from teachers and parents although a few of the students also mentioned media and health care providers. The fact that this study found that a large proportion of the information on the negative health effects of smoking

came from teachers is indicative of the importance of schools in the issue of youth smoking behavior. If individual teachers and schools are able to provide this type of information and expand the teaching to other issues around smoking than perhaps it is possible to help young people make an informed choice around the decision to smoke.

School recommendations generated by youth. Recommendations offered by the participants in this study with regard to elementary schools dealing with youth smoking included classroom discussions and education on the negative effects of smoking which have long been implemented within classrooms (Best et al., 1988) and specifically within the Canadian classrooms since the inception of the Canadian Association of School Health in 1988 which promoted health education within the schools and included sections on tobacco (Health Canada, 2001). The students, as recommendations for the elementary schools, also suggested using graphic pictures and/or real specimens to depict the effects smoking has on the human body and bringing in speakers to talk about different issues related to smoking behavior. Recommendations for junior high schools included bringing in speakers, watching commercials like those currently being shown on television, discussing peer pressure, and having tougher rules against smoking on school property. At the high school level, the students felt that having support within the school for students who want to quit and banning smoking on school property would be beneficial. Many of the students also mentioned using real life examples at the high school level to influence individual's smoking behavior.

Within their own high school, the students had mixed feelings on the implementation of a designated smoking area. Some of the students felt it was a positive step as it prevented people from smoking in other areas and gave the smokers a place to

be. Others felt it promoted smoking and made the school look bad. The reviews are mixed on whether a high school should implement the harm reduction strategy of designating a smoking area on school property which is reflective of the literature which indicates that there are both advocates (Poulin & Elliot, 1997) and critics (Tupker, Poland & West, 1997 as cited by Erikson, 1997) for the approach and the debate is ongoing.

Summary of implications. The survey data did not indicate that the influence of biopsychosocial factors varied with gender as was found by other researchers (Flay et al., 1998). Although significant variations were not found to exist between smoking classifications and the influence of various biopsychosocial factors when both the survey and interview data were analyzed, it should be noted that current smokers seemed to be slightly more influenced by psychological factors while ex-smokers were more influenced by social factors. Data from both the surveys and interviews revealed that a combination of biological, psychological, and social factors were contributing to youth smoking behavior which parallels the biopsychosocial model of multiple influences and interactions of the factors in health behaviors (Taylor, 1986). These findings suggest that smoking should be viewed as a holistic behavior encompassing these three areas of influence and furthermore that interventions and recommendations need to embrace this holistic view as one set of factors is not isolation of the others.

Little variation exists between the smoking classifications with regard to the perceptions and attitude of the participants toward smokers. A major theme to emerge from the interviews on this topic was that smoking is a personal choice. It therefore seems important for schools to intervene early on with respect to issues around smoking

and help youth make informed choices. Hopefully schools will be able to send the message to youth at a young age that starting to smoke is not a good decision.

Participants offered a number of recommendations for elementary, junior and senior high schools for dealing with the issue of youth smoking, many of which centered around the idea of using real life examples of smoking's negative health effects and focussing on prevention efforts. Other suggestions were to provide assistance to youth who smoke and are interested in quitting. Given the recommendations provided by youth in this study, it would appear that smoking prevention and cessation programs are appropriate in the schools. The voices of the youth in this study echo the fact that smoking prevention efforts need to continue through all levels of school and be reflective of real life experiences. Many of the students had mixed reviews on the issue of harm reduction's strategy of designated smoking areas which may indicate that schools are currently not the place for these methods of intervention.

Concluding recommendations. Based on the data collected within the context of this study the researcher offers the following recommendations to schools dealing with the issue of youth smoking.

- (1) Start tobacco prevention and awareness activities early on in elementary school and continue throughout the grades. These efforts should include real life examples that focus on not only the biological effects of smoking such as the negative health effects but also on the psychological effects such as habit and stress and the social effects such as opinions within the general public, health problems that make social activities and physical activity difficult, recent government efforts to make more places smoke

free. Hold school wide assemblies with guest speakers who will discuss issues and experiences with smoking.

