Adolescents' Opinions Regarding Effective Smoking Prevention Strategies

by

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "Adolescents' Opinions Regarding Effective Smoking Prevention Strategies" submitted by Laura J. Godard in partial fulfillment for the degree of Master of Science.

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ABSTRACT

The purpose of this study was to obtain the opinions of adolescents regarding effective smoking prevention strategies. Grade 8 students were recruited into focus group interviews, and were asked their opinions regarding program approaches and strategies, methods of delivery and types of leaders for smoking prevention efforts, and regulatory approaches to smoking prevention. The opinions of the participants were qualitatively analyzed for trends and patterns in responses, compared with the smoking prevention literature, and analyzed for differences by smoking status and gender. Important differences in the opinions of adolescents regarding effective smoking prevention strategies and the consensus of the smoking prevention literature were discovered, as well as a number of differences in opinions by smoking status and gender. The data obtained in this study should be used to improve the effectiveness of smoking prevention efforts, and to stimulate further research into effective smoking prevention strategies.

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Completing this thesis has been a truly enjoyable experience, and one enriched by the help and encouragement of many people.

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DEDICATION

I dedicate this thesis to my best friend, David. I thank my God every time I remember you. Let's never stop learning together!

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CHAPTER ONE: RESEARCH PROBLEM

I. Introduction

Cigarette smoking is the largest preventable cause of morbidity and mortality in North America (Botvin, Goldberg, Botvin, & Dusenbury, 1993), making it a public health issue of monumental importance. It is responsible for 2 million deaths annually in developed countries (Giovono, Eriksen, & McKenna, 1992); in Canada, smoking causes 38,000 deaths per year, or 20% of all deaths (Collinshaw, Tostowaryk, & Wigle, 1989). In the United States, smoking related diseases are estimated to account for $22 billion in health care costs, and $43 billion in lost productivity (Davis, 1987). Because of the addictive nature of nicotine, smoking cessation is rarely successful (Meier, 1991). As a result, the prevention of smoking has received particular attention recently (Winkelstein, 1992).

Adolescents are the main target of these prevention efforts since the majority of smokers begin during their teens; 60% of smokers begin by age 13 and 90% by age 20 (Tye, Warner, & Glantz, 1987). In Canada, 21.7% of males and 23.5% of females between the ages of 15 and 19 are current smokers (Health and Welfare Canada, 1992). Smoking prevalence begins to increase noticeably around age 12 (Pentz, *et al.,* 1989); the younger the age of smoking onset, the less likely a person is ever to quit (Meier, 1991). Smoking prevention programs have demonstrated some success at preventing or delaying the onset of cigarette smoking among adolescents (Bruvold, 1993); however, the prevalence of smoking among adolescents is still alarmingly high. As a result, research into effective prevention strategies continues.

In the design of such prevention efforts, it is important to assess the problems and priorities for action, as seen by the target audience. Target audience participation during the design of health promotion efforts is likely to increase the support and cooperation needed for their success; lack of consultation is a serious oversight that may render them less effective, or even ineffective (Green & Kreuter, 1991). The Epp Framework for Health Promotion (Health and Welfare Canada, 1988) states that public participation is essential in overcoming the major health threats of today, including the need to increase prevention. Little research has been done to assess adolescents' opinions of effective smoking prevention strategies; in an to effort prevent smoking, these opinions should be sought.

II. Objectives of the Study

The purpose of this research was to seek adolescents' opinions of which strategies would be effective in decreasing intention to smoke. More specifically, the following research questions were addressed:

- According to adolescents, which prevention strategies will lead to an intention not to smoke?
- What are the similarities and differences in effective smoking prevention strategies identified in the smoking prevention literature, and effective strategies identified by adolescents?
- Do the smoking prevention strategies identified as effective by adolescents differ according to gender or smoking status?

Information gained from this study can be used to design smoking prevention

efforts that reflect adolescents' priorities. It can also be used to assess whether the theoretical approaches to smoking prevention in adolescence correspond to the prevention issues identified as important by adolescents. Finally, this study identifies smoking prevention strategies of particular interest to groups of specific gender and/or smoking status.

III. Review of Literature

This review will begin with an examination of the influences on adolescent smoking behavior. This will be followed by a review of smoking prevention strategies, and finally, an examination of past research into adolescents' opinions regarding effective strategies for decreasing intention to smoke and/or smoking behaviour.

In this study, *adolescence* will refer to the time in life in which the developmental tasks of achieving autonomy, separation from parents, and acquiring adult functioning skills are carried out; in general, this occurs between the ages of 11 and 18 (Harken, 1987). *Smoking* will refer to use of cigarettes, either in the experimental, regular (established behavior pattern), or addictive (heavy daily smoking, with withdrawal symptoms and craving upon quitting) stages described by Hirschman & Leventhal (1989). Although the use of smokeless tobacco and other tobacco products does occur in adolescence, there is evidence that the influences on use, and the effects of prevention strategies are different for these products than for cigarettes (Sussman, *et al.,* 1993; Chasson, Presson, Sherman, McLaughlin, & Gioia, 1985), therefore use of these tobacco products will not be considered. Finally, *smoking prevention* refers to efforts aimed at stopping the progression from non-smoking or experimental smoking,

to regular or addictive smoking, as defined above.

A. Influences on Adolescent Smoking

Many factors are hypothesized to influence adolescent smoking. These include biological, psychological, environmental, media-related, and developmental influences.

1. Biological Influences

The major biological influence on adolescent smoking is the addictive nature of nicotine (Sarason, Mankowski, Peterson, & Dinh, 1992). While this is not an important factor in the initiation of smoking, it is very important in the movement to experimental, regular, and addictive smoking (Hirschman & Leventhal, 1989). Nicotine addiction is the major reason why smoking cessation interventions have had disappointing results to date; in addition to its addictive properties, beneficial physiologic effects of nicotine include feelings of pleasure, relaxation, and alertness (Winkelstein, 1992).

2. Psychological Influences

Psychological factors have been found to contribute to adolescent smoking. Psychological characteristics found to be predictive of adolescent smoking include low self-esteem, low assertiveness, general anxiety, strong need for social approval, strong need to appear older and more mature, increased rebelliousness, and external locus of control (Harken, 1987).

3. Environmental Influences

The main environmental influences on adolescent smoking are family smoking behaviour, family smoking attitudes, and peer pressure. Adolescents whose parents

smoke are more likely to smoke than adolescents whose parents do not smoke, especially if the parents are permissive regarding smoking (Health and Welfare Canada, 1990). The same relationship exists for adolescents whose siblings smoke (Harken, 1987). Increased numbers of friends who smoke is a risk factor for adolescent smoking, while lack of friends who smoke is a protective factor (Winkelstein, 1992).

4. Media-Related Influences

Media-related, or advertising factors, are also associated with adolescent smoking. Numerous correlations between cigarette advertising and adolescent smoking have been observed. Greater awareness of, and greater approval of cigarette advertisements are predictors of adolescent smoking (Aitken, Leathar, O'Hagan, & Squair, 1987; Botvin, Botvin, Michela, & Filazzola, 1991). These associations have also been found in tobacco company sponsorship of sporting events (Ledwith, 1984). Meier (1991) found that adolescents themselves acknowledge the role of advertising in their decision to smoke, with 51.5% reporting that the media was a major influence. Cigarette advertising may influence adolescent smoking in a number of ways, including presenting a less dangerous image of smoking through the marketing of low-tar and slim cigarettes, decreasing smoking and health coverage in magazines that accept tobacco advertising, increasing the perception of smoking prevalence, and presenting a favourable social image of smokers (Bierer & Rigotti, 1992). There is also concern that the marketing of candy cigarettes to children encourages a positive social image of smokers (Botvin, *et al.,* 1991).

5. Developmental Influences

Adolescence represents a unique developmental stage, with a number of characteristics that may influence smoking behavior. First, one of the main developmental tasks of adolescence is to establish personal identity, independence, and autonomy in a time of role confusion (Johnson, Amatetti, Funkhouse, & Johnson, 1988). As adolescents seek to establish their own image, Social Learning Theory (Bandura, 1977) predicts that they will imitate the behavior of attractive role models. This could explain the influence of advertisements, peers, and parents in adolescent smoking behavior. Second, adolescence is a time when peer influence and group membership is extremely important; this could also augment the effect of advertising, peer smoking, and family smoking on adolescents. Third, adolescence is a time of extreme egocentricity (Harken, 1987), where individuals are very concerned about their actual versus their desired social image. Smoking is often seen as one way of achieving an ideal self-image and peer approval. This may be especially true of females; ideal self-image for adolescent females often includes slimness, and cigarette smoking is seen as a means of weight control (Health and Welfare Canada, 1990; Clayton, 1991). Finally, adolescents do not tend to be future-oriented, and they tend to have a sense of personal invulnerability, making them less influenced by fear of the long-term health consequences of smoking (Winkelstein, 1992).

B. Smoking Prevention Strategies

Smoking prevention strategies can be considered in terms of smoking prevention programs, delivery methods, leadership types, and regulatory approaches.

1. Smoking Prevention Programs

Numerous programs and interventions have been designed and implemented to help adolescents to form the intention not to smoke, and ultimately to prevent adolescent smoking. These programs are based on a variety of different approaches, and are delivered through a variety of mediums. These interventions are most commonly given in grade seven, as at this age smoking experimentation and prevalence begin to increase (Pentz, *et al.,* 1989). The results of such programs are usually measured in terms of behavior (daily, weekly, or monthly cigarette use), and in some cases, in terms of knowledge and attitudes (including behavioral intention).

a. Program Approaches

The approaches of smoking prevention programs can be divided into four basic categories (Battjes, 1985): rational, developmental, social norms, and social reinforcement. The original approach to smoking prevention is referred to as the *rational* approach, and is attributed to the Theory of Reasoned Action (Fishbein & Ajzen, 1975). This theory states that behavioral intention is the most immediate precursor of behavior, and that behavioral intention is influenced by both attitudes toward that behavior and subjective norms (or perceived social pressures) regarding the behavior. Smoking prevention programs based on the rational orientation attempt to change attitudes toward smoking through the provision of factual information about smoking, including effects and consequences; in practice, however, little is done to try to influence subjective norms regarding smoking. Examples of activities from this type of program include lectures, questions and answers, and displays of tobacco products

(Bruvold, 1993).

The developmental approach is based on Developmental Theory (Erickson, 1963), which states that each developmental stage has a task or crisis that must be resolved. Adolescents who have difficulty achieving their task of identity establishment may view smoking and other rebellious activities as a means of establishing identity (Johnson, *et. al.,* 1988). Correlations found between smoking status and characteristics such as low self-esteem, alienation, and poor interpersonal skills support this theory (Harken, 1987). Programs based on the developmental approach seek to improve self-esteem, and skills such as decision-making, anxiety reduction, communication, and self-improvement (Renick & Botvin, 1985); typically, they do not specifically address smoking behavior.

The social norms approach is based on Jessor's Problem Behavior Theory (Jessor, Donovan, & Costa, 1991), which proposes three main psychosocial risk factors for problem behavior: personality system, perceived environment system, and behavior system. Each system is composed of various values, beliefs, behaviors, and perceptions. The goal of interventions based on the social norms approach is to alter these psychosocial risk factors for smoking through the provision of alternatives to cigarette use such as the promotion of community activism and tobacco-free recreational activities (Bruvold, 1993). This approach has been used with some success in adolescents at high risk for drug use, where activities such as tutoring, vocational training, and one-on-one mentoring are also used (Tobler, 1986). As with the developmental approach, there is usually no specific focus on smoking.

The most popular smoking prevention approach today is the social reinforcement approach, based on Social Learning Theory (Bandura, 1977), which suggests that learning occurs through reinforcement (either positive or negative), as well as through observation of the behavior of others. These experiences shape both a person's expectations regarding a particular behavior, and the performance of the behavior. Smoking prevention programs based on the social reinforcement approach address the social pressures associated with smoking and include strategies such as recognizing and learning to resist social pressures to smoke, and identification of immediate physical and social consequences of smoking. Specific examples of activities include discussions of the consequences of smoking, correction of beliefs about the prevalence of smoking, role-playing resistance strategies, examinations of tobacco advertisements, and public commitments not to smoke (Pentz, *et al.*, 1989).

These approaches contribute to the majority of smoking prevention programs. Often, however, more than one approach is combined in a single intervention, making it difficult to examine the effects of a single approach. On the other hand, some programs do not seem to be based on theory, making it difficult to compare the findings of their evaluations, and to build on knowledge of adolescent smoking behavior.

b. Program Effects

Many smoking prevention programs have been reviewed in the literature. A number of meta-analyses have been conducted, in which comparisons of program effect sizes (ES, the standardized difference between the treatment and control means) based on a number of variables are made (e.g., type of program, length of program). These

analyses are quite useful in understanding which approaches to smoking prevention are most promising. Bruvold (1993) conducted a meta-analysis of 46 school-based smoking prevention programs. The programs were classified according to the approaches described above: rational, developmental, social norms, and social reinforcement. Interventions that did not include control groups or that were not school-based were excluded from the analysis. Bruvold found that all four types of programs could produce significant changes in *knowledge* compared with control groups (ES between 0.09 and 0.50 at first follow-up). Social reinforcement and developmental programs were also found to change *attitudes* (ES between 0.40 and 0.70 at first follow-up); Bruvold cautions, however, that very few programs actually measured changes in attitudes. With regard to *behavioral* change, the newer approaches (developmental, social norms, and social reinforcement) produced greater changes than the rational approach. ES at first follow-up for the newer approaches were between 0.14 and 0.30, compared with 0.03 for the rational approach. Changes in attitude were found to be related to changes in behavior, whereas changes in knowledge were not.

Similar results were obtained in earlier meta-analyses. In a review of 33 school-based substance abuse prevention programs (Bangert-Drowns, 1988), programs were classified as informational (i.e., the rational approach), affective (i.e., developmental and social reinforcement approaches), or mixed informational and affective. Increases in *knowledge* were found equally in all types of programs. Effect sizes for *attitude* changes were found to be significantly greater in affective and mixed informational and affective programs than in informational programs. Unlike Bruvold's meta-analysis,

this study did not find significant effect sizes for changes in behavior. This may have resulted from excluding programs aimed only at smoking prevention from the analysis; the programs included in the study were general drug education programs, many of which included smoking as a topic. In programs that target multiple drugs, effects tend to be larger for cigarette use than for other drug use (Tobler, 1986; Pentz, *et al.,* 1989; Hansen, Malotte, & Fielding, 1988).

In the one of the earliest meta-analyses (Tobler, 1986), two approaches were found to be successful. Peer programs, which included strategies such as teaching refusal skills, social skills, and life skills (i.e., developmental and social reinforcement approaches) were found to produce significantly greater effect sizes than knowledge only programs. Again, these were programs aimed at multiple drugs; the effects were greatest for cigarette use. Alternative programs, or programs based on the social norms approach, were found to be effective for adolescents at high risk for drug abuse.

In successful individual interventions using the social reinforcement approach, prevalence of smoking in treatment groups was found to be 30% to 70% less than in control groups; follow-up periods ranged from 1 to 8 years (Pentz, *et al.,* 1989; Perry, Kelder, Murray, & Klepp, 1992; Vartiainen, Fallonen, McAlister, & Puska, 1990; Sussman, *et al.,* 1993; Telch, Miller, Killen, Cooke & MacCoby, 1990). One major study (Murray, *et al.,* 1992) found no treatment effects for a social reinforcement intervention after five years. The authors suggested that the lack of treatment effect was due to a combination of treatment contamination in the control group, and incomplete implementation of the intervention in the treatment groups.

Individual interventions based mainly on the developmental approach were also found to be effective in slowing the increase in smoking prevalence in treatment groups compared with control groups (Botvin, Baker, Dusenbury, Torțu, & Botvin, 1990; Botvin, Batson, Witts-Vitale, Bess, Baker, & Dusenbury, 1989). In many interventions involving the social reinforcement or developmental approaches, the control groups received a traditional, rationally-oriented program. The results demonstrated the superior effect of social reinforcement and developmental programs over rationally oriented programs.

c. Criticisms of Program Evaluations

A number of limitations threaten the validity and generalizability of the results of smoking prevention program evaluations (Kozlowski, Coambs, Ferrence, & Adlaf, 1989). These include non-random assignment to treatment and control groups, short follow-up periods, differential attrition in treatment and control groups, use of non-treatment control groups (i.e., failure to measure placebo effect), incorrect unit of analysis (individual rather than classroom), and small sample sizes. Other criticisms include the fact that school-based programs where community interventions are also in place are compared with control schools in areas without community interventions, making it difficult to know the effect of the school-based interventions. Botvin, *et al.,* (1990) found that the effect of smoking prevention programs depends on the degree of program implementation, which is not often evaluated in smoking prevention studies. Finally, smoking prevention studies may only measure the effect of interventions in adolescents who are at low risk for smoking. This is especially true of school-based

programs, since adolescents who are truant or who have dropped out are more likely to become smokers (Johnson, *et al.,* 1990)

2. Delivery Methods

Smoking prevention programs can be delivered through schools, community action, mass media, parent organization, or combinations of these methods. Numerous studies have demonstrated that the effects of school-based programs are enhanced in areas where there are also other types of interventions such as community organization and mass media efforts (Vartianen, *et al.,* 1990; Flynn, Worden, Secker-Walker, Badger, Geller, & Costanza, 1992; Johnson, *et al.,* 1990). These investigators postulate that a supportive social environment, with similar objectives to those of school-based smoking prevention programs, leads to greater acceptance of smoking prevention messages. This hypothesis is supported by findings from a study conducted in a tobacco growing region of North Carolina (Dignan, Block, Steckler, & Cosby, 1985). After implementation of a social reinforcement prevention program, there was an increase in attitudes favourable toward smoking, presumably because the school intervention was at odds with local social support for tobacco production and use. This is referred to as the "boomerang effect." The necessity for a supportive social environment is also demonstrated by the fact that prevention programs targeting both smoking and alcohol generally show more favourable results for tobacco use than alcohol use (Tobler, 1986; Pentz, *et al.,* 1989; Hansen, *et al.,* 1988). This difference may be due to a social environment more supportive of alcohol use than cigarette use.

Mail and telephone follow-up to school-based programs have also been used.

In one study (Elder, *et al.,* 1993), students in the treatment group were given a social reinforcement program, as well as telephone calls and mailed newsletters; after three years the prevalence of smoking was 37% less in the treatment group than the control. Unfortunately, no group was given only the school-based program, making the added effectiveness due to the mail and telephone follow-up difficult to assess.

3. Leadership Types

The type of leadership in school-based smoking prevention programs has varied, including health professionals or experts, classroom teachers, and same age or slightly older peers. Investigations show support for peer- and teacher-led programs over expert-led programs. Telch, *et al.,* (1990) found that after a social reinforcement smoking prevention program, students in peer-led groups had significantly lower smoking prevalence (24.8%) than those in the teacher-led and control groups (29.3% and 30.5%, respectively). In another study that compared peer, expert, and teacher leadership, significantly lower smoking and intention to smoke rates occurred among females in the teacher-led and peer-led groups than in the expert-led and control groups (Clarke, MacPherson, Holmes, & Jones, 1986). Peer-led males had lower, however, non-significant intentions and behaviors compared with the other groups.

A meta-analysis of school-based substance abuse programs (Bangert-Downs, 1988) found that effect sizes for attitudes were significantly higher when peer leaders were used compared with teachers or experts. In contrast, Cohen, Felix, & Brownell (1989) found no difference in changes in smoking behavior between peer-led and teacher-led groups. In general, however, peer-led programs appear to produce greater

changes in attitudes and behavior than teacher- and expert-led programs. This may be due to the fact that adolescents view peers as more important role models than teachers or experts.

4. Regulatory Approaches

In addition to smoking prevention programs (with varying methods of delivery and types of leadership), a number of regulatory approaches have been used in an effort to prevent adolescent smoking. These include advertising restrictions, economic disincentives to smoke, and direct restrictions on tobacco use (Bierer & Rigotti, 1992). Restrictions on cigarette advertising are based on the correlations found between exposure to cigarette advertising and adolescent smoking rates. Although the effectiveness of cigarette advertising restrictions on adolescent smoking is unknown, there is evidence that increases in cigarette advertising and promotion (e.g., sporting event sponsorship, free samples of cigarettes) are associated with increased smoking rates in adolescents (Botvin, *et al.,* 1993; Albright, Altman, Slater, & MacCoby, 1988). Cigarette warnings (in advertisements and on cigarette packages) have been used to try to prevent smoking, however, their effectiveness is also unknown (Bierer & Rigotti, 1992).

The main economic disincentive believed to affect adolescent smoking is increased cigarette price. Consumption of cigarettes and initiation of smoking decrease with increasing price; this is especially true of adolescents, who are three times as likely as adults to change behaviour as a result of price increases (Novotny, Romano, Davis, & Mills, 1992). Increases in cigarette taxes in California resulted in a reduction in

smoking prevalence from 25% to 21.4% over one year (Bierer & Rigotti, 1992). The effect of greater taxation can also be seen by comparing tax increases and consumption decreases in Canada and the United States. In Canada, where taxation increases have been greater, the decrease in smoking consumption has also been greater (Bierer & Rigotti, 1992).

Finally, prevention efforts through regulation include restrictions on adolescents' access to cigarettes, in the form of smoke-free environments and restrictions on cigarette sales. Smoke-free environments in schools and workplaces reinforce non-smoking social norms (Novotny, *et al.,* 1992). Pentz, Brannon, Charlin, Barrett, MacKinnon, & Flay (1989) found that schools with greater restrictions on smoking had lower smoking prevalence among their students, although the differences were not statistically significant. In spite of this, they suggest smoking policies in schools may be an important smoking prevention strategy to pursue in the future. With regard to cigarette sales, adolescents can easily purchase cigarettes, and this contributes to adolescent smoking; restriction of access by adolescents has led to reduced sales to this group. Hinds (1992) found that smoking prevalence among girls decreased from 26.4% to 11.5% after the initiation of a local ordinance to enforce a ban on cigarette sales to minors. Non-significant decreases were seen in males. Another similar enforcement program resulted in a decrease of regular smokers from 16% to 5% (Jason, Ji, Anes, & Birkhead, 1991). In both studies, changes in legislation and enforcement were the only major changes in smoking prevention efforts during the study period. Bans on cigarette vending machines have also been effective in restricting adolescent access to

cigarettes (Forster, Hourigan, & Kelder, 1992).

C. Adolescents' Opinions Regarding Effective Smoking Prevention Strategies

Research in this area is very limited, as only two studies were found. First, Heimann-Ratain, Hanson, & Peregoy (1985) used focus group interviews in the design of a smoking prevention program that addressed social influences and pressures to smoke. Eight focus groups were conducted, in both urban and rural areas; each group consisted of eight 11 year olds. The purpose of the study was to "provide information about the target population's beliefs, ideas, values, motivations, and skills, for incorporation into the program and to provide feedback on the proposed content of the program" (p. 13). Subjects indicated they wanted information on the long-term health effects of smoking, as this made the other program components relevant (e.g., the role of peer pressure, family influences on smoking). The subjects also said they enjoyed role playing various resistance skills; however, early in the focus groups the subjects generally did not recognize that they were subject to peer pressure to smoke. Therefore, the recommendation of including resistance skills may have only come as a result of exploring the role of peer pressure earlier in the session, or from the enjoyable experience of the role-playing itself. The request for information on long-term health consequences is interesting, because this has not been found to be an effective prevention strategy, and adolescents do not cite fear of long-term consequences of smoking as a reason for not smoking (Stanton, Mahalski, McGee, & Silva, 1993).

In a second study (Perry, Klepp, Halper, Hawkins, & Murray, 1986), 207 peer

leaders of two smoking prevention programs were surveyed to assess their perceptions of which program components were most preferred by their classmates, and whether the programs used would be effective in preventing smoking. Program components included health consequences of smoking, social pressures to smoke, and resistance strategies. The peer leaders felt that students' favourite activities were learning about smoking prevalence, examining cigarette advertisements, and role-playing various resistance strategies. Unpopular activities included making public commitments not to smoke, interviews with adults about smoking, and the movie *Death in the West.* Sixty-eight percent of the peer leaders of one program and 44% of the peer leaders of the other program felt that the strategies used would be effective in preventing cigarette smoking. Both this study and the one cited above sought adolescent opinions of effective prevention strategies; however, in both cases this was done *after exposure* to existing strategies.

IV. Summary

Little research has been done to assess adolescents' opinions of effective smoking prevention strategies. Of previous smoking prevention programs, those based on social reinforcement and developmental approaches appear to be the most effective method of preventing adolescent smoking. Smoking prevention programs have a greater effect when various methods of delivery are combined. Programs can either be expert, teacher, or peer-led. While there is little support for the use of expert leaders in smoking prevention programs, peer-led programs appear to be an effective way of decreasing the rate of onset of adolescent smoking. Public policy and legislative

initiatives may also impact the prevention of smoking among adolescents. Effective strategies include cigarette taxation and restrictions on adolescents' access to cigarettes. Potentially effective strategies include restrictions on advertising, use of cigarette warnings, and smoke-free school policies. Knowledge of the influences on adolescent smoking is necessary for adolescent smoking prevention. These influences can be biological, psychological, environmental, media-related, or developmental.

The impact of smoking on health makes the prevention of adolescent smoking an important goal. In seeking to increase the effectiveness of prevention efforts, it is important to seek the opinions of those who will be the target of these efforts.

CHAPTER TWO: RESEARCH DESIGN & METHODS

I. Introduction

This chapter will outline the study design and methods used to carry out this research. The method of data collection, focus group interviews, will be discussed, followed by an explanation of participant selection, data collection, data analysis, and ethical issues.

II. Study Design

A. Focus Group Interviews

This study consisted of focus group interviews to assess the perceptions and opinions of adolescents regarding effective strategies for decreasing intention to smoke. Focus groups are "carefully planned discussions designed to obtain perceptions on a defined area of interest in a permissive, nonthreatening environment" (Krueger, 1988, p. 18). One advantage of focus group interviews is that while assumptions regarding effective smoking prevention strategies found in the literature can be either confirmed or denied, predetermined, closed-ended questions are not used. This allows for the fact that adolescents may prefer smoking prevention strategies that are not evident in the literature, or that they may give strategies different priority than previously thought. Focus group interviews also allow for the observation of opinions that are formed within a group (Kitzinger, 1994). The smoking literature indicates that adolescent smoking is very much affected by social interactions (Harken 1987), therefore it is appropriate to conduct this research in a group setting.

One of the main limitations of focus group interviews is that while focus groups

have high face validity, generalizability of findings may be low (Morgan, 1993). This is because the participants may not be representative of the target population (due to selection bias), and the results cannot, and should not, be analyzed statistically. The purpose of this qualitative, exploratory study, however, was to examine the range of participants' opinions and perceptions, in this case adolescent opinions regarding smoking prevention. Information from this study can be used to develop a quantitative instrument to administer to a larger group of adolescents, in order to make generalizations regarding effective smoking prevention strategies in the adolescent population.

B. Characteristics of the Focus Groups

Experts in focus group research recommend that each group contain participants homogeneous on relevant study characteristics (Greenbaum, 1988). The relevant characteristics in this study were gender and smoking status; thus, groups were assembled based on these factors. Morgan (1993) suggests that if comparisons between groups of varying study characteristics are to be made, at least two groups in each comparison category should be conducted. Therefore, for each gender and smoking status combination, two focus groups were carried out.

The use of pre-existing groups (i.e., participants who know each other) is discouraged, as it may be difficult to determine whether group interactions were due to pre-existing dynamics between group members, rather than the issue being discussed (Krueger, 1988). Kitzinger (1994), however, argues that while this may apply in market research, the traditional domain of focus group research, the use of pre-existing groups

may be an advantage in social science and health research. She states "by using pre-existing groups we were sometimes able to tap into fragments of interactions which approximated to 'naturally occurring' data (such as might have been collected by participant observation)" (p. 105). In this study, pre-existing groups were used. This decision was based on practical considerations (e.g., ease of assembling groups); however, based on Kitzinger's argument this was not felt to be a threat to the validity of this study.

Finally, adult focus groups generally have 8-12 participants and last for approximately two hours. Krueger (1988) recommends that groups conducted with adolescents be smaller and shorter, to facilitate interaction and to maintain interest; thus, the groups contained between 4-6 participants and were 45-60 minutes in length.

III. Sampling Methods

A. School Selection

Grade 8 students from a Calgary junior high school felt to be at higher than average risk for smoking (according to key informants in the school system and Calgary Health Services) were invited to participate in this study. It was hypothesized that use of a higher risk school would increase the number of smokers available to participate in the study, and would allow for assessment of the opinions of non-smoking adolescents who may be at high risk for adopting smoking behavior. Grade 8 students were recruited because at this age smoking prevalence has begun to increase (Pentz, *et al.,* 1989).

B. Participant Selection

1. Eligibility

The researcher gave a verbal presentation of the study to the students in each of five grade 8 classes. Students interested in the study were required to read and sign a consent form, to provide their parents with a letter explaining the study, and to obtain written parental consent. Students also completed an information form, where they were asked which statement best described them:

- Never smokers: I have never smoked a cigarette,
- Experimental smokers: I smoke once in a while (less than every week),
- Regular smokers: I smoke regularly (every week), or
- Quitters: I used to smoke, but I have not smoked for the last month.

Responses were used to assign eligible students to a focus group. Copies of the information letter to parents, the consent form, and the information form can be found in Appendices A, B, and C, respectively.

2. Group Construction

Students who provided personal and parental consent were considered for group participation. Purposive sampling was used to create focus groups with participants homogeneous with respect to gender and smoking status. The original intent of this study was to conduct focus group interviews of male and female never smokers, experimental smokers, regular smokers, and quitters; however, this was revised after meeting with school officials. Students selected to be in this study were excused from their health class in order to participate in a focus group interview. As a result, the

participants of each focus group (e.g., female experimental smokers) had to be obtained from only one class (i.e., approximately 30 students), rather than the entire grade 8 population of the school (approximately 130 students). In each class, there were simply not enough experimental smokers, regular smokers, or quitters of each gender to be able to conduct a focus group for each gender and smoking status combination. Therefore, experimental smokers, regular smokers, and quitters were considered to be ever smokers, and groups of male never smokers, female never smokers, male ever smokers, and female ever smokers were constructed. For each gender and smoking status combination, two focus group interviews were carried out.

IV. Data Collection

The eight focus group interviews were conducted in the months of May and June, 1994. The benefit of using a neutral, off-school site (where participants may have felt freer to express their true feelings) was overruled by the convenience of meeting at the school, during regular school hours. Sessions were 45-60 minutes long, and were audio-taped. The researcher facilitated all eight groups. Participants received a McDonald's Big Mac coupon.

Open-ended questions were used to lead the discussion in four areas: which prevention program approaches should be targeted (e.g., resisting social pressures, development of life skills); preferred delivery methods (e.g., school programs, mass media campaigns); preferred type of leadership (e.g., peer versus teacher versus expert leadership); and regulatory strategies (e.g., cigarette warnings, cigarette taxation). To discuss program approaches, participants were asked to write down three answers to the

question, "if your job was to help people your age not to start smoking, what would you do?" Each answer was then discussed among all group members. For the remaining three topics, participants brainstormed a list of potential delivery methods, leadership types, or regulatory approaches. The advantages and disadvantages of each item on the list were discussed, and then students were asked which delivery method, leadership type, or regulatory approach would be most effective in the prevention of adolescent smoking. A copy of the discussion guide used during the focus group interviews can be found in Appendix D.

The researcher attempted to remain neutral on the topic of smoking prevention during the interviews. Students were encouraged to explain their responses in detail, and to express opinions different from the consensus of the group. For each question, answers volunteered by students were discussed in detail; following this, the researcher suggested other ideas, and these were also discussed. During analysis, a distinction is made between comments that were volunteered by students and those that were in response to suggestions by the researcher.

The initial focus group was used as a pilot test of the interview questions, the interview room, and the recording equipment. During this interview, the researcher recognized the need to suggest possible smoking prevention strategies for discussion. The researcher suggested strategies as she could remember them, however, some strategies evident in the smoking prevention literature were forgotten. Therefore, following this group, a comprehensive list of smoking prevention approaches, delivery methods, leadership types, and regulatory approaches was constructed for use when

making suggestions during subsequent groups.

The interview room was found to be adequate, however, the recording equipment did not perform well. Feedback from the overhead lights affected the tape quality through a loud hum on the tape. To minimize the impact on the quality of the written transcript, the researcher transcribed this tape herself, on the day of the interview. In this way, many of the comments that were difficult to hear on the tape could be recalled. More careful attention to the placement of the recording equipment resulted in no further problems with tape quality. All other tapes were transcribed by a typist and the transcripts were checked by the researcher.

V. Data Analysis

A. Data Management

Audio-tapes of the focus group interviews were transcribed verbatim. The data was numbered, coded, and examined using the computer software The Ethnograph (Seidel, Kjolseth, & Seymour, 1988). Once a printed transcript of a focus group was obtained, each line of the text was numbered using The Ethnograph. Next, the data was manually coded, and the coding scheme was entered into the computer. In this way, The Ethnograph was used to examine the data for trends and patterns in the responses of the participants. Differing responses for participants, by smoking status and gender, were assessed. Summary descriptions of responses are provided, with illustrative quotes. Results are interpreted in the context of current approaches to smoking prevention.

B. Coding of Data

Miles & Huberman (1984) recommend the creation of an initial list of codes, prior to manual coding. These codes are based on the "conceptual framework, list of research questions, hypotheses, problem areas, and key variables that the researcher brings into the study" (p. 57). Thus, an initial list of codes and definitions, was established, based on strategies evident in the smoking prevention literature. This list included codes to identify program approaches (e.g., the developmental approach), specific strategies within an approach, delivery methods, leadership types, and regulatory approaches.