- (2) Present information to students focussing on the psychological and social factors that influence youth to begin smoking such as curiosity, for something to do, to feel cool and/or rebellious, peer pressure and to fit in and knowing other individuals who smoke including friends and family. Have lessons on identity formation and adolescent development to help youth understand the changes and feelings associated with that stage of life. Perhaps have these lessons delivered by professionals within the community. Discuss decision-making strategies and introduce social factors such as ways of recognizing peer pressure and peer influence and learning how to resist as social factors appear to have a strong influence on youth smoking behavior and is often neglected in current efforts to combat the numbers of young smokers.
- (3) Introduce and teach about the factors that influence youth to continue to smoke such as physiological and psychological addiction to cigarettes and to deal with stress. Offer alternatives to dealing with stress such as talking to others, learning ways to relax, increasing physical activity, maintaining a healthy diet, learning to take deep breaths and learning positive self-talk (Health Canada, 2001).
- (4) Post pictures and information around the school showing the effects of smoking not only on ones physical health, but also on psychological and social well being.
- (5) Provide support within the schools for students who want to discuss issues around smoking and for those that want to quit. Quit programs should include information not only on the physical or biological effects that make quitting difficult such as

withdrawal but also the psychological factors such as routine, habit and stress as well as the social factors such as being around people you are used to smoking with or in areas and situations you are used to smoking in and being in the presence of other smokers or in areas where strangers are smoking.

- (6) Ask students and listen to their views about smoking interventions, programs and policies around smoking in their schools. Youth have valuable insight into the world around them.

Future research. Future research should focus on further exploring the biopsychosocial factors around youth smoking. Investigating these issues with a junior high population and perhaps an elementary school population is recommended. Examining gender similarities and differences with regard to these factors would be another direction to pursue. Including larger sample sizes and diversity among the participant populations, including an urban population, would also help to build upon the current research base. We must discover effective ways of combating the high numbers of youth smokers.

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APPENDIX A
Preliminary Survey

Grade: _____

Age: _____

Gender: Male or Female (Please circle one.)

1. Have you ever tried smoking? Please circle one of the following:

Yes No

If you circled "Yes"...

Why did you try smoking? Check as many as apply to you:

- _____ I was curious
- _____ my friends smoke
- _____ smoking is cool
- _____ for something to do
- _____ because I was stressed

Please list other reasons: _____

2. What would you consider your current smoking status? Please check one of the following:

- _____ current smoker
- _____ ex-smoker
- _____ non-smoker

Approximately how many cigarettes do you smoke during the *school week*?

Approximately how many cigarettes do you smoke during the *weekend*?

If you consider your current smoking status to be...

- **current smoker** please complete Section I
- **ex-smoker** please complete Section II
- **non-smoker** please complete Section III

Section I (current smoker)

A. Why do you smoke now? Check as many as apply to you:

- _____ I enjoy it
- _____ my friends smoke
- _____ I feel more accepted by my peers
- _____ it is cool
- _____ it gives me something to do
- _____ it calms me down
- _____ it keeps my weight down
- _____ it is a habit

Please list other reasons: _____

B. Are you thinking about quitting smoking?

When? _____

Why? _____

Section II (ex-smoker)

A. How long ago was your last cigarette? _____

B. Why did you smoke? Check as many as apply to you:

- _____ I enjoyed it
- _____ my friends smoke(d)
- _____ I felt more accepted by my peers
- _____ I thought it was cool
- _____ it gave me something to do
- _____ it calmed me down
- _____ it kept my weight down
- _____ it was a habit

Please list other reasons: _____

C. Why did you quit smoking? Check as many as apply to you:

- _____ cost too much money
- _____ negative effects on my health (i.e. difference in breathing, coughing, difficulty in sports)
- _____ did not enjoy it
- _____ bad example to others
- _____ wanted to improve my sense of smell and taste
- _____ someone wanted me to quit
- _____ Who? _____

Please list other reasons: _____

Section III (non-smoker)