This initial list of codes and definitions was modified as coding proceeded, with some codes being altered, some added to the list, and some deleted. Although the purpose of this study was not to generate theory (rather to examine the data collected for trends and patterns, and to compare these to the relevant literature), elements of the constant comparative method (Glasser & Strauss, 1963) were used in creating new codes. As a new category of data became evident, it was given a code name, similar to the actual words used by the respondent. Subsequent data that appeared to be similar to the new category was compared to previous data in that category. Based on this comparison, the data was either coded in the new category, or categories were expanded, collapsed, or modified. In order to assess the reliability and validity of the coding process, two health professionals who have worked in this research area were asked to code one of the transcripts. A detailed list of codes and definitions can be found in Appendix E.

VI. Ethical Issues

This research project was subject to ethical approval by the Conjoint Medical Ethics and the Education Joint Research Ethics Committees of The University of Calgary, as well as the Calgary Board of Education. Participation in this study was voluntary, and was indicated by provision of written personal and parental consent, and by student attendance at the interview. Both students and parents were informed that they could withdraw from the study at any time. The student consent form was written at an age-appropriate reading level.

Self-reported smoking status was obtained from students wishing to participate in the focus group interviews. Students were assured that their responses would not be made known to their parents or teachers. Upon completion of this study, the list of students and the audio-tapes were destroyed. Only the researcher, her supervisor, and a typist had access to the audio tapes. Students were assured that it would not be possible to identify the participants of the study in the final report.

VII. Summary

This research study was presented to grade 8 students of a Calgary school felt to be at higher than average risk for smoking. Student and parent consent was obtained, as well as information on smoking status. Eight focus group interviews were conducted, to assess adolescents' opinions regarding effective smoking prevention strategies. Each group consisted of 4-6 students; within each group, participants were of the same gender, and were all either never smokers or ever smokers. Open ended questions regarding program approaches, delivery methods, leadership types, and

regulatory approaches to smoking prevention were presented. Discussion of a variety of opinions was encouraged.

Audio-tapes of each focus group were transcribed verbatim. They were then numbered and coded using The Ethnograph computer software. A list of initial codes was devised, based on the smoking prevention literature. During the coding and analysis of the data, this list of codes was revised as necessary. Manual coding was entered into The Ethnograph software, and the data was then analyzed for trends and patterns. The trends and patterns were compared with the smoking prevention literature, and were analyzed with respect to gender and smoking status.

CHAPTER THREE: OVERVIEW OF RESULTS

I. Introduction

This chapter provides an overview of the results obtained in the focus group interviews. Characteristics of the study sample are presented, followed by a presentation of the categories of responses obtained in the focus group interviews. For each of the main questions addressed in the focus groups, the various categories of responses are defined, and where necessary, illustrative quotes are given. These categories and definitions will be used in subsequent chapters that analyze adolescents' opinions regarding effective smoking prevention strategies.

II. Study Sample

The participating school had 130 grade 8 students. Of these, 106 (81.5%) indicated interest in the study through completion of the information form; however, only students who returned consent forms with student and parental signatures were considered for participation (a total of 53 students, or 40.8% of all grade 8 students). The gender and smoking status of these students is shown in Table 1. Definitions of each smoking status were given in Chapter Two (section II.B.1, page 23).

Table 1: Gender and Smoking Status of Eligible Students

	Never Smokers	Ever Smokers			Total
		Experi-mental	Regular	Quitter	
Female	14 (26%)	15 (28%)			29 (54%)
		3	2	10	
Male	12 (23%)	12 (23%)			24 (46%)
		1	2	9	
Total	26 (49%)	27 (51%)			53 (100%)
		4	4	19	

Of these 53 eligible students, groups were constructed as described in Chapter Two (section II.B.2, page 23). Of the 38 students invited to a group interview, 35 participated. One student did not wish to participate, and two students were absent on the day of their interview. The gender and smoking status of participating students are shown in Table 2.

Table 2: Gender and Smoking Status of Participating Students

	Never Smokers	Ever Smokers			Total
		Experi-mental	Regular	Quitter	
Female	8 (23%)	10 (29%)			18 (52%)
		2	1	7	
Male	9 (26%)	8 (23%)			17 (48%)
		1	1	6	
Total	17 (49%)	18 (52%)			35 (100%)
		3	2	13	

In general, students who participated in the focus group interviews were pleasant and eager to contribute to the discussion. Some participants did not make many verbal comments, however, they were attentive to the discussion and contributed when called upon (i.e., these students appeared soft-spoken rather than disinterested). Female participants appeared similar in physical development and maturity. This was not true of the males in this study; even within a single group, some boys were pre-pubescent, while others were much more intellectually and physically mature.

In nearly all groups it was difficult to discuss regulatory approaches, as students would often declare that "rules are stupid" and that "rules don't help," perhaps reflecting the sometimes rebellious nature of adolescence. In addition, most students had difficulty thinking in abstract terms. For example, if a cigarette advertising ban was suggested, students often pointed out that this would not be possible in Canada, since many American magazines are distributed in this country. It was difficult, if not impossible, for students to ignore this fact in order to consider the *potential* effectiveness of decreased cigarette advertising.

III. Response Categories

This section summarizes the types of responses that were obtained in the eight focus group interviews. For each of the four main topics addressed (program approaches, delivery methods, leadership types, and regulatory approaches), categories of responses are presented, with definitions and in some cases, illustrative quotes. In addition to these four main topics, some additional themes emerged during the focus group interviews, and these are also defined in this section. It is not the purpose of this

section to indicate the level of support expressed for any particular smoking prevention strategy, but rather to define the range of opinions that were expressed by the focus group participants. Trends and patterns in responses, the relationship between adolescents' opinions and the smoking prevention literature, and differences in responses by gender and smoking status are presented in subsequent chapters.

A. Program Approaches

A **program approach** refers to the overall approach or orientation of a smoking prevention program. Program approaches that are evident in the smoking prevention literature are the rational, developmental, social norms, and social reinforcement approaches. These four program approaches were described in detail in Chapter One (section III.B.1.a, page 7). Each approach has a number of specific smoking prevention strategies, and these are described below.

1. Rational Approach

The **rational approach** attempts to change attitudes toward smoking through the provision of facts about smoking, including its effects and consequences. A number of specific smoking prevention strategies comprise the rational approach. **Demonstrations** of the effects of smoking are tangible examples of the effects of smoking. These could include pictures of lung tumours, comparisons of the lungs of smokers and non-smokers, or pictures or visits with people who suffer from smoking-related diseases.

Discussion of **long term health effects** refers to the discussion of future health consequences of smoking, such as lung cancer, heart disease, and emphysema. Some

students suggested that the **physiologic effects** of smoking be discussed; that is, the immediate physiologic effects such as the presence or absence of a "high," relaxation, etc. Students also suggested that the **addiction** associated with nicotine and cigarette smoking be discussed, as well as the effects of the **ingredients in cigarettes**.

In addition to the above rational approach strategies (evident in the smoking prevention literature), students suggested two other strategies that can be classified as rational in their orientation. First, students suggested that the **expense** of smoking be discussed, in order to persuade adolescents not to take up smoking. Second, students suggested that a discussion of the **effects of second hand smoke** might be an effective way to prevent adolescent smoking. One student stated:

> OK, I'd like show them like what, you might be smoking, bad things might happen to you but it can also happen to people around you. Like if you're carrying a baby or something they could show a video of how it slowly kills the baby and gives them asthma and stuff.

2. Developmental Approach

The **developmental approach** attempts to prevent smoking through the improvement of self-esteem, and improvement of skills such as decision-making, anxiety reduction, communication, and self-improvement. Three categories of responses within this approach were obtained in the focus group interviews.

Improvement of **decision-making skills** refers to the improvement of skills necessary to evaluate a behaviour under consideration. **Self-confidence improvement** refers to improvement of confidence as a means to prevent smoking. This could involve both self-improvement and improvement of self-esteem. Finally, some students suggested that receiving help in **dealing with problems**, such as depression, family

problems, or stress, would be effective in adolescent smoking prevention. Students felt that smoking was one way of dealing with these problems, therefore, learning to cope with problems in other ways may prevent adolescent smoking. The following excerpt describes this strategy:

> Participant: And stress, or in school, sometimes when I come home from school some days it's just, I've got so much homework and stuff, it's just, like, now what am I going to do? I just want to grab for [a cigarette], you know...
>
> Researcher: So helping people with stress might be helpful?
>
> Participant: Yeah.

3. Social Norms Approach

The **social norms approach** attempts to prevent adolescent smoking through the provision of activities, as an alternative to cigarette use. The main strategy of the social norms approach is involvement in **extra-curricular activities**. Students suggested that participation in activities such as clubs or sports may reduce boredom, and subsequently cigarette smoking.

4. Social Reinforcement Approach

The **social reinforcement approach** examines the social pressures associated with smoking, including recognition and resistance of social pressures to smoke, and recognition of the immediate physical and social consequences of smoking. Seven specific smoking prevention strategies using this approach were suggested by the participants of the focus group interviews.

A discussion of **short term health effects** of smoking, such as smoker's cough and decreased athletic performance, was suggested by some participants. Students also

suggested that a discussion of the **short term social effects** of smoking would prevent adolescent smoking. These effects include unpleasant smell on hair and clothes, bad breath, and the effect of smoking on attractiveness to other people.

Students were asked whether they thought practicing **resistance strategies** would be helpful in adolescent smoking prevention. This would involve activities such as role-playing how to say "no" to offers of cigarettes. Making **public or personal commitments** not to smoke was also discussed as a smoking prevention strategy. In addition, **advertising study** was suggested; this would involve the examination of the pressures to smoke found in cigarette advertisements, for the purpose of recognizing and resisting these pressures.

Two final smoking prevention strategies of the social reinforcement approach emerged in the focus group interviews: reducing peer and social pressures to smoke, and addressing motivation to smoke. **Reducing peer and social pressures to smoke** is the reduction of *inter*personal pressures to smoke (e.g., offers from others, smoking by role models). It also refers to increasing peer and social pressures to *not* smoke. An example of reducing peer and social pressure to smoke was given by one student who advocated greater cigarette advertising restrictions:

> There just would, it wouldn't be around so much so it wouldn't seem like such a popular thing to do anymore. If it wasn't everywhere you look...then people just wouldn't think it was the thing to do.

An example of increasing peer and social pressures to *not* smoke can be seen in this statement:

> I'd say a model [should deliver smoking prevention messages] because...it's kind of hard to explain but if they don't have to smoke, um,

> like you guys are saying that beautiful women in cigarette ads smoke and everything, well if they don't have to smoke then like some people would probably get the message that you don't have to like, smoke just to be gorgeous.

A different approach to increasing the peer and social pressures to not smoke was suggested by another student:

> Like if you showed pictures of like kind of like losers smoking and stuff and make other people not want to do it.

All three of the above quotes are examples of the category reducing peer and social pressures to smoke.

Addressing motivation to smoke is the recognition and/or reduction of *intra*personal pressures to smoke (for example, to achieve image). Although these pressures may be influenced by peer or social pressures, examination of motivation to smoke refers to a personal, introspective reflection. Students felt that if adolescents examined motivations for smoking, they would recognize that smoking to fit in with others or to achieve a "cool" image is foolish, and they would not smoke. The following statements are examples of this category of response:

> I would tell them not to smoke because everyone else does it, and like a lot of people smoke to fit in. Because I believe if you want to survive in the world today you have to have your own unique personality and individuality.

> [I would ask them] is it like really you, or are you just putting on an image for your friends?

> [I would ask them] why would you want to smoke, like if they said just like our friends did it or something like that I'd say that's dumb. If your friends say, like jump off a bridge or something would you do it? You know like, do you follow everything your friends do?

5. Miscellaneous Approaches

Two of the smoking prevention strategies suggested by the focus group participants could not be classified as rational, developmental, social norms, or social reinforcement in approach. The first was to **try smoking**, where students suggested that people should try smoking once, in order to see that it is not a desirable habit. The second was to **defer smoking**, where adolescents should be discouraged from starting to smoke until they are older (e.g., age 20), since non-smokers of this age are unlikely ever to begin smoking.

B. Delivery Methods

Delivery methods refer to the location or medium used to deliver smoking prevention messages. Many students suggested the **school** as a delivery method for smoking prevention, either in the classroom, through optional, extra-curricular activities, or during school assemblies. **Television** was also suggested, either through smoking prevention commercials, or through television programs. A number of **print media** were suggested, such as magazines, newspapers and books; these could contain celebrity endorsements of non-smoking, or anti-smoking messages such as "break free" advertisements. Participants identified the **home** as a delivery method for smoking prevention, most often through family members, either immediate (e.g., parents, siblings) or extended (e.g., grandparents).

Students pointed out that **public places** such as buses, bus stations, shopping centres, and restaurants deliver smoking prevention messages through signs, posters, and no-smoking policies. One group also suggested that popular **games**, such as Nintendo

could be used to deliver smoking prevention messages, either through messages during the game, or through pamphlets that come with the game. Students also suggested **radio, health facilities** (hospitals, community health centres, or physicians' offices), **community organizations** (such as community centres or community sports teams), **pamphlets** and other brief written materials, and **cigarette warnings** on packages and advertisements. Cigarette warnings were also considered to be a regulatory approach (see below).

C. Leadership Types

Leadership type refers to the type of person who delivers a smoking prevention message or program. During the focus group interviews, both *categories* and *characteristics* of leaders were discussed. The **category** of a leader refers to the leader's occupation or age (for example teacher, health professional, student). **Characteristics** of a leader include his/her smoking status and attractiveness or popularity. A leader of any category may have various characteristics.

1. Categories of Leaders

Seven different categories of leaders were identified by the focus group participants. **Peers** are adolescents who are perceived to be similar to their audience in terms of their experience and understanding of the pressures to smoke. This category includes same age or slightly older peers, siblings, and other same age family members (such as cousins). School **teachers**, as well as **experts** (people perceived to know a great deal about smoking and smoking prevention, such as physicians, nurses, and researchers) were also suggested as categories of leaders.

Parents and older family members (such as grandparents) may deliver smoking prevention messages to adolescents. This may be intentional, through discussion of smoking with the adolescent, or it may be unintentional, as described by two participants:

> Well my mom smokes and I know what it's doing to her. So I don't want that to happen to me or any of my friends.

> What I'm saying is like, if your parents smoke and you know what it's like, like living in the house like that and it like stinks and it's all gross and stuff like that, you're not going to smoke.

Other categories of leaders are **celebrities** (well-known individuals such as professional athletes, actors, and singers), **patients and their families** (people who have a smoking-related disease, or people with a family member with a smoking-related disease), and **coaches** of community or school sports teams.

2. Characteristics of Leaders

Focus group participants identified four potentially important characteristics of leaders of smoking prevention efforts. **Smokers or quitters** are people who presently smoke, or who have smoked in the past (i.e., not never smokers). Present **non-smokers** were also seen to be important in some cases. Some leaders should be physically and/or socially **attractive people**, while in some cases leaders should be **normal people** (average, local, and non-famous). The specific cases in which these characteristics are important will be discussed in the next chapter.

D. Regulatory Approaches

Nine different **regulatory approaches** (laws or rules that may contribute to smoking prevention) were discussed during the focus group interviews. These included:

- **age restrictions** for purchasing, possessing, or smoking cigarettes,
- **no-smoking policies** in workplaces, restaurants, schools, and shopping centres,
- alteration of the **price of cigarettes** in order to decrease smoking prevalence,
- cigarette **advertising restrictions** such as Canada's ban on cigarette advertising on broadcast media,
- **warnings** of the effects of cigarette smoking, found on cigarette packages or in cigarette advertisements (cigarette warnings were also considered to be a delivery method), and
- **plain packaging** of cigarettes, through legislation to limit the colours and designs that can be used on cigarette packages.

Students also described **family restrictions**, or family rules or standards that may prevent adolescents from smoking. These restrictions can come from parents and/or siblings; they may be specific rules, as described by this student:

> I think that is the one thing that most people are scared of kind of, is that their parents will find out and they'll be grounded for like a long time or something.

Family restrictions may also be more subtle standards that might discourage smoking, as described by one student: "nobody in my family smokes, so I would be kind of looked on as an outcast if I smoked."

Cigarette restrictions (restrictions on the types or amounts of cigarettes that can be sold) were suggested as a potentially effective smoking prevention strategy. One

student suggested that banning cigarettes completely would decrease smoking prevalence:

> Or even if they made cigarettes illegal, they would still be sold, but if they really wanted to like reduce smokers in Canada, then the government should just stop producing the stuff.

Another student felt that the more addictive cigarettes should not be sold:

> And I think that what they, if the government really wants to stop like smoking, stop, well I mean slow down the people who are smoking, they should like you know the extra strong or whatever cigarettes, they should take those off the market and leave the light and regular.

The final regulatory approach described in the focus groups was **sports team rules**. One student described such a rule:

> I played on a hockey team and we had this coach that told us if anyone is even like smoking or chewing, if he finds out that, he says you are automatically off the team so I guess like [that] can kind of be good.

E. Additional Themes

During the focus group interviews, a number of **additional themes** that were not specifically addressed by the planned questions emerged. Some of these were related to effective smoking prevention among adolescents, and some were more general themes related to adolescent smoking behaviour. These themes are defined here, and discussed in detail in the next chapter.

1. Prevention Strategies

Focus group participants suggested a number of ways in which smoking prevention strategies could be made more effective. Comments were made regarding the appropriate **age for various smoking prevention interventions**, such as the age at which smoking prevention should begin, and the appropriate ages for different

approaches to smoking prevention. Students also suggested that there are **gender differences** in smoking prevention, therefore some strategies may be more effective for one gender than the other. Many students suggested that smoking prevention interventions must have a more **realistic approach**. This approach would have average, normal people and would portray real events and factual information.

Focus group participants also stated that movies about smoking prevention should not be **out of date**. Many groups also suggested that **scare tactics** should be used in smoking prevention; that is, facts about smoking should be presented in an exaggerated or extreme way, to scare the audience about the consequences of smoking. Another theme that emerged in the focus group interviews was the need to **give adolescents a choice about smoking**, and not to preach against smoking. Finally, students suggested a number of ways of **making smoking prevention interesting**, such as having guest speakers, involving students in discussions and activities, and the use of audio-visual displays.

2. Other Themes

Five additional themes related to adolescent smoking behaviour arose during the focus group interviews. Students identified a number of situations where they perceived **apathy**, where those in authority (e.g., teachers) do nothing to prevent or stop smoking, either because they are not concerned, or because the problem is too big. Students also described many instances of **hypocrisy**, in which mixed messages about smoking are given out. Although the focus group questions addressed the *primary* prevention of cigarette smoking, students had a number of ideas about **helping adolescents to quit**

smoking. One attitude that emerged frequently in the focus groups was a **fatalism** with regard to smoking and its prevention. Finally, students made many comments on reasons **why adolescents begin to smoke**; these reasons will be discussed in detail in subsequent chapters.

IV. Summary

This chapter presents an overview of the results obtained in the focus group interviews. Students who provided personal and parental consent to participate were recruited. A total of 35 grade 8 students participated in a focus group interview. These students were grouped according to smoking status and gender. Participating students were pleasant and generally eager to contribute to the discussion; however, discussion of regulatory approaches was difficult at times, as students often categorically rejected rules or laws as effective smoking prevention strategies.

In each focus group interview, program approaches, delivery methods, leadership types, and regulatory approaches were discussed. This chapter lists and defines the categories of responses in each of these four main discussion areas. Where necessary, illustrative quotes have been presented to clarify the meaning of a category. Throughout the group discussions, some themes emerged that were not part of the planned discussion; these are also listed and defined in this chapter. Some of these additional themes outlined means of making adolescent smoking prevention strategies more effective, while some addressed adolescent smoking behaviour in general.

The next three chapters will use the focus group responses to address the following three questions:

- According to adolescents, which prevention strategies will lead to an intention not to smoke?
- What are the similarities and differences in effective smoking prevention strategies identified in the smoking prevention literature, and effective strategies identified by adolescents?
- Do the smoking prevention strategies identified as effective by adolescents differ according to gender or smoking status?

CHAPTER FOUR: TRENDS AND PATTERNS IN RESPONSES

I. Introduction

The purpose of this chapter is to consider the research question "according to adolescents, which prevention strategies will lead to an intention not to smoke?" Although no two groups, or even two participants were identical in their responses, similarities in responses were seen between the first and second focus group interviews, similarities that continued throughout the data collection period. Of course, there were also important differences between the various focus groups. Many of these differences were related to smoking status and/or gender. These will be discussed in detail in Chapter Six; this chapter will highlight some of the trends and patterns seen in the data.

II. Program Approaches

A number of program approaches, and strategies within these approaches, were described by the focus group participants. Strategies of a rational approach were by far most often suggested as effective for adolescent smoking prevention. The second most popular approach was the social reinforcement approach. This approach was followed by the social norms and developmental approaches, which were suggested with about equal frequency. These approaches are discussed below. Trying smoking to see that it is an undesirable habit (a miscellaneous approach) was suggested by a few groups; however, it was not generally supported as an effective smoking prevention strategy. The second miscellaneous approach, deferring smoking until adolescents are older, was only suggested by one group. These two approaches will not be discussed further.

A. Rational Approach

Seven rational approaches to smoking prevention were suggested by the focus group participants: demonstrations, and learning about the addictive nature of smoking, the expense of smoking, the effects of the ingredients in cigarettes, the effects of second hand smoke, and the physiologic effects of smoking. The overall trend in responses was to support the discussion of long term health effects, with the addition of tangible demonstrations of the effects of smoking, to make the discussion even more effective.

The participants were quite knowledgeable about the long term effects of smoking; they suggested that the relationship between smoking and lung cancer, heart disease, oral and throat cancers, emphysema and decreased life expectancy be discussed (many participants said people their age should be told that each cigarette smoked will shorten their life by five minutes). Many types of demonstrations were suggested by students: pictures or actual visits with people with smoking-related diseases, television programs showing people suffering from smoking-related diseases, pictures or samples of smokers' lungs and hearts, presentations by people who have had family members die of smoking-related diseases, mechanical demonstrations of the heart and lungs while smoking, and presentations by people who cannot participate in sports as a result of smoking.

Students felt that the addition of demonstrations of the effects of smoking would do two things to improve a discussion of the long term health effects of smoking: make smoking prevention more interesting, and provide proof that the long term effects do actually occur. One student stated:

> I think you [should have a] demonstration of what can happen to your lungs or something because it is something you can actually see. You know, not just read on a piece of paper and think well it might not be true, you can actually see it happening. Maybe you've never really seen it before, to think it was that bad. To actually see it, you know it has got to be for real.

Another student described what he thought would make a good demonstration:

> If [doctors] show you like interesting way...like this is the lung system and this is when it's smoking like kind of what it would look like...They should have like a mechanical thing of lungs and everything, and should have it smoking and then like even a mechanical heart going bum, bum, bum, and then show them after like 20 cigarettes what happens.

Participants did not feel that the discussion of long term effects and demonstrations would be effective because of the knowledge they would impart, but rather, because of a more subtle effect. Students felt that seeing the long term effects of smoking would convey the suffering, limitations, and shortened life associated with smoking, and in this way discourage adolescent smoking. To increase the impact of seeing the long term effects of smoking, many students said the effects needed to be communicated in a way that would "gross out," disgust, or scare students. This can be seen in some of their rather dramatic suggestions:

> They should get somebody who is either suffering from like lung cancer or heart disease or whatever or who had a family member die because of smoke come in and just tell about what it is like for them to have, what it is like to have a family member have one of these diseases.

> OK, well like show us a gross presentation of what smoking does like go into the morgue or something and bring some like cancer heart in and lungs an plop it in the table and show us. Gross [us] out.

> Try to scare them and like show them big horror cases and hospitals like people attached to respirators and stuff.

> You should get those people with the voice box taken out so they could

show you. That would be good. Talk about scare you!

Although students were very supportive of long term health effects and demonstrations of the effects of smoking, they did identify some weaknesses in these strategies. A few groups pointed out that since teens are not future oriented, they may not care about long term effects; however, they felt this weakness could be overcome to some extent if presentations are scary and disgusting. One student said:

> I would tell them all about the health problems that are as a result of smoking. You know, not to make them aware but to kind of scare them away from it. Because I've noticed that if you just tell them you can get cancer, they don't really care. If you tell them...if you over, really exaggerate, then they'll probably back away from it slowly.

Students also suggested that once a person is addicted to smoking, knowledge of the long term effects of smoking, even when presented in interesting and dramatic ways, will not have any effect.

The addictive nature of smoking, the expense of smoking, the effects of the ingredients in cigarettes, and the effects of second hand smoke were mentioned by about half of the groups; however, students did not feel these would be the most effective ways of preventing adolescent smoking. The physiologic effects of smoking were mentioned by two students, who felt that adolescents should be told that smoking is not a particularly rewarding or pleasurable experience.

B. Social Reinforcement Approach

Following the rational approach, strategies within the social reinforcement approach were most often suggested and supported during the focus group interviews. Short term health effects, short term social effects, reducing peer and social pressures

to smoke, and addressing motivation to smoke were often suggested by students as effective smoking prevention strategies. Three social reinforcement strategies, practicing resistance strategies, advertisement study, and making public or personal commitments, were never suggested by students, however, they were discussed after being suggested by the researcher.

Reduction of peer and social pressures to smoke, and examination of the short term social effects of smoking were the most popular social reinforcement approaches. Students discussed both *recognizing* and *reducing* peer and social pressures to smoke (or interpersonal pressures to smoke). Students clearly felt that there was no need to *recognize* peer and social pressures to smoke, either because they did not feel they were subject to such pressures, or because they were already well aware of these pressures; they did not feel discussing peer pressure would have any effect on adolescent smoking prevention.

Students did, however, support many smoking prevention strategies that would *reduce* peer and social pressures to smoke. Examples of such strategies are:

- show role models (peers, celebrities, television characters) who do not smoke,
- make smoking less pervasive in society, by restricting cigarette advertising, promoting non-smoking areas in public places, and reducing smoking prevalence,
- show unattractive people (such as "nerds" or "losers") smoking, and

- ask smokers not to pressure non-smokers into smoking.

The focus group participants felt that reducing peer and social pressures to smoke would be effective because adolescents begin to smoke precisely because of peer and social pressures. Strategies that reduce the peer and social pressures to smoke reverse the forces that cause adolescents to smoke in the first place, as observed in the following statements:

> Have a really ugly person that smokes saying "oh I smoke" or whatever, and then a really good looking person that says they don't smoke, because that is what they do, the opposite with advertising...and it seems to have been working, like so if they do the opposite, it will work to get people to stop smoking.

> I think that is [who] has the most influence, is somebody you want to be like. That's why people, most people start smoking, like they have a friend that's cool and they smoke so I'll be cool. So if they have like a role model that says "no, smoking isn't good," then they won't want to.

The other frequently suggested social reinforcement strategy was discussion of the short term social effects of smoking. In some groups this strategy was suggested by the researcher, however, it was always heartily supported by the focus group participants. Undesirable short term social effects that were identified by students included yellow fingers and teeth, bad breath, unpleasant smell on hair and clothes, and premature wrinkles, all of which could lead to unattractiveness to other people. Students felt that learning about short term social effects would be effective in classroom lectures, in television commercials, or in magazines. A television commercial in which a girl who smokes shrivels up and becomes wrinkled as she looks in a mirror was described by many students as effective. One participant said she would discuss short term social effects for the following reasons:

> Well teenagers are worried a lot about their image you know, and just tell them the things that will affect the way they look like especially girls, I think are worried about how they look. And just tell them...if they smoke [they can get] yellow teeth and fingers and stuff. And if, because teenagers are so worried about how they look it would probably help them to get the idea.

Students also observe the short term social effects of smoking by observing their parents and friends who smoke:

> I was talking to some of my brother's friends, because he's older, and most of them say that the only thing that kept them from smoking in their teens was because their parents did it. They didn't like it because they were always smelly and stuff, and they just got so sick of it that they didn't like doing it.

As with discussion of long term health effects, there was an implication that the discussion of short term social effects should try to disgust and gross out adolescents, in order to be more effective. A few students pointed out that since there are many positive social effects of smoking (e.g., increased popularity), it may be necessary to exaggerate the negative social effects.

The focus group participants stated two reasons why the discussion of short term social effects would be effective in adolescent smoking prevention. First, they felt that short term effects may have more of an impact than long term effects, since adolescents may be more concerned with immediate than future problems. Second, they acknowledged that people their age are very concerned about their appearance, and that they want to be accepted by others, and liked by members of the opposite sex; therefore, if adolescents perceive that smoking will make them unattractive, they will be less likely to do it.

Reduction of peer and social pressures to smoke, and discussion of short term

social effects of smoking were the most commonly suggested social reinforcement strategies; however, addressing motivation to smoke and discussing short term health effects of smoking were also suggested as effective smoking prevention strategies by the focus group participants. Addressing motivation to smoke involves an examination of intrapersonal pressures to smoke. For example, students said that adolescents should ask themselves if they smoke for any of the following reasons: to fit in with others; to achieve a certain image; to make a point; or, because they feel they have to. Students felt that adolescents who thought about their motivation to smoke would realize there are other ways to accomplish the above tasks.

Students felt that discussing short term health effects would be effective because the effects are immediate, rather than in the future, similar to discussion of short term social effects. Smokers' cough and decreased athletic performance were identified by the research participants as short term health effects that might prevent adolescent smoking. One boy stated:

> That's one of the reasons I never really started, because of my sports. I wouldn't want to start because of what I've heard, that it does damage to your lungs.

Another participant stated:

> Another thing you could do also is like, I know it's really far fetched but get like a really famous athlete because even like, and get them to talk to the people that play sports and stuff because it would really slow you down...Your lungs would just totally, like you can't run anymore. There's a girl in grade 9 that went into like a major major asthma attack at one of the basketball games and she smokes. And she couldn't play for the rest of the season because she couldn't breathe.

Making public or personal commitments was only discussed in one group,

however, this group felt that making a personal written commitment not to smoke would help adolescents not to start smoking. The participants of this group felt that making a written commitment would help them to abstain from smoking when they are presented with the opportunity to do so. Two final social reinforcement strategies were suggested by the researcher: role-playing how to say "no" to offers of cigarettes, and examining cigarette advertisements to recognize and resist the pressures to smoke that they contain. Neither strategy was supported by the focus group participants. Although role-playing had a few supporters, most students said they do not frequently get offers of cigarettes, if they do get offers they are not difficult to refuse, or that practicing saying no would not make it any easier to refuse a real offer. No students felt that examining cigarette advertisements would be effective, either because they felt that adolescents are not affected by advertising, or because they felt that looking at advertisements would encourage people to smoke.

C. Developmental Approach

Three developmental strategies were discussed in the focus group interviews. Improvement of decision-making skills and self-confidence were discussed in most groups, after being suggested by the researcher. Few students were opposed to these ideas, however, most students did not particularly endorse either strategy as an effective method of preventing adolescent smoking. Helping teens to deal with problems, such as depression, stress, and family conflict was a common theme in some groups. These groups suggested that people who are stressed, who have family problems, or who are depressed may smoke to cope with these problems. They felt that if adolescents knew

of other ways to cope with these problems, or if the problems were alleviated, fewer people would start smoking.

D. Social Norms Approach

The main strategy of the social norms approach is involvement in extra-curricular activities. This strategy received some support. Students gave examples of community and school sports teams, hobbies, and community clubs (such as Boy Scouts), and school clubs (such chess club and debate team). Many students said that adolescents smoke because they are bored, and that involvement in sports, hobbies, or clubs will decrease boredom and therefore, smoking as well. One student described the role of boredom and extra-curricular activities in this way:

> Because a lot of people, they, you know, go to the corner store and hang out with their friends and smoke. I'm thinking of like, they could always be doing something better and having more fun that just hanging on the corner, they could go out, go like to, say a dance or play some sports or something...When you're sitting at a party all your friends are sitting there with nothing to do, just talk. A cigarette in your hand gives you something to do.

III. Delivery Methods

During the focus group interviews, participants were asked for their opinions of delivery methods for adolescent smoking prevention. A wide range of delivery methods were suggested, as described earlier. A few of the delivery methods received widespread support: schools, television, and public places such as shopping centres and restaurants.

A. School

All participants agreed on three reasons why the school is a good place to

deliver smoking prevention. First, unlike any of the other delivery methods discussed, students are required to be at school, and to listen to presentations about smoking. Second, the participants said that most adolescents begin to smoke while they are at school. One student said:

> Usually high school and junior high is where smoking starts. You don't like, well, in most cases I don't imagine people just start at home. It's probably from always going to school. Someone brings them to school at lunch.

Finally, another advantage of the school as a delivery method is that celebrities can come to schools to make presentations about not smoking. In fact, the school is the site where many of the effective program approaches and strategies described earlier can be carried out:

> [School] is where like all the references, most of the references are. Like you know we get friends, researchers, teachers, maybe coaches if you're on the basketball team, even media, Cancer Society...

Although not compulsory, like classroom presentations, students pointed out that the school can also be a site of optional, extra-curricular activities that might contribute to adolescent smoking prevention.

In spite of endorsing the school, students also saw many weaknesses in this delivery method. First, students pointed out that while they can be forced to attend classes about smoking, they cannot be forced to pay attention, or to learn. One group said:

> Participant #1: If it's something you get at school, it just goes in one ear and goes out the other.
>
> Participant #2: They just kind of...lecture you too long and then you just drift off.

In addition to ignoring smoking prevention messages presented in schools because they are boring, students may also ignore them if they feel their teachers are preaching. A perception that teachers are preaching may even lead students to rebel, as seen below:

> Well [school] is also kind of bad because you know how when your parents tell you not to smoke, you do it anyways just to rebel? I think it would, people would do that in school too, like if all the teachers started ragging on them...