A. Why have you never smoked?

- _____ cost too much money
- _____ negative effects on my health
- _____ friends
- _____ bad example to others
- _____ parents
- _____ smells bad
- _____ it is not cool

Please list other reasons: _____

B. Do you think you will ever smoke in the future? Please circle one:

Yes

No

Maybe

APPENDIX B

Choices Contact Letter

**Mount Saint Vincent University
Department of Education
Graduate Program in School Psychology**

December 19th, 2000

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5th Floor, Simpson Hall
N.S. Hospital Grounds
P.O. Box 896
Dartmouth, Nova Scotia
B2Y 3Z6**

Dear Mr. Payette,

My name is Jennifer Clark. I am a graduate student at Mount Saint Vincent University in the Masters of Arts in School Psychology Program. As part of my thesis, designed to look at tobacco use among teens I am requesting permission to conduct a survey with a small number of individuals enrolled in the Choices Program. It is my intention to use this feedback to revise the survey prior to administration at a local high school.

The rationale behind my thesis is to investigate the biopsychosocial factors that contribute to some youth beginning smoking, continuing to smoke and quitting smoking. The information gained from this study will be useful to school board and public health officials in addressing interventions aimed at reducing the incidence of smoking among teens.

Should the Board agree to the study being proposed program officials, parents and teens at Choices will have the option to refuse participation in the research. Close communication will be kept throughout the process. A summary of the study will be provided to any participants who request a copy. A copy of the completed final thesis will be available to the Board.

I have attached a copy of the proposal for your information. I look forward to hearing from you.

If you have any questions or concerns around this study you may contact the research supervisor Dr. Fred French at 457-6186. If you wish to discuss the study with a person not involved in the research you may contact Dr. Penny Corkum at 457-6108.

**Jennifer Clark
Mount Saint Vincent University
School Psychology Program**

**Fred French, Ph.D.
Thesis Supervisor
School Psychology Program**

APPENDIX C

Choices Participant Consent Form

**Mount Saint Vincent University
Department of Education
Graduate Program in School Psychology**

Letter of Consent

You are invited to take part in a survey about the factors around teen smoking. The researcher Jennifer Clark, a graduate student in the Masters of Arts in School Psychology student at Mount Saint Vincent University, is interested in looking at why some teens start smoking, why some continue to smoke, why some quit and why some never start.

The survey will take about 5 minutes. You may skip any questions you do not wish to answer and you may discontinue at any time. Please do not put your name anywhere on this survey therefore you cannot be identified.

Your responses and comments will help to update the survey before it is given to students at a local high school.

If you have any questions or concerns about the survey or about teen smoking, you may contact one of your counselors or Tom Payette who can put you in touch with the researcher.

I have read the above statements and agree to participate in this study on teen smoking. I understand that I may discontinue at anytime and that my identity will be kept confidential.

Signature: _____

Date: _____

APPENDIX D

School Board Contact Letter

Mount Saint Vincent University
Department of Education
Graduate Program in School Psychology

December 19th, 2000

Mr. David Reid
Assistant Superintendent of Area A
Halifax Regional School Board
9 Taranki Drive
Cole Harbour, Nova Scotia
B2W 4X3

Dear Mr. Reid,

My name is Jennifer Clark. I am a graduate student at Mount Saint Vincent University in the Masters of Arts in School Psychology Program. As part of my thesis, designed to look at tobacco use among teens I am requesting permission to conduct a survey and a small number of one-on-one interviews with students at a local high school.

The rationale behind my thesis is to investigate the biopsychosocial factors that contribute to some youth beginning smoking, continuing to smoke and quitting smoking. The information gained from this study will be useful to school board and public health officials in addressing interventions aimed at reducing the incidence of smoking among teens.

Should the Board agree to the study being proposed school officials, parents and students at the high school will have the option to refuse participation in the research. Close communication will be kept with the principal. A summary of the study will be provided to the school and to any students who request a copy. A copy of the completed final thesis will be available to the School Board.

I have attached a copy of the proposal for your information.

If you have any questions or concerns around this study you may contact the research supervisor Dr. Fred French at 457-6186. If you wish to discuss the study with a person not involved in the research you may contact Dr. Penny Corkum at 457-6108.

I look forward to hearing from you.

Jennifer Clark
Mount Saint Vincent University
School Psychology Program

Fred French, Ph.D.
Thesis Supervisor
School Psychology Program

APPENDIX E

Student Consent Form

**Mount Saint Vincent University
Department of Education
School Psychology Program**

Student Consent Form

A study looking at tobacco use among teens is being conducted at your school. Participants in this study will be surveyed by Jennifer Clark, a graduate student in the Masters of Arts Program in School Psychology at Mount Saint Vincent University. In addition to completing a survey a small number of students will be asked to participate in one-on-one interviews to further discuss the issues around tobacco use among teens.

Your name will not appear on the survey therefore you will not be able to be identified. The interviews will be recorded on audiocassette so they can later be put into written text by the researcher and the research supervisor. No identifying information will be kept on the cassettes.

The survey will take about 5 minutes. You may skip any questions you do not wish to answer and you may discontinue at any time. Your responses and comments will be used to help develop recommendations around the issue of teen smoking.

If you have any questions or concerns, you may contact your school principal..

I have read the above statements and agree to participate in this study on teen tobacco use. I understand that I may skip any question and that I may discontinue at anytime. I also understand that my identity will not be revealed.

I, _____ (your name), agree to participate in this study by filling out a prepared survey on issues around teen smoking.

Signature: _____

Date: _____

**** In addition to filling out the survey some students will randomly be invited to participate in *one-on-one interviews* where issues around teen smoking will be discussed. If you are willing to participate in an interview please check one of the following:

I am willing to participate in an interview as a a) _____ current smoker
b) _____ ex-smoker
c) _____ non-smoker

APPENDIX F

Parent Consent Form

**Mount Saint Vincent University
Department of Education
School Psychology Program**

Parent Consent Form

Your son/daughter's school has agreed to participate in a study being conducted by Jennifer Clark, a graduate student in the Masters of Arts in School Psychology Program at Mount Saint Vincent University. This study is investigating issues around tobacco smoking. As part of this study your son/daughter will be asked to complete a questionnaire on their views on smoking and not smoking. In addition to completing the questionnaire a number of students will be asked to participate in one-on-one interviews to further discuss the issues around tobacco smoking among teens. Your son/daughter will be asked to give their personal consent before participating in the study.

Please be aware that the questionnaires will be filled out anonymously and that your son/daughter's identity, if they so choose to participate in an interview, will remain confidential.

Please complete the bottom of this form and return it to the school.

If you have any questions, you may contact either of the following individuals:

The school principal: ? at ?

The research supervisor: Dr. Fred French at 457-6186

As well, should you wish to discuss the study with a person not involved in the research you may contact *Dr. Penny Corkum at 457-6108.*

I, _____ (parent/guardian's name), ***give my consent*** for
_____ (son/daughter's name) to participate in this study by:

A) filling out the questionnaire _____

B) doing a one-on-one interview _____

I, _____ (parent/guardian's name), ***do not give my consent*** for
_____ (son/daughter's name) to participate in this study.

APPENDIX G

Survey

Grade: _____ **Age:** _____

Yes **No**

If you circled "Yes"... then complete the following questions up to the large box.

Where were you when you first started? _____

_____ I was curious
_____ my family members smoke
_____ my friends smoke
_____ smoking is cool
_____ for something to do
_____ because I was stressed

Please list other reasons:

_____ current smoker
 _____ ex-smoker
 _____ non-smoker

Approximately how many cigarettes do you smoke during the *weekend*?