Another weakness of the school as a delivery method is that students observe a great deal of apathy and hypocrisy toward smoking on the part of teachers and staff. First, many teachers smoke, even though teachers play a large part in delivering smoking prevention messages. Second, teachers do not enforce no-smoking policies on the school property. The school where this research was conducted has a smoking compound where high school students are allowed to smoke. Students observed that underage students smoke, and that people smoke outside the compound with little or no fear of being punished by teachers:

> And there's lots of times, like I don't know, I guess teachers like some teachers don't really like, it's like too big a problem, they don't want to handle it. There's lots of times like a teacher will walk by like someone they know is in Grade 8 or Grade 7 and they'll just keep walking. They won't even mention it to them at all.

> Junior High [students] aren't supposed to be allowed to smoke on the school grounds. But we all go out on the compound anyways. Like the staff room is right where we stand, like, like we're standing there smoking. It's hilarious.

Even if these weaknesses of schools could be eliminated, students observed that school rules and influence can only extend as far as the school property:

> Teachers can only help what is in the school grounds. They can't exactly have an influence on when you're walking to Dairy Queen and

smoking.

Despite these weaknesses of the school as a delivery method for smoking prevention, this method was endorsed by all groups. Students felt that the effectiveness of the school could be increased by reinforcing smoking prevention messages through other methods of delivery (television, community organizations), and by making smoking prevention activities in the school compulsory.

B. Television

Focus group participants were also very supportive of television as a delivery method for smoking prevention. They felt its strengths are that adolescents spend a great deal of time watching television, that commercials are repeated and therefore remembered, and that television is a good medium for celebrities to deliver non-smoking messages. Students said that smoking prevention messages can be delivered on television through both anti-smoking commercials, and through television programs.

As with schools, the participants also identified weaknesses which limit the effectiveness of television as a delivery method. First, they stated that many people are not affected by commercials, either because they change channels or leave the room, or because they do not pay attention to them. Second, students felt that there is some hypocrisy in putting smoking prevention messages on television, since television also makes smoking appear to be attractive:

> First you see a commercial that says "don't smoke," and next you see people smoking.

> After you see [smoking prevention] commercials, like people on the TV shows, they smoke. Like even sports people, like athletes, they smoke and it's kind of like they are your heroes, and they're smoking so you

want to be like them.

The third, and largest weakness of television as a delivery method for smoking prevention identified by students is the poor quality of anti-smoking commercials. Every focus group said that most commercials are too "corny", not realistic, not serious, and not scary. Every group identified a commercial in which a girl who smokes turns into a giant cigarette as a bad commercial, because it depicts an event that does not happen in real life. Students said they liked more realistic commercials such as one where a girl becomes wrinkled as a result of smoking, and where information about the effects of ingredients in tobacco is presented. They felt that these commercials depict real effects of smoking, and therefore are effective. This excerpt from one group reflects what was said in most of the groups:

> Researcher: Do you think if they made better commercials that TV would be a good place?
>
> Participant #1: Yeah more serious.
>
> Participant #2: More truthful, like what will really happen like, it's not like somebody is going to turn into a cigarette.
>
> Participant #1: Show on the commercials, show what's going to happen. You could take an example like um, show a non-smoker and a smoker and they're maybe the same people but before and after.
>
> Participant #3: Basically make the commercials more believable instead of so fake and kind of cartoonish almost.

Besides making better smoking prevention commercials, television could also be improved as a delivery method if information about smoking was presented in television programs. Again this should be done in a realistic, factual manner that does not preach, and should show long term health effects. One group said:

> Participant #1: One time DJ on Roseanne tried to smoke and they're like saying how it's like [bad]...they're so corny about it. "You shouldn't smoke!" They should have shows where some people smoke because maybe it will go through their life showing what can happen through smoking, like coughing on the show or something.
>
> Participant #2: Actually show them the bad things that can happen before you actually do it.

One group also suggested that television presentations on the effects of smoking should be used in place of pamphlets and posters in physicians' offices.

C. Public Places

Two themes emerged in the discussion of public places as a delivery method for smoking prevention: no-smoking policies in public places such as schools, shopping centres, and restaurants, and signs and posters in public places such as bus stations. Students felt that no-smoking policies in public places have been, and will continue to be very effective in adolescent smoking prevention. This smoking prevention strategy will be discussed below under regulatory approaches. Students felt that signs and posters in public places are largely ineffective. Adolescents generally do not look at signs and posters, and even if they do, they are not affected. One student said:

> [A sign would] help a bit, because some people see it, but it doesn't do that much. It's just like a sign, it can't really do that much. You just look at and you pass it by. It doesn't really register what it said. You get home and you don't remember that you saw that sign or anything.

D. Other Delivery Methods

School, television, and public places with no-smoking policies were identified by the focus group participants as the best methods of delivery for smoking prevention. Community organizations, radio, and print media such as magazines received some

support. Existing community organizations such as Boy Scouts, sports teams, and youth groups would be effective in smoking prevention for two reasons. First, specifically addressing smoking in these activities would reinforce smoking prevention messages heard at school and on television; second, involvement in these activities is likely to reduce boredom and smoking in the first place. Students said that formal smoking prevention programs in a community organization such as a community centre would be ineffective since, unlike school, attendance would be voluntary.

Some students felt that smoking prevention messages should be delivered on the radio, since adolescents listen to the radio a great deal. This was not felt to be one of the best delivery methods, however, because people generally do something else while listening to the radio and do not pay full attention to the radio. In addition, like television, a hypocritical message is sent out when radio stations play smoking prevention commercials followed by songs about smoking and drugs:

> If you're listening to the radio and [they] said "we'll take a break now" and you hear about non-smoking and then they'll, like say you're listening to some Oldies station or something, and the next song you hear is "Smoking in the Boys Room" or something. What are you going to think?

Some students felt that magazines would be a good delivery method because adolescents (mainly girls) look to magazines to find an image. Therefore, if the negative effects of smoking are described in magazines (such as decreased attractiveness to the opposite sex), people may be less likely to begin smoking. Most students said, however, that they either do not read magazines, or they would not take the time to look at a smoking prevention advertisement or read an article about the negative effects

of smoking. Once again, the effectiveness of magazines as a delivery method is decreased by the hypocrisy in presenting both anti-smoking messages and attractive images of smokers:

> Like in a magazine...you're going to see some ads say "don't smoke" or whatever, but then you're also going to see some ads with some, like fashion magazines, some beautiful lady smoking so you don't know which one you're going to take. If it's going to show just some typical girl...pushing away a cigarette, and if it shows a model [smoking], it's obvious what the kid is going to choose.

Delivery of smoking prevention through pamphlets and posters at health facilities such as physicians' offices and hospitals was discussed. The strengths of this method of delivery are that people are bored, so they will read about smoking, people who are sick or who are around sick people will want to improve their lifestyle, experts know a great deal about smoking, and most people visit a health facility from time to time. Despite these advantages students did not really endorse this method of delivery as particularly effective. The delivery of smoking prevention messages through popular games such as Nintendo was mentioned in one group, mainly in jest. The delivery of smoking prevention through the home will be discussed in terms of parents, siblings, and other family members under leadership types.

IV. Leadership Types

Of the categories of leaders discussed in the focus group interviews, students felt the best leaders for adolescent smoking prevention would be peers and celebrities. There was some support for patients with smoking-related disease or their families, as well as experts, such as physicians, nurses, and researchers. All students agreed that teachers and parents do not make good leaders in smoking prevention.

A. Peers

Every focus group agreed that peers would make good leaders of smoking prevention efforts. Peers are same age or slightly older adolescents, including family members such as siblings or cousins. They can act as leaders in both formal settings (e.g., a class presentation) and informal settings (e.g., discussions among friends).

The focus group participants identified a number of reasons why peer leaders would be effective in smoking prevention. First, they felt that peers can understand the pressures that exist to smoke better than older people such as parents and teachers. One student said:

> [Peers] know...you're going through the same thing, and they know what you're going through, so it's more understandable to them and they're not like in the past...they know what situations are taking place now.

Second, adolescents can observe the effects of smoking on their peers who smoke, and those peers might even discourage other adolescents from smoking. One student said his sister discourages him from starting to smoke:

> My sister smokes and she like, she tells me not to start [because] it's a bad habit and everything...[it's] not good and some of her clothes smell and stuff like that.

Third, unlike teachers, parents, and experts, peers generally do not preach or talk down to others, and this makes it easier to listen to what they are saying.

The main reason why peers would make good leaders of smoking prevention efforts is because adolescents smoke to fit in with their peers; therefore, using peers to teach smoking prevention would reverse one of the major influences on adolescent smoking. Peer leadership is an important way of reducing peer pressure to smoke, as

identified by this student:

> A person...in high school, like I'm 13, and say a person in high school, I could relate to them and they can relate to me because, see a lot of people smoke to look older, to fit in with the older group of people. So if they told you not to smoke and you know, you'd probably quit because if you want to fit in with them and if you're smoking, they are going to push you away.

The main disadvantage of peer leaders is that adolescents may not think these peers are as attractive as their peers who *encourage* smoking. Other disadvantages identified by the focus group participants are that peers may be too nervous to talk to their classmates about smoking, and, since peer leaders lack the authority of a teacher or parent, students may not respect or listen to them.

B. Celebrities

As well as peer leadership, the focus group participants also supported celebrities (singers, actors, athletes, television characters) as leaders in smoking prevention. Celebrities could make presentations about smoking in schools, or they could make television commercials or videos to promote non-smoking.

Students felt that celebrities would be effective in smoking prevention for reasons similar to those described for peers. Many adolescents smoke because they look to celebrities as role models; therefore, if celebrities endorse non-smoking they will be reducing the social pressures to smoke. One student said of celebrities:

> Lots of people want to be like them, and if they don't do drugs or they don't smoke, you don't want to smoke.

Another student said:

> People look up to like Michael Jordan saying "smoking is not good." I think that's what a lot of people use to make their decisions.

One student recognized that the use of celebrities works to sell other products, so it would likely work to decrease smoking:

> You know how they get people, like famous people, to talk about it, that would catch more people's eyes. So get, you know how they do drinks, um, for basketball, the Gateraid stuff...that catches a lot of people's eyes, and probably more people buy that product. So famous people would work.

Finally, students said that if a celebrity made a presentation in school, it would be more interesting than if a teacher did, since celebrities are famous.

Despite their support for celebrities, many students felt suspicious that celebrities who make non-smoking endorsements only do it for money or to look good, or that they may say they do not smoke, even if they do. To increase the effectiveness of using celebrities as leaders, students said they need to know that the celebrities do not presently smoke, and that they are not getting paid for their work. The main weakness of using celebrities as smoking prevention leaders is that many of the celebrities that adolescents most admire do smoke. Focus group participants were asked the question, "if you could get anyone in the world to teach your smoking prevention class, who would it be?" Most students suggested a celebrity of some sort; however, many of the students pointed out that they had seen their celebrity smoke, either on television or in a magazine.

C. Other Categories of Leaders

The focus group participants were unanimous in their opinion that neither teachers nor parents are effective as leaders in smoking prevention. Students said that teachers are boring, so adolescents do not pay attention to them, and that teachers

preach, so adolescents smoke to rebel against them. When teachers smoke themselves, or when they do not enforce school rules about smoking they are seen as both hypocritical and apathetic. This further reduces their effectiveness as smoking prevention leaders. Students also said that unlike peers and celebrities, teachers simply are not role models for adolescents. One group said:

> Participant #1: Teenagers don't really think of their teachers as like role models or heroes...they don't like say "OK, if he doesn't [smoke] I won't."
>
> Participant #2: I think it's true what [he] is saying. It doesn't really matter what your teachers do because, like, I don't know, they just don't really matter to you.

The focus group participants felt that parents are ineffective smoking prevention leaders for a number of reasons. First, parents tend to preach, to lecture, and to make threats, and in one sense this tempts adolescents to smoke to rebel:

> Parents probably [aren't] the best way to go because kids won't, like at our age [we] don't really want to listen to our parents all the time, and a lot of kids probably...they like to do things that their parents don't want them to do. So getting their parents to talk about it would probably be the worst idea.
>
> When they [make threats] you're going to want to smoke more, just to get them back.

In another sense, parental threats do play a role in smoking prevention. This role will be discussed later in this section, and under regulatory approaches.

A second reason why parents are ineffective smoking prevention leaders is that they do not understand the pressures to smoke, especially if they do not smoke themselves. One student said:

> [Parents] don't understand. Like, my mom does, because she has the

same pressure. But my dad doesn't because he doesn't smoke.

Third, some parents smoke themselves (which is seen as hypocritical by adolescents), and they may not even discourage their children from smoking. Finally, students said that parents generally wait too long before talking to their children about smoking:

> [Parents] have that attitude that my kid won't [smoke] for a long time. Then you start smoking and they come to you two years later and give you a lecture on it, because they don't think you'll start until then.

Despite the lack of support for teachers and parents, the focus group participants did not feel these two categories of leaders are entirely without hope. Students felt that teachers could be good leaders if they provided more interesting teaching activities, such as games, plays, field trips, and group discussions. They also recognized that parents care about their children, and that in some families, where there is good communication, parents may be effective in discouraging their children from smoking.

Three other ways in which parents may be effective in preventing adolescent smoking are through talking about their own experiences with smoking, through their own smoking behaviour, and through family rules and standards about smoking. Two students described how their parents talked about their own experiences with smoking:

> My mom told me that she never smoked and she was glad she didn't and all that, that she would be addicted.

> My dad started smoking when he went to the air force, but when he came back out he stopped. I don't know why he stopped, but he did, and he told me about what it was like when he smoked. And what happens sometimes you'll either get a buzz and you'll feel good or some days you're just, your bored and you're smoking and then you don't want to smoke, you kind of put the cigarette away and later on you think that was such a waste and you get mad at yourself.

Both of these students said they enjoyed hearing what their parents had to say, and that

these were effective ways for their parents to talk to them about smoking.

Many students said that observing their parents and older family members such as grandparents smoke discourages them from smoking. Two students said:

> My grandpa used to smoke, but he had a stroke because of it. My grandma tried to quit when she was around my grandfather, but she kept promising "Oh, I'm going to quit, I'm going to quit" and she still [smokes]. She spends so much money on cigarettes.

> My grandpa has to go in for an operation every once in a while because he has lung cancer.

Both students felt that observing their grandparents helped to discourage them from starting to smoke.

Finally, many focus group participants felt that family rules (such as getting grounded for smoking) or family standards (such as smokers being outcast) may be effective in discouraging smoking. To some extent adolescents rebel against family rules, however, this is balanced by a desire to avoid punishment. The impact of family rules on adolescent smoking is discussed further under regulatory approaches.

Focus group participants gave experts (such as physicians, nurses, and researchers) and smoking-related disease patients and their families a level of support somewhere between peers and celebrities, and teachers and parents. They felt that experts could be effective because they are knowledgable about smoking. Students said that when people visit a physician they are thinking about their lifestyle, therefore they may be open to what he/she has to say about smoking. Experts who make classroom presentations may be boring (like teachers); however, they may be interesting just because they are guest speakers. Experts who know a lot about smoking can present

demonstrations of the effects of smoking, and can discuss some of the suffering associated with the long term effects of smoking (program approaches that students felt would be effective). A few students stressed the need for experts to use vocabulary that is understandable to adolescents.

Patients would make good leaders of smoking prevention efforts for two reasons. First, they are demonstrations of the long term effects of smoking. Second, they are proof of the fact that some smokers develop problems. This is important since adolescents may be tempted to deny that smoking really does have bad effects. Two students stated:

> If they're addicted, they're not going to stop because you say "oh, you could die." There are all those people who have lived to 103 and they smoke.

> Not necessarily just smokers but people who have problems because of smoking. Like, if you get me out there [to talk about smoking] I could care less because I'm a smoker and nothing is wrong with me right now, so I'm OK.

Sports teams coaches were mentioned as a leadership category by only one group.

D. Characteristics of Leaders

Four important characteristics of smoking prevention leaders were identified by focus group participants: smokers or quitters, non-smokers, attractive people, and normal people. Smokers or quitters were seen to be important because they can understand the pressures to smoke and the effects of smoking better than people who have never smoked. Smoking may be an important characteristic of a leader in some cases, because adolescents can observe the unpleasant social effects, as well as the long term health effects of the leaders' smoking behaviour.

Students felt that both experts who discuss smoking prevention and celebrities who do non-smoking endorsements should be non-smokers, as described below:

> Participant #1: In some movies people who don't smoke, like in actual life, they make them smoke one or two cigarettes, just so they can be in the movie.
>
> Researcher: So that kind of destroys your image of them as non-smokers?
>
> Participant #2: Exactly.
>
> Participant #1: They shouldn't have [celebrities] in non-smoking commercials if they smoke.
>
> Participant #3: They should have to be, actually non-smokers.

In some cases, students felt that attractive people (physically or socially), such as peers, older peers, or celebrities should lead smoking prevention efforts, since they would be seen as role models. One student stated:

> I think it might be good to get good looking people and try to get, like you see in ads, they always have good looking people and they think that it's because people want to smoke because they think that they look better, so if you get like good looking people who are saying not to smoke, people will pay attention to the people that are hot. And then they might think "oh then I'll look good if I don't smoke."

Students also felt however, that normal people (average, local, non-famous people) would make good leaders of smoking prevention programs. Students felt they can relate better to normal people than to celebrities, and normal people can be trusted more to give their true opinions, rather than say they do not smoke in order to make money (something celebrities might do). One group said normal people were better than attractive people or celebrities because

> Participant #1: ...[celebrities] probably get paid and we know that

> [normal people] aren't getting paid because they are just normal everyday people coming off the streets to talk to people so we should listen and see what they have to say.
>
> Participant #2: Maybe more than famous people, [normal people] know the situations and famous people are kind of secluded and they don't know the exact situations.

V. Regulatory Approaches

In each focus group, participants were asked which rules or laws might be effective in adolescent smoking prevention. Although students were quick to state that no rules would be effective, the subsequent discussions revealed some support for a number of different regulatory approaches. The levels of support for regulatory approaches, however, were noticeably lower than levels of support in the discussion of program approaches, delivery methods, and leadership types.

The majority of students felt that altering the price of cigarettes, no-smoking policies, and family restrictions with regard to smoking would be effective regulatory approaches. Many students felt that age restrictions for purchasing tobacco *could* be effective, although all agreed this approach is ineffective at present. Some students were supportive of greater advertising restrictions, while plain packaging, and warnings on cigarette packages and advertisements received limited support.

A. Price Control

This regulatory approach was generally suggested by the researcher, however, most participants agreed that raising the price of cigarettes would be an effective means of preventing adolescent smoking. Students felt increased prices would keep people who have never smoked from starting, as well as discourage experimental smokers from

continuing. One student said:

> If they were only [smoking] just to try it, if the prices went way up, it's going to put in their minds "well I have to get this much money and then I can be doing other things with this money."

Another student, who smokes daily, said:

> When [cigarettes cost] $6.95, I didn't really, I barely smoked in that time you know for like, I would go for two weeks without smoking.

The focus group participants felt that as cigarette prices increase, smoking will become less of a priority for adolescents. One group said:

> Participant #1: Well the thing is, when you're young and you always save up all your money and so you have like, always have money. But then once you kind of get to this age, you just, you can get broke really easy, because you don't really have that money.
>
> Participant #2: Because of clothes or something like that. Electronics.

Most students felt that price increases would not have any effect on people who are already addicted, other than to drive them bankrupt, and possibly to a life of crime to support their habit.

Although most students felt raising the price of cigarettes would be effective in smoking prevention, they did recognize some weaknesses in this regulatory approach. First, since experimental smokers do not smoke a great number of cigarettes, initially smoking is not an expensive habit. Therefore, adolescents who are just beginning to smoke may not be greatly affected by price increases. Second, when people begin to smoke, they do not necessarily buy a complete pack. One student said:

> Like [you can] put your money together with friends...or you don't like even have to buy a pack, you can just bum them off people.

Either of these strategies would reduce the money needed to begin smoking, thereby

making price increases less effective. Many students pointed out, however, that if the price of cigarettes increase significantly it will be more difficult to bum cigarettes from friends:

> [Now] you walk in the [smoking] compound or something and half the people there are all bumming smokes off you. They don't have their own and if the prices went up, you know, people [would say] like, "get lost, you're not bumming my smokes, like it costs so much!"

Finally students felt that increasing the price of cigarettes would increase sales of illegal, smuggled cigarettes. They felt it was unlikely, however, that adolescents would purchase such cigarettes:

> If the price went up, it would help teens, because teens aren't gong to go to some smuggler company. And we're talking about teens, not adults.

B. No-Smoking Policies

No-smoking policies in restaurants, shopping centres, workplaces, sporting events, and schools were discussed in each focus group. Students generally felt that the no-smoking policy in their school was ineffective; reasons for this were outlined in the discussion of schools as a delivery method and teachers as a leadership type (sections III.A and IV.C, respectively, of this chapter). Other than in schools, however, students felt that no-smoking policies are an effective strategy for adolescent smoking prevention.

Students identified four reasons why no-smoking policies might prevent adolescent smoking. First, experimental smokers may not continue to smoke as it becomes less convenient and enjoyable to smoke. One student, a smoker, said:

> Well in the winter [no-smoking policies discourage people from smoking] because you're like freezing your butt and you can't have a

> cigarette and enjoy it.

Another student said:

> I think [no-smoking policies help] because it's easier not to do it, you know, you're with friends at the mall, you know. Someone pulls out a smoke, you can't really do it unless you're eating or something, but then people don't like to smoke when they're eating.

Second, as non-smokers observe the lengths to which smokers must go to have a cigarette, they will be less likely to smoke themselves:

> My dad said that one of the reasons he quit was not just because he wanted to but because it was getting so hard to find places that he could smoke because all business offices and restaurants and everywhere you have to go, like even in the dead of winter go and stand outside and smoke, and people just might think twice about smoking if they know they have to go outside and like in two feet of snow or whatever, just to have a cigarette.

Third, as non-smokers are exposed less and less to cigarette smoke, they will become less tolerant of it, and will find smoking less attractive.

The major reason why no-smoking policies would be effective in preventing smoking is because they would reduce the peer and social pressures to smoke, by limiting children's and adolescents' observation of people smoking. One student said:

> [No-smoking policies help] because, well, if there are little kids walking around or something in the mall with their parents and they see someone else smoking, they'll want to take after them or they might start smoking or something just to see what it is like. And if there's no one smoking, they won't really get the idea.

In spite of the general feeling that no-smoking policies are an effective smoking prevention strategy, almost all groups felt that this regulatory approach has a major limitation: if people want to smoke, they will find a place to do so.

C. Family Restrictions

The theme of family restrictions as a deterrent for adolescent smoking emerged in the focus group interviews. Although many students said that parental rules and threats cause adolescents to smoke to rebel, most students also indicated some fear of being punished or shunned in their families if they smoke. No students said that parents *should* make rules and threats regarding smoking, however, most students indicated a qualified support for this regulatory approach.

Two types of family restrictions were described by the focus group participants: family rules and threats of punishment, and family standards. Family rules about smoking described by students included being grounded, having allowance taken away, and corporal punishment. Fear of such punishment was described by many students:

> My parents are kind of strict and I know if like they ever saw me smoking or doing something like that, he'd kill me. My dad would just waste me. Like he scares, like he scared my sister when he caught my sister smoking, it was pretty ugly for about three months. My sister is some big, you know, rebel. She would do what ever she wants. It doesn't really scare her but I'm a little softy. He'd beat me up.

> But [teens] know if their parents, in most cases, like when they're just starting, if their parents catch them, they'll be in big trouble.

> My parents they, if they catch us [smoking] then they would probably ground us for life.

Family standards, while reflected in family rules and threats of punishment, also include being shunned or outcast for smoking. Obviously students from families of non-smokers are more likely to be affected by such standards. One student said:

> Well, like nobody in my family smokes, so I'd be kind of looked on as an outcast if I smoked.

Family rules and threats of punishment mainly originate from parents, however, family standards may also be expressed by siblings. One student said:

> I was going through my brother's drawers once, (don't ask why) and there was this note inside. I opened up the note and there was this cigarette. So I took the cigarette and I gave it to [my brother], and actually I hit him. And then I went downstairs, and I ignored him for, I think it was at least three days. I would not talk to him.

This student felt that her actions encouraged her brother to quit smoking, and that if he had done the same thing to her, she would not have smoked.

D. Other Regulatory Approaches

The great majority of focus group participants felt that age restrictions for purchasing and smoking cigarettes are an ineffective regulatory approach to smoking prevention. A number of reasons were given for this:

- adolescents can forge notes from their parents in order to purchase cigarettes,
- adolescents can use fake identification when purchasing cigarettes,
- few store owners ask for identification, even when it is obvious that their customers are under 18,
- adolescents can purchase cigarettes from vending machines,
- older people will buy packages of cigarettes for adolescents, in return for a few cigarettes, and
- adolescents can get cigarettes from their older friends or siblings.

Basically, adolescents felt that while they cannot purchase cigarettes everywhere, in

general it is not difficult to do so. One student described his experience:

> You know what is really stupid? Like I guess if you buy cigarettes it's not so stupid, but when you go to like [the convenience store] by my house, like they have all these stickers outside, cigarettes with little circle around it and a cross, like "no, you can't buy it" and yet I've bought my sister a pack of smokes you know, and I was, that was last year when I was like 12. I bought her, they have all these signs, you know "we're not selling them [to people] under 16."

Students felt that besides being ineffective, this rule actually causes adolescents to smoke. One student said:

> I know a couple of people who are 14 and they go in and buy them just because of the rule.

Finally, students also felt that a relatively small punishment for smoking when underage, and a lack of enforcement contribute to adolescent smoking:

> Right now it's just, if you're caught smoking under age, you get a 25¢ fine. If you're caught smoking again you pay 50¢, and again, $1.00 and $1.25. I think policemen just say "I don't care." Let the kid smoke and I don't care, it's not going to help me any for busting him for it.

Although students felt that age restrictions are ineffective at present, most students felt that if the restrictions could be enforced, they could be an effective regulatory approach. Students said:

> If they like raise [the age to purchase cigarettes] enough so that by the time they're old enough to smoke, they might not want to.

> Usually, when kids want to try [smoking], they usually like buy a pack or something and just, you know, try it out with a bunch of friends and if they can't buy that pack, then they might not try it out and they might not start.

Students felt that store owners are largely to blame for adolescents' relatively easy access to cigarettes. Every group said store owners knowingly sell cigarettes to

minors because they only care about money, even though they know that their actions are against the law, and that smoking kills people. The focus group participants said that enforcement of age restrictions should focus on vendors:

> Participant #1: I think the police shouldn't concentrate on the age of smokers but they should concentrate on the vendors, like make sure that they're not selling to under age kids.
>
> Participant #2: They should send in decoys...say an undercover police officer walks in with his undercover buddy...if they know that someone's selling them to under 18 or whatever, they have proof. They should charge them, like they always...do nothing.

Even though things *could* be done to make age restrictions more effective, students felt that policing cigarette vendors adequately may take too much time and too many resources, and that since it would be impossible to monitor all stores, there will always be some stores that will sell cigarettes to adolescents.

Cigarette advertising restrictions received some support as an effective regulatory approach, however, not to the same degree as price control, no-smoking policies, and family restrictions. This approach was most often suggested by the researcher. Most of the focus group participants felt that adolescents are affected to some degree by advertising, therefore limiting cigarette advertisements is a good idea. They felt that decreasing the amount of cigarette advertising would reduce societal pressures to smoke:

> [If there were greater advertising restrictions] there just would, it wouldn't be around so much so it wouldn't seem like such a popular thing to do anymore. If it wasn't everywhere you look, I mean there's bill boards in downtown, and there's like on TV I think I've seen one, but I'm not sure. For sure in magazines and stuff and you see them all over the place, but if they weren't everywhere you look, then people just wouldn't think it was the thing to do.

Although the students saw benefits in advertising restrictions, they felt the effectiveness would be decreased by two things. First, since many magazines are published in the United States, Canada could not have an effective cigarette advertising ban in magazines. Second, even if social pressures to smoke were reduced by cigarette advertising restrictions, those social pressures would still exist in other forms:

> If there [weren't anymore cigarette advertisements], people would still be like drawn in because their favourite movie stars or their favourite actors or TV sit-com families, like smoke, and they absolutely adore that person. They're going to be smoking just to be like that person.

Focus group participants did not feel that either plain packaging or warnings on cigarette packages or advertisements would be effective smoking prevention strategies. Most students felt that people buy cigarettes to look cool when they smoke, and based on taste or price, rather than because of the package. Students felt that cigarette warnings are too future-oriented for adolescents, and that it is hypocritical to put a warning on the product itself, or on an advertisement for a product. They said that few people pay attention to warnings on cigarette advertisements, and that package warnings would be ineffective for three reasons: non-smokers do not see package warnings, addicted smokers are unaffected by package warnings, and experimental smokers are not likely to throw out a package of cigarettes just because they see a warning. Restricting the amounts or types of cigarettes available was mentioned in two focus group interviews, and sports team rules in one.

VI. Additional Themes

A number of unplanned, additional topics arose during the focus group interviews, some related to effective smoking prevention, and some related to adolescent

smoking behaviour in general. The common themes among the various groups are discussed in this section.

A. Prevention Strategies

The focus group participants had insightful comments about how smoking prevention strategies could be made more effective. Their comments referred to appropriate ages for smoking prevention interventions, important gender differences in smoking prevention, the need for a realistic approach toward smoking prevention, the need to avoid out of date smoking prevention materials, the use of scare tactics, specific suggestions to make smoking prevention more interesting, and the need to give adolescents a choice about smoking.

With regard to the appropriate age for smoking prevention interventions, the following suggestions were common:

- strategies to deal with peer pressure should be taught to elementary, not junior high school students, because elementary school is where peer pressure is the strongest,
- non-realistic approaches to smoking prevention, such as the use of cartoon characters and showing a girl turn into a cigarette are effective for elementary school children, however, not for junior high students, and,
- parents and teachers generally wait too long before discussing smoking with young people:

  I think some people's folks talk to them about [smoking], but usually the parents like wait too late. They think that it's like, it

> only happens when you're 18 or something. They don't really talk to you about it early enough.

Students identified three important gender differences in smoking prevention. First, if celebrities are used to promote non-smoking, different ones must be used for boys than for girls. Second, girls are more likely to be affected by learning about the effects of smoking on appearance (e.g., being less attractive to the opposite sex, premature wrinkles). For example, one student said:

> Lots of girls like look into those magazines for their image and stuff so if they see [the effects of smoking on their appearance and attractiveness to others] then they won't want to [smoke].

Finally, many of the focus group participants felt that girls are more likely than boys to be attracted to smoking by cigarette advertisements in magazines. One student said:

> Teenage girls that smoke usually look at them and say "oh there are beautiful women in these things that are smoking, and maybe I'll look like one of them if I start smoking."

Every focus group advocated a more realistic approach to smoking prevention, particularly in television smoking prevention commercials. For example, a realistic approach to a television anti-smoking commercial would show actual consequences of smoking, such as getting lung cancer. Almost every group described a cigarette commercial in which a girl turns into a cigarette as the opposite of a realistic approach. One student described the effect of that commercial in this way:

> Yeah [commercials should be more] serious, because that commercial [where a girl turns into a cigarette], like I think anyone, unless they have an I.Q. of I don't know, could figure out that you're not going to turn into a giant cigarette if you smoke.

Many focus group participants also said that if hair styles, clothing, and manners

of speech are out of date in smoking prevention movies, students are distracted from the message of the film. Many groups suggested that scare tactics should be used in smoking prevention in order to scare the audience about the consequences of smoking. One student said:

> Like Mr. Smith, he says he's just going to give us facts and not scare us, but I think scaring the kids would help more like if you really freaked them out bad they would kind of think about it.

Students advocated using scare tactics in classroom presentations, television commercials, and warnings on cigarette packages and advertisements.

Most students felt that the effectiveness of smoking prevention interventions is greatly reduced if teachers or other leaders preach against smoking, and do not recognize that adolescents should have a choice about smoking. When asked what she would do to prevent people her own age from starting to smoke, one student said:

> I wrote...tell them that [smoking] is kind of a choice, because lots of people do it to rebel or whatever, or they do it because people tell them that they shouldn't do it...so if you tell them that it's their choice and you might not care if they do it or whatever, they might not do it, if they don't think it's something bad.

Finally, students made the following suggestions for making smoking prevention in the classroom more interesting: have guest speakers, avoid lectures, promote student involvement through plays, games, and group discussions, go on field trips (e.g., to visit a cancer ward), and use demonstrations and audio-visual displays.

B. Other Themes

Five additional themes related to adolescent smoking behaviour arose during the focus group interviews: apathy, hypocrisy, how to help adolescents quit smoking,

fatalism with regard to smoking, and reasons why adolescents begin to smoke. The main situation where the focus group participants observed apathy was in the school. Many students stated that teachers do not do anything to prevent or stop smoking, either because they are not concerned about the problem, or because the problem is too big. This is evidenced by the fact that the school smoking policy (which states that only high school students can smoke, and they must smoke in the smoking compound) is not enforced with respect to age or to location. They also observed apathy on the part of police and lawmakers because store owners who sell cigarettes to minors are not prosecuted.

Students identified many situations in which hypocritical messages about smoking are given:

- celebrities who promote non-smoking may smoke in real life,
- teachers smoke, even though they are supposed to promote non-smoking,
- store owners knowingly sell cigarettes to minors,
- magazines, television, and radio may all be used to promote non-smoking, however, they all also promote smoking,
- school smoking policies are not enforced, and
- health professionals smoke, even though they promote non-smoking.

With respect to helping adolescents to quit smoking, students felt they should be told how to quit smoking, so that those smokers who wish to do so can. They also felt that

if peers were to promote quitting, smokers may consider stopping. One student said:

> I think friends would probably be a better source than parents, like if your friends are really nagging on you to quit. They are always there and like you would kind of want to like, if they said "we won't hang out with you anymore if you don't quit, we don't like it" or whatever, you would probably kind of have to.