- **current smoker** please complete Section I
- **ex-smoker** please complete Section II
- **non-smoker** please complete Section III

Section I (current smoker)(complete section I only if you are a current smoker)

A. Why do you smoke now? Check as many as apply to you:

- ☐ I enjoy it
- ☐ my family members smoke
- ☐ my friends smoke
- ☐ I feel more accepted by my peers
- ☐ it is cool
- ☐ it gives me something to do
- ☐ it calms me down
- ☐ it keeps my weight down
- ☐ it is a habit

Please list other reasons: _____

B. Are you thinking about quitting smoking?

When? _____

Why? _____

C. How will you quit?

- ☐ patch
- ☐ cold turkey
- ☐ cut down gradually

Please list other methods of quitting: _____

Section II (ex-smoker)(complete section II only if you are an ex-smoker)

A. How long ago was your last cigarette? _____

B. Why did you smoke? Check as many as apply to you:

- ☐ I enjoyed it
- ☐ my family members smoke
- ☐ my friends smoke(d)
- ☐ I felt more accepted by my peers
- ☐ I thought it was cool
- ☐ it gave me something to do
- ☐ it calmed me down
- ☐ it kept my weight down
- ☐ it was a habit

Please list other reasons: _____

C. Why did you quit smoking? Check as many as apply to you:

- _____ cost too much money
 - _____ negative effects on my health (i.e. difference in breathing, coughing, difficulty in sports)
 - _____ did not enjoy it
 - _____ bad example to others
 - _____ wanted to improve my sense of smell and taste
 - _____ someone wanted me to quit
 - _____ Who? _____
- Please list other reasons: _____

D. How did you quit smoking?

E. What or who helped you to quit?

Section III (non-smoker)(complete section III only if you are a non-smoker)

A. Why have you never smoked?

- _____ cost too much money
- _____ negative effects on my health
- _____ friends
- _____ bad example to others
- _____ parents
- _____ smells bad
- _____ it is not cool

Please list other reasons: _____

B. Do you think you will ever smoke in the future? Please circle one:

Yes *No* *Maybe*

Why or why not? _____

.....

Additional Comments:

APPENDIX H

Interview Questions for Current Smokers

Interview Questions**(Current Smokers)**

- 1) **Why did you start smoking? (Age? Place?)**
- 2) **Why do you continue to smoke now?**
- 3) **Approximately how many cigarettes do you smoke now? Does it change from weekdays to weekends?**
- 4) **What are the positives to smoking for you?**
- 5) **What are the negatives to smoking for you?**
- 6) **Are you thinking about quitting? (When? Why or why not? How?)**
- 7) **Have you tried quitting in the past? What helped? What hindered?**
- 8) **Do any of your friends smoke?**
- 9) **Do any of your family members smoke?**
- 10) **What do you think of people you know who smoke?**
- 11) **What do you think about smokers in general?**
- 12) **Are there things that your school or other schools (high schools, junior highs and elementary schools) could do to help with the issue of youth smoking?**

APPENDIX I

Interview Questions for Ex-Smokers

Interview Questions**(Ex-Smokers)**

- 1) Why did you start smoking? (Age? Place?)
- 2) Did you continue to smoke immediately following your first try?
- 3) Why did you continue to smoke?
- 4) What were the positives to smoking?
- 5) What were the negatives to smoking?
- 6) What made you decide to quit?
- 7) How did you quit? What/who helped? What/who made it difficult?
- 8) Do any of your friends smoke?
- 9) Do any of your family members smoke?
- 10) What do you think about the people you know who smoke?
- 11) What do you think about smokers in general?
- 12) Are there things your school or other schools (high schools, junior highs and elementary schools) could do to help with the issue of youth smoking?

APPENDIX J

Interview Questions for Nonsmokers

Interview Questions

(Non-Smokers)

- 1) Have you ever tried smoking before? (Age? Place? Reason?)**
- 2) Why have you never smoked before?**
- 3) Do you think you will ever smoke in the future? Why or why not?**
- 4) Do you have friends that smoke?**
- 5) Do any of your family members smoke?**
- 6) What do you think about those people that you know who smoke?**
- 7) What do you think about smokers in general?**
- 8) Are there things your school or other schools (high schools, junior highs and elementary schools) could do to help with the issue of youth smoking?**

APPENDIX K

Table of Survey Data

Table of Survey Results**Sample: N=64****Grade: 10, 11 and 12****Age: 15 to 19; mean age of 16.19****Gender: female: 41; male: 20; not identified: 3**