Most groups displayed a rather fatalistic attitude toward adolescent smoking and smoking prevention. Students felt that people who want to smoke will do so, and that little if anything can be done to stop them. One student stated:

> I don't think like any law, any parent, you know, any person really is going to make that big of a difference. If someone's going to start smoking, it's kind of what that person is like, you know people have different personalities and different goals in life and if a person wants to, they'll want to, no matter like who is going to say what or anything.

Finally, students gave many reasons why adolescents begin to smoke. The most common reasons given were:

- to look good,
- to rebel against authorities and people who preach against smoking,
- because adolescents are attracted by cigarette advertisements,
- because adolescents' role models smoke (e.g., other peers, older friends, siblings, celebrities),
- to cope with stress, depression, and family problems, and
- because of pervasive social pressures to smoke (e.g., in advertisements, television, magazines, radios, public places).

VII. Summary

This chapter contains an examination of the trends and patterns in the responses of the focus group participants, in order to answer the question "according to adolescents, which prevention strategies will lead to an intention not to smoke?" The focus group participants felt the most effective program approaches would be to present the long term health effects of smoking, in the form of tangible demonstrations. They were also supportive of reducing peer and social pressures to smoke, and discussing short term social effects of smoking. Schools, television, and public places such as shopping centres, and restaurants were described as effective delivery methods for smoking prevention, and students felt that peers and celebrities would be the most effective leaders. Students were reluctant to admit that any regulatory approaches would be effective, however, they did suggest that increased cigarette prices, no-smoking policies, family restrictions, and age restrictions could be effective in preventing adolescent smoking.

This chapter has described overall trends and patterns in the responses of the focus group participants. The next two chapters will compare these trends and patterns to the smoking prevention literature, and will examine important differences in responses according to gender and smoking status.

CHAPTER FIVE: A COMPARISON OF THE DATA AND THE SMOKING PREVENTION LITERATURE

I. Introduction

Prior to data collection, a review of the smoking prevention literature was carried out. The purpose of this chapter is to compare the data collected in the focus group interviews with the reviewed literature, in order to assess whether the theoretical approaches to smoking prevention correspond to the prevention issues identified as important by adolescents. This chapter will address the research question "what are the similarities and differences in effective smoking prevention strategies identified in the smoking prevention literature, and effective strategies identified by adolescents?"

II. Effective Smoking Prevention Strategies

A. Introduction

Chapter One outlined common strategies found in the smoking prevention literature. The strategies that have been found to be most effective in preventing adolescent smoking behaviour will be summarized in this section, along with a brief summary of the strategies identified as effective by adolescents in the focus group interviews. Subsequent sections of this chapter will highlight and discuss similarities and differences between the data collected and the smoking prevention literature.

B. Program Approaches

Program approaches outlined in the smoking prevention literature were similar to the program approaches described by the research participants: rational, developmental, social norms, and social reinforcement. The focus group participants identified two smoking prevention strategies that could not be classified into any of

these four approaches, however, the two strategies were not strongly advocated as effective. Within the rational and social reinforcement approaches, focus group participants identified some specific strategies that were not mentioned in the smoking prevention literature. These included discussing the effects of second hand smoke and the expense of cigarette smoking (rational approach strategies), and addressing motivation to smoke (a social reinforcement strategy).

The review of the smoking prevention literature indicated that the developmental, social norms, and social reinforcement approaches are clearly superior to the rational approach in their ability to produce changes in smoking attitudes and behaviour (Bruvold, 1993). The focus group participants, however, clearly supported the use of rational approach strategies (such as demonstrations and discussions of long term health effects) as effective smoking prevention strategies. They were also supportive, although to a lesser degree, of the social reinforcement approach, particularly reducing peer and social pressures to smoke and examining short term social effects of smoking. Although reducing peer and social pressures to smoke is a social reinforcement approach, it differs from many of the social reinforcement strategies found in the literature that seek to *recognize and/or resist*, rather than *reduce* peer and social pressures.

C. Delivery Methods

The main delivery method considered in the smoking prevention literature is the school, although mass media, community involvement, and parental involvement are mentioned as adjunctive methods. Most studies that address delivery methods for

smoking prevention indicate that using a combination of delivery methods increases the effectiveness of interventions, probably because using multiple delivery methods provides a supportive social environment and a consistent message about smoking (Vartianen, *et al.,* 1990; Flynn, *et al.,* 1992; Johnson, *et al.,* 1990).

More than the smoking prevention literature, the focus group participants outlined other potentially effective delivery methods, including mass media, community organizations, print media, health facilities, pamphlets and posters, cigarette warnings, and public places. The opinions of the adolescents regarding delivery methods were similar to the smoking prevention literature in terms of support for schools as a delivery method, and the need to use a combination of methods. The focus group participants, however, gave greater support than the smoking prevention literature to methods other than school, such as television and public places.

D. Leadership Types

The smoking prevention literature addresses mainly school-based smoking prevention programs. Therefore, the main leadership types considered are teachers, peers, and experts. Studies of smoking prevention leadership indicate that peer leaders are most effective in smoking prevention, followed by teachers, followed by experts (Telch, *et al.,* 1990; Clarke, *et al.*, 1986; Bangert-Downs, 1988).

The focus group participants considered both school-based, and broader, societal approaches to smoking prevention. Therefore, they identified a larger list of smoking prevention leaders, including peers, teachers, experts, parents and older family members, celebrities, sports coaches, and patients with smoking-related diseases and their families.

Like the smoking prevention literature, the focus group participants felt that peers are an effective leadership type; however, they also felt that celebrities would be quite effective. While the smoking prevention literature suggests that teachers can be effective leaders (Cohen, Felix, & Brownell, 1989), the students strongly disagreed.

E. Regulatory Approaches

Regulatory approaches that are known to impact adolescent smoking are increasing cigarette prices and restricting adolescents' access to cigarettes (Novotny, *et al.,* 1992; Hinds, 1992; Jason, *et al.,*1991; Forster, *et al.,* 1992). Other regulatory approaches have been employed, however, their effectiveness is unknown. These include advertising restrictions, cigarette warnings, and no-smoking policies.

The focus group participants agreed that both increasing cigarette prices and restricting adolescents' access to cigarettes are potentially effective for decreasing adolescent smoking; however, their support for the effectiveness of restricting access was somewhat veiled by their opinion that, at present, this regulatory approach is largely ineffective due to lack of enforcement. Although the effectiveness of no-smoking policies in public places is unknown, the focus group participants felt that this is an effective regulatory approach to smoking prevention. The students also recognized the potential effectiveness of family restrictions on smoking, an approach not considered in the smoking prevention literature.

F. Summary

The smoking prevention literature and the opinions of the focus group participants were similar in some ways and different in others. These similarities and

differences are summarized in the following tables.

Table 3: Program Approaches

Program Approach	Smoking Prevention Literature	Focus Group Participants
Rational	Ineffective.	Most effective.
Developmental	Somewhat effective.	Somewhat effective.
Social Reinforcement	Most effective.	Second most effective.
Social Norms	Somewhat effective.	Somewhat effective.
Miscellaneous	Not mentioned.	Two strategies suggested, however, neither felt to be effective.

Table 4: Delivery Methods

Delivery Method	Smoking Prevention Literature	Focus Group Participants
School	Only effective delivery method discussed in detail.	Equally effective methods. Television and public places are effective independent of schools.
Television	Adjunctive to schools, or not discussed.	
Public Places		
Other Delivery Methods (e.g., community organizations, print media, health facilities, pamphlets, cigarette warnings)		Less effective methods.

Table 5: Leadership Types

Leadership Type	Smoking Prevention Literature	Focus Group Participants
Peers	Most effective.	Most effective (along with celebrities).
Teachers	Effectiveness between peers and experts.	Ineffective.
Experts	Least effective.	Effectiveness between peers and teachers.
Celebrities	Not discussed.	Most effective (along with peers).
Other Leaders (e.g., sports coaches, smoking-related disease patients and their families)	Not discussed.	Somewhat effective.

Table 6: Regulatory Approaches

Regulatory Approach	Smoking Prevention Literature	Focus Group Participants
Price Increases	Effective.	Effective.
No-Smoking Policies	Effectiveness unknown.	Effective.
Age Restrictions	Effective when enforced.	Ineffective, because unenforced.
Family Restrictions	Not discussed.	Somewhat effective.
Other Regulatory Approaches (e.g., advertising restrictions, cigarette warnings)	Effectiveness unknown.	Not very effective.

III. Major Similarities

Despite a number of differences between effective smoking prevention strategies

identified by the focus group participants and the smoking prevention literature, a number of similarities exist. Both the participants and the literature support the use of the developmental, social norms, and social reinforcement approaches. There is agreement on the effectiveness of the school as a delivery method, as well as peers as a leadership type. Finally, the focus group participants agreed that the two known effective regulatory approaches, increased cigarette prices and age restrictions for cigarettes, are effective, or at least could be effective. The smoking prevention literature speculates that no-smoking policies are an effective smoking prevention strategy, an opinion echoed by the focus group participants.

IV. Major Differences

The most striking difference in the opinions presented in the focus group interviews and the themes in the smoking prevention literature is the use of the rational approach to smoking prevention. Students clearly felt the rational approach would be effective in smoking prevention, while the literature clearly indicates that the rational approach is less effective than other approaches.

During the focus group interviews, the discussion of program approaches mainly centred on classroom strategies; students generally considered what people their age should be taught about smoking. They felt the most effective means of preventing adolescent smoking would be to learn about its long term effects, something very different from the consensus in the smoking prevention literature. A more subtle difference between the focus group participants and the literature, however, suggests that the focus group participants are also quite supportive of the social reinforcement

approach, the most effective approach according to the smoking prevention literature. This difference is in the perspective taken with respect to how smoking prevention should be carried out.

The smoking prevention literature mainly considers school-based interventions and legislated regulatory approaches. This perspective is reflected in the fact that the school is the only delivery method, and peers, experts, and teachers are the only leadership types, that have been studied in detail. The focus group participants, however, displayed a much broader perspective on smoking prevention. Although they recognized the school as an important means of delivering smoking prevention, the overall theme was to address pressures to smoke found at the societal level. This is reflected in the students' differences of opinions from the smoking prevention literature, in terms of effective delivery methods, leadership types, and regulatory approaches. The following comments display the broad perspective of the focus group participants:

- peer and social pressures to smoke should be reduced through showing role models who do not smoke, and making smoking less pervasive in society through advertising restrictions, no-smoking policies, and reduced smoking prevalence,
- adolescents should receive help in dealing with emotional and interpersonal problems such as stress, depression, and family conflicts,
- delivery methods such as television and public places are equally as important as schools,

- celebrities should promote non-smoking, through personal appearances and mass media, and
- parents and siblings play a role in deterring adolescents from smoking, through family rules and standards.

V. Summary

The smoking prevention literature identifies the social reinforcement approach as the most effective approach to smoking prevention. The focus group participants identified the rational approach as the most effective approach to smoking prevention. Since smoking prevention in the literature is mainly considered in the context of school-based programs, leadership types are limited generally to peers, teachers, and experts. The focus group participants' perspective to smoking prevention, however, was much more broadly based than that of the smoking prevention literature. This can be seen in their support for a number of delivery methods, leadership types, and regulatory approaches not discussed in the literature. When the focus group participants' opinions of program approaches, delivery methods, leadership types, and regulatory approaches are considered together, one can see that although students felt the rational approach is the most effective approach in formal learning situations, they also supported the social reinforcement approach, particularly the reduction of peer and social pressures to smoke.

CHAPTER SIX: DIFFERENCES IN RESPONSES BY GENDER AND SMOKING STATUS

I. Introduction

Chapter Four outlined the trends and patterns in the responses of the focus group participants, as there were considerable similarities between groups. There were also, however, interesting differences. While some of these differences are undoubtedly due to the unique personalities of each of the participants, the unique group dynamics in each interview, and the unstructured method of data collection, some of these differences appear to be related to gender, to smoking status, or to both. Most of these differences occurred where, overall, the focus group participants gave a smoking prevention strategy neither strong support nor strong disapproval. This chapter will examine these differences in suggested effective smoking prevention strategies, in order to address the research question "do the smoking prevention strategies identified as effective by adolescents differ according to gender or smoking status?"

II. Differences by Gender

A. Introduction

Differences in responses according to gender were apparent in all areas of discussion: program approaches, delivery methods, leadership types, regulatory approaches and additional themes.

B. Program Approaches

Differences in responses according to gender were seen in the following program approaches: discussion of the expense of smoking, helping adolescents to deal with problems, involvement in extra-curricular activities, discussion of short term health

effects of smoking, and discussion of short term social effects of smoking. Many of the boys suggested discussing the expense of smoking, while only one girl mentioned this strategy. Specific ideas included:

- calculate how much money a teenage smoker would spend in one year on cigarettes,
- calculate how much adults spend in one year on cigarettes, since adults are likely to smoke more cigarettes than adolescents,
- tell teens they will "always be broke",
- discuss the hardships associated with being poor as a result of smoking (one student said "you would be troubled all the time because you would have no money"),
- tell people they will have to borrow money from others to finance their smoking, and
- tell people that they would have to spend all the money they make at an after school job on cigarettes.

Helping teens to deal with problems such as stress, depression, and family conflicts is a smoking prevention strategy that was suggested exclusively by girls; it was a common theme in three of the four female groups. Girls stated that people smoke in order to cope with such problems, and that learning to cope with these problems, or alleviating these problems would contribute to a decrease in adolescent smoking.

Boys indicated a high level of support for involvement in extra-curricular

activities as an effective smoking prevention strategy. They said that extra-curricular activities provide a distraction from smoking, that they alleviate the boredom that may cause smoking, that involvement in sports may deter smoking because of the effects of smoking on athletic performance, and that extra-curricular activities may involve regulations that discourage smoking (e.g., suspension from a hockey team for smoking). Community and school sports teams, school clubs, Boy Scouts, and hobbies were all suggested as extra-curricular activities. During the focus group interviews, many of the boys indicated that they are presently involved in such an activity.

Although girls agreed that boredom is a cause of adolescent smoking, they were not at all enthusiastic about extra-curricular activities. Only one female participant said she was involved in a regular extra-curricular activity (gymnastics). While the boys were quick to identify a number of interesting activities, girls were not. One female group provided some insightful comments:

> Researcher: All right, a lot of people have told me they think that people smoke because they're bored. So one idea might be to provide more extra curricular activities like sports teams or things to do after school so people aren't bored.
>
> Participant #1: Yeah, but not all people like sports. They like to do other things. They could provide more, like I don't know.
>
> Participant #4: More things like non-sport related.
>
> Participant #1: OK, like I don't know, like there's teams that we have here at school like basketball, volleyball, track, badminton, so I don't really like them. They're OK but I'm not that great at them. I mean I won't smoke because I'm bored, it just seems kind of dumb.
>
> Participant #4: Like it's really, I tried out for the volleyball team and I didn't make it. So if you don't make it, you're not going to go out and play.

> Researcher: Yeah, I guess only 10 people out of the whole school are going to be on the volleyball team. Are there other clubs or activities or things you think that would be good?
>
> Participant #1: They have dumb clubs in school though. They have the debate team and the computer club or something like that, like yeah.
>
> Researcher: OK what do you think?
>
> Participant #3: Well there's not that many clubs that aren't related to sports and I think we should make more clubs like that.
>
> Participant #2: Or have, like, a different variety of sports.
>
> Participant #1: Instead of anything, like, with a ball in it. You know, say for example, you could have like swim team or something like that you know. 'Cuz like there's volleyball, basketball and baseball.

This group advocated a greater variety of sports, sports that are recreational and open to all, and a greater variety of non-sport activities, that are not "uncool."

Discussion of the effects of smoking on athletic performance (a short term health effect), was mostly suggested by boys. One boy said:

> That's one of the reasons I never really started, because of my sports. I wouldn't want to start because of what I've heard, that it does damage to your lungs.

Besides learning about the short term health effects from teachers, boys suggested that professional athletes should make television commercials that say "you can't be a champ if you smoke," and that people who smoke should come to schools as guest speakers to talk about the impact of smoking on their athletic performance.

Finally, although both boys and girls felt learning about the effects of smoking on appearance would be effective in smoking prevention, girls were more likely to admit that they would be affected by this strategy. Many boys also pointed out that this

strategy, while effective, would have the greatest effect on girls. One male group said:

> Participant #1: Like that commercial where it's got that chick going to the washroom and the music is on, and she takes that cigarette and then she just shrivels up into this old bag...
>
> Participant #2: That's a good one!
>
> Researcher: Do you think that would be good? Do you think that helps people?
>
> Participant #1: Yeah, especially with the girls, because if you tell them "your face is going to get wrinkled, you'll be a bag and dirty," they're kind of like "oh no!"

C. Delivery Methods

Three noticeable differences by gender occurred during discussion of effective delivery methods. First, girls gave greater support to the radio as an effective delivery method. In general, girls said they spend a fair amount of time listening to the radio, and that interesting commercials, songs, or talk shows could address smoking. Boys, on the other hand, either said they did not listen to the radio a great deal, or that smoking prevention on the radio would be ineffective since many songs on the radio are about smoking and drugs.