Item	# Total	# Females	# Males
<i>Ever tried smoking?</i>			
Yes	47	29	16 (2 not id)
No	17	12	4 (1 not id)
<i>At what age did you try smoking?</i>	Mean 12.45	Mean 12.03	Mean 13.88
<i>Where were you when you first started?</i>			
Friend's house	15	8	7
Home	11	10	1
School	13	5	8
Party	1	1	0
Other: grandmother's house, down by the water	2	2	0
<i>Why did you first try?</i>			
I was curious	37	23	13 (1 not id)
My family members smoke(d)	12	7	5
My friends smoke(d)	26	13	12 (1 not id)
Smoking is cool	4	2	2
For something to do	17	8	7 (2 not id)
Because I was stressed	11	7	4
Other: pressure, weight loss, rebellious, drinking, taste & smell	5	3	2
<i>Approximately how many cigarettes do you smoke...</i>			
During the school day?	Mean 7.34	Mean 7.03	Mean 7.88
During the weekend?	Mean 27.77	Mean 26.24	Mean 28.25
CURRENT SMOKERS	22	11	9 (2 not id)
<i>Why do you smoke now?</i>			
I enjoy it	10	5	4 (1 not id)
My family members smoke	2	1	1
My friends smoke	7	1	4 (2 not id)
I feel more accepted by my peers	1	1	0
It is cool	1	0	0 (1 not id)
It gives me something to do	13	6	6 (1 not id)
It calms me down	15	8	6 (1 not id)
It keeps my weight down	5	4	1
It is a habit	17	7	8 (2 not id)
Other: addicted, stress	3	2	1

Are you thinking about quitting?

No	4	2	1 (1 not id)
Yes	16	8	8
Don't know	2	1	0 (1 not id)
When?	Majority of responses indicated soon		

Why?

Responses included health, money, bad habit, friend

How will you quit?

Patch	0	0	0
Cold Turkey	11	6	5
Cut down gradually	8	4	4
Other:	0	0	0

EX-SMOKERS

13 9 4

How long ago was your last cigarette?

Less than 1 month	2	2	0
1 to 6 months	3	2	1
6 to 12 months	0	0	0
12 to 24 months	1	1	0
Greater than 24 months	6	3	3
* not given	1	1	0

Why did you smoke?

I enjoyed it	4	4	0
My family members smoke(d)	1	1	0
My friends smoke(d)	10	8	2
I felt more accepted by my peers	1	1	0
I thought it was cool	3	1	2
It gave me something to do	5	5	0
It calmed me down	9	7	2
It kept my weight down	2	2	0
It was a habit	5	5	0
Other: defying parents, drinking	2	1	1

Why did you quit smoking?

Cost too much	7	6	1
Negative effects on my health	8	6	2
Did not enjoy it	4	4	0
Bad example to others	2	2	0
Wanted to improve my sense of smell and taste	3	3	0
Someone wanted me to quit	8	6	2
Parent	2	2	0
Friend(s)	5	4	1
Other: smell, foolish, bribe	3	2	1

How did you quit?

Cold turkey	8	7	1
Cut down	2	2	0
Suckers	1	1	0
Bet	1	0	1
Got sick	1	1	0

What or who helped you to quit?

Friends	8	6	2
Parent(s)	2	1	1
Guidance counselor	1	1	0
Feelings and beliefs against smoking	1	0	1
Suckers	1	1	0

NON-SMOKERS

29	21	7 (1 not id)
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Why have you never smoked?

Costs too much money	10	5	5
Negative effects on my health	28	20	7 (1 not id)
Friends	4	2	2
Bad example to others	8	6	2
Parents	10	8	2
Smells bad	20	14	5 (1 not id)
It is not cool	16	13	2 (1 not id)
Other: no interest, parents do and it's gross, I like myself	10	6	3 (1 not id)

Do you think you will ever smoke in the future?

Yes	0	0	0
No	27	20	7
Maybe	1	1	0

Why not?

Health	12	9	3
No interest	11	6	5
Gross	3	3	0
Seen the effects on others	3	3	0
Self respect	2	2	0
Cost	1	1	0