Second, girls and boys had different opinions on the use of magazines as a delivery method for smoking prevention. Most boys said they do not read magazines, while both boys and girls said that girls read magazines. Students felt that since girls often look to fashion magazines for image, magazines should talk about smoking, particularly its effects on appearance and attractiveness to the opposite sex. One girl said:

> And like in the magazines, they're starting to get onto the hair and

> clothes thing. Because they have a lot of guys on there, like I don't know if they're telling the truth, that's one problem, is you don't really know if they're [just] saying it, but they have guys quoting that if they see a girl smoking, they don't want to go near her. There should be more of that. Lots of girls like look into those magazines for their image and stuff, so if they see that then they won't want to [smoke].

Finally, boys were much more supportive of community organizations as a delivery method than girls were. This is likely due to their greater involvement in community-based extra-curricular activities, and their support for such involvement as an effective smoking prevention strategy.

D. Leadership Types

Two minor gender differences were observed in opinions regarding effective leaders of smoking prevention. First, although all students supported the idea of celebrities endorsing non-smoking, boys felt that television appearances would not be as impressive or effective as in-person appearances, since celebrities can be seen on television anyway. This sentiment was not expressed by any girls. Second, girls were more supportive than boys of using older peers as leaders. Most girls felt it would be effective to have a high school student speak to junior high school students, because they would look up to that person. Boys were more reluctant to admit that they would look up to older peers.

E. Regulatory Approaches

Boys and girls displayed a general difference in attitudes toward regulatory approaches. Boys tended to take a more militant approach to regulation, while girls had a more fatalistic approach. For example, boys expressed the idea that not only is it possible for authorities to enforce age restrictions for access to cigarettes, but they

should enforce such rules, as seen in the following comments:

> They should increase the fines and aggressiveness too [for smoking while underage].

> Well, the rules, it would really help if they enforced it in school. Like, there are so many young kids out in the courtyard, say even right now smoking cigarettes. If they enforced it more, I mean kids that are 18 and they want to smoke, that's the smoking area. OK fine. OK, you can't do anything about that. Anyone under 18, you should be able to do something about it.

> The problem is really, like, kids can't get into trouble from the police when they smoke, so I think that they should make like a...like they know they can't [get in trouble] so they smoke right in front of [adults].

Another example of the more militant approach taken by boys is that only boys suggested that legislation be enacted to limit the types or amounts of cigarettes that can be sold. One boy suggested that if authorities really want to stop smoking, they should outlaw cigarettes altogether.

Unlike boys, girls had the attitude that while in theory regulatory approaches to smoking prevention can be carried out, it is unlikely that they will be carried out at all, or to the degree necessary to be effective. The following excerpt displays this attitude:

> Yeah, like stores can be closed, they can lose their license but still, that's not going to stop you from buying them. You'll just go buy them from another store.

F. Additional Themes

There were some differences of opinion by gender in the additional themes that emerged in the focus group interviews. These differences occurred in opinions of the use of scare tactics, in the need to give adolescents a choice about smoking (e.g., not to preach), and why adolescents begin to smoke. Although most students advocated the

use of scare tactics when presenting information about the effects of smoking, boys were much more enthusiastic in their support for this approach than girls. This attitude can be seen in the following comments made by boys:

> We watched...the movie *The Truth About Smoking* because we were doing consumer product testing, and they showed you know a cowboy, like the Marlboro Man, and they showed a cowboy with him, like a machine stuck to him and wires because he had emphysema, and I think that could probably scare a person out of smoking.
>
> I think if the TV, well I guess they could do it on TV, but if the messages on TV could be gory enough or scary enough they would probably work...if they made like a minute-long commercial that's pretty freaky, it would probably make me think twice. I don't know about other people.
>
> Like they put like [cigarette warnings on the package], they don't put like serious things that scare people, because they want the product to sell. Like if they put like a picture of like a burnt up lung and it was like really sick, no one is going to, they would be like "ooh!"

Rather than advocating the use of scare tactics (although scare tactics did receive some support), girls tended to express the opinion that authorities should not preach about smoking, and that adolescents should be given a choice. The following comments were made by girls:

> I don't think [people should preach about smoking], like not so much "don't do this, don't do this, don't do this." Not so much of that because you are just like "oh, I can outsmart you and do this anyways."
>
> If people want to smoke, they should be able to.
>
> I think kids should make their own choice. If you want to ruin your health, that's your problem.
>
> It's your choice. If you want to smoke, you should be able to.

Finally, the focus group participants suggested many reasons why adolescents begin to

smoke. Only the female participants, however, felt that adolescents smoke in order to cope with problems such as stress, depression, and family conflicts. This opinion is reflected in the exclusive female support for dealing with problems as an effective smoking prevention strategy.

G. Summary

Table 7 outlines the observed gender differences in opinions of effective smoking prevention strategies, where each "+" sign indicates the relative level of support for a strategy. The relative level of support was assessed subjectively by a combination of the frequency of discussion of a specific strategy, and the enthusiasm in that discussion.

Table 7: Gender Differences in Effective Smoking Prevention Strategies

Strategy	Girls ♀	Boys ♂
Discussing cost of smoking	+	++++
Dealing with problems	++++	not mentioned
Extra-curricular activities	+	++++
Short term health effects	++	++++
Short term social effects	++++	++
Radio	+++	+
Print media (e.g., magazines)	++++	+
Community organizations	+	++++
Celebrities - personal appearances	++++	++++
Celebrities - television appearances	++++	++
Older peers	++++	+
Scare tactics	++	++++
Don't preach	++++	++

+ = very weak support
++ = weak support
+++ = strong support
++++ = very strong support

III. Differences by Smoking Status

Fewer differences in opinions were observed by smoking status than by gender. This may have been due to the grouping of students as never smokers and ever smokers, and will be discussed further in the next chapter. Smoking status differences were observed only in the area of regulatory approaches, specifically, in opinions

regarding altering the price of cigarettes and family restrictions regarding smoking.

Although most students felt that increasing the price of cigarettes would decrease adolescent smoking, ever smokers were quicker to advocate this strategy than never smokers. Never smokers would sometimes initially state that raising the price of cigarettes would have no effect, only to reconsider when the researcher suggested a price of, for example, $10.00 a package. Ever smokers, however, were more likely to volunteer the opinion that raising cigarette prices would prevent adolescent smoking. This is likely due to the fact that ever smokers have actually spent money on cigarettes, while this was a more hypothetical question for never smokers.

Ever smokers also expressed more fear of their parents finding out that they smoke, and of subsequent punishment. As discussed earlier, the focus group participants tended to balance the fear produced by family restrictions with the desire to rebel. Never smokers more often stated that they would simply rebel against family rules, while ever smokers expressed a greater fear of being discovered and punished. Again, this is likely due to the fact that ever smokers have actually experienced a fear of their parents finding out that they smoke, a situation that is only hypothetical to never smokers.

IV. Differences by Gender and Smoking Status

A few differences of opinion appear to be related to both gender and smoking status. These differences will be presented here, while possible weaknesses in conducting the analysis with respect to two variables are considered in the next chapter. First, all groups except for female ever smokers felt that an increase in cigarette

advertising restrictions would be an effective smoking prevention strategy. This is an interesting finding, since all girls (ever and never smokers) said that they are influenced by magazines (the major site of cigarette advertisements). Female ever smokers said that since they are not affected by advertisements anyway, cigarette advertising restrictions would be ineffective. All other groups felt that adolescents are influenced by advertising, therefore restrictions would be effective.

Another gender and smoking status difference was expressed by female ever smokers. Although most students did not feel cigarette warnings on packages are an effective smoking prevention strategy, both female ever smoker groups gave some support to them. The girls in these groups stated that they read the package warnings as they take out a cigarette, therefore warnings have some potential as an effective prevention strategy. These students had a number of suggestions for how the effectiveness of package warnings could be increased:

> They should have more...for kids, because on the cigarette packages they just say like "smoking during pregnancy can harm the baby or can cause lung disease" but like when you're young you don't want to think about that. You kind of have that attitude when you're a teen, like that never happens to me. So they should have like more geared to the young kids too.
>
> If [package warnings] were more short term instead of long term, then maybe they would help.
>
> They should change [the package warnings] every once in a while, so that they're new and people read them.
>
> [Cigarette warnings should be] put in like language that we can understand, like they have some big word. Yeah, OK.
>
> In elementary [the warning] says like, it's the main cause of emphysema. I'm like what's that, you know? I've never even heard of that. They

> should say what it is and how it can put you in a wheelchair and stuff, and then maybe kids would be like, more likely not to smoke.

The final gender and smoking status difference involved male ever smokers. They were the only group to give any support to plain packaging for cigarettes. Both male ever smoker groups said that while people primarily use cigarettes to look good, they also use the package; therefore, a less attractive package may be an effective prevention strategy. Male ever smokers said:

> If they pull out a nice snazzy pack of cigarettes, and people are going to say, "hey, those look nice"...if they pull out some little, you know, brown cardboard box with cigarettes in it...

> The thing that would be bad about them, if people kind of, you know because people like to roll them up their sleeve or stick them in their front pocket. If they have this big red pack, you know, streaming through, and if you have this big [plain] thing, no one would want to stick in their pocket...they would just probably stick it in their back pocket where they can't see it.

V. Summary

This chapter has examined differences in adolescents' opinions of effective smoking prevention strategies according to gender and smoking status. Many differences in opinions were observed according to gender. Some of these differences appear to be due to gender differences in reasons for smoking, some appear to be due to differences in how boys and girls occupy their free time, and some are difficult to explain. Two differences in opinions of effective smoking prevention strategies were associated with smoking status: the effect of cigarette price, and the effect of family restrictions. Ever smokers had experience with both of these regulatory approaches, while never smokers had to consider these approaches hypothetically. Finally, three

differences were observed according to both gender and smoking status: the effects of advertising restrictions, warnings on cigarette packages, and plain packaging. It is difficult to explain why a group of a particular gender and smoking status combination would support a strategy more than other groups; however, given that for two of these strategies the opinions of adolescent female ever smokers (a growing segment of the population) differed from all other students, these differences are of special interest.

This chapter concludes the examination of the three research questions set out at the beginning of this research. The next chapter will summarize the findings of this study, and will discuss some of the more interesting information gained, limitations of the study, significance of the study, and implications for future research.

CHAPTER SEVEN: DISCUSSION

I. Introduction

This study has considered adolescents' opinions regarding effective smoking prevention strategies. The purpose of this study was to gain information that can be used to design smoking prevention interventions that reflect adolescent priorities, to assess the similarities and differences between theoretical approaches to smoking prevention and prevention issues identified as important by adolescents, and to identify gender and smoking status differences in adolescents' opinions regarding effective smoking prevention strategies. Such information has been gained in this study, and can be used for the above purposes. The information has also generated other questions and areas for research.

This final chapter will summarize the results of this study, and discuss some of the key findings in detail. Strengths and limitations of the study will be considered, followed by a discussion of the significance of the study and of the need for further research in this area.

II. Summary of Findings

A. Trends and Patterns in Responses

Focus group participants were asked which program approaches, delivery methods, leadership types, and regulatory approaches would be most effective in adolescent smoking prevention. When considering program approaches, students were most supportive of the rational approach, in the form of demonstrations of the long term health effects of smoking. They were also supportive of some social reinforcement

approaches, including reducing peer and social pressures to smoke and discussing short term social effects of smoking. The focus group participants felt that schools, television, and public places with no-smoking policies are the most effective delivery methods, and that peers (either same age or slightly older) and celebrities are the best types of leaders. Finally, students felt no-smoking policies, increased cigarette prices, family restrictions with regard to smoking, and age restrictions for purchasing cigarettes are, or could be, effective regulatory approaches to smoking prevention.

B. Comparison With the Smoking Prevention Literature

The opinions of the focus group participants agreed with the smoking prevention literature in several areas. These areas include support for the developmental, social norms, and social reinforcement approaches, support for the use of schools as a delivery method, the effectiveness of peers as leaders, the effectiveness of cigarette price increases, and the potential effectiveness of age restrictions for purchasing cigarettes. The opinions of the focus group participants were noticeably different from the smoking prevention literature in the participants' support of the rational approach as effective in smoking prevention. They were also different in their support of delivery methods, leadership types, and regulatory approaches not evident, or not emphasized in the literature. These include support for television and public places as delivery methods, celebrities as a leadership type, and family restrictions as a regulatory approach.

C. Differences by Gender and Smoking Status

The above trends and patterns in responses refer to *overall* opinions expressed in the eight focus group interviews. Where a particular smoking prevention strategy did

not receive support from all groups, support was often given by groups of specific gender and/or smoking status. Girls demonstrated more support than boys for helping adolescents to deal with problems, discussing short term social effects of smoking, using magazines and radio as delivery methods, and using older peers as leaders. Boys indicated more support than girls for discussing the expense of smoking, discussing the effects of smoking on athletic performance, involvement in extra-curricular activities, in-person celebrity endorsements of non-smoking, and greater legislation and law enforcement to reduce adolescent smoking.

Ever smokers were more enthusiastic than never smokers in their opinions that increasing the price of cigarettes and family restrictions regarding smoking are effective means of preventing adolescent smoking. Finally, female ever smokers were alone in their disapproval of cigarette advertising restrictions as an effective prevention strategy, and they were also alone in their support of cigarette package warnings. Male ever smokers were the only gender and smoking status combination to support plain packaging as an effective smoking prevention strategy.

III. Discussion of Key Findings

A great deal of information on adolescents' opinions of effective smoking prevention strategies was collected in this study. While all of the information can serve to make smoking prevention efforts directed at adolescents more effective, some of the findings are of key interest. These include the support expressed by the participants for the rational approach to smoking prevention, the broad, societal perspective on smoking prevention taken by the participants, the need to target adolescents by gender and

smoking status, and the support expressed by female ever smokers for cigarette package warnings as an effective smoking prevention strategy. Each of these findings will be discussed in this section.

A. Support for the Rational Approach

Each focus group participant was asked to respond to the question "if your job was to help people your age not to start smoking, what three things would you do?" In each of the eight focus group interviews, the overwhelming suggestion was to discuss and give demonstrations of the long term health effects of smoking. The support given for the rational approach was also indicated by the participants' recommendation for a realistic approach to smoking prevention. Many students said that rather than flashy, non-realistic smoking prevention efforts (such as a television commercial in which a girl turns into a cigarette), simple, factual information about smoking and its effects should be presented (such as a television commercial which gives information about the long term effects of smoking, on a plain black screen).

The support given for the rational approach to smoking prevention is quite surprising, since the smoking prevention literature indicates that all other approaches to smoking prevention are more effective than the rational approach (Bruvold, 1993; Tobler, 1986; Bangert-Drowns, 1988). It is also surprising since in the literature, fear of long term health consequences of smoking is not cited by adolescents as a reason for not smoking (Stanton, *et al.,* 1993); in addition, discussing the long term effects of smoking does not address any of the numerous reasons given by the focus group participants for why adolescents begin to smoke.

The findings of this study can be compared to previous work in this area. In their study of adolescents' opinions of effective smoking prevention strategies, Heimann-Ratain, *et al.,* (1985) also found that students indicated they wanted to learn about long term health effects of smoking, since they felt that this knowledge would make other prevention strategies (such as role-playing and examining peer pressure) relevant. The results of this study are similar to those of Heimann-Ratain and her colleagues in the finding of support for the rational approach; however, the focus group participants of this study tended to support the rational approach because of its ability to scare, disgust, or "gross out" students about smoking, rather than for its ability to make other strategies relevant. Perry, *et al.,* (1986) carried out a survey of peer leaders of a smoking prevention program, to assess their opinions of effective smoking prevention strategies; in their study, social reinforcement strategies received greater support than strategies of a rational approach.

The fact that the focus group participants of this study advocated rational approach strategies such as demonstrations and long term health effects raises some interesting questions. First, to what extent were the opinions of the participants limited by their past exposure to smoking prevention strategies? The researcher had the opportunity to attend one of the smoking prevention classes taught to the focus group participants. The class largely focussed on long term health effects, although some attention was also given to short term health and social effects, and the addictive nature of smoking. Very few students indicated they had received any classroom instruction about smoking prior to grade 8. On one hand, given their limited exposure to smoking

prevention curriculum, and particularly curriculum of other than a rational approach, it is possible that students were to some extent only repeating what they have previously learned about smoking. On the other hand, students have observed other approaches to smoking prevention, particularly the social reinforcement approach through media campaigns. It is difficult to assess to what extent the opinions of the participants were affected by their past exposure to various smoking prevention strategies, however, the possibility of a cohort effect should be considered. Since the opinions of this group of participants may have been affected by their past exposure to smoking prevention efforts, research into the opinions of subsequent birth cohorts of adolescents, who may have been exposed to different amounts and types of smoking prevention efforts, should be conducted.

Another question to be considered is whether participating in some smoking prevention strategies would have changed the opinions of the focus group participants (i.e., whether participation would increase the perceived effectiveness of a strategy). In two previous studies of adolescents' opinions of smoking prevention strategies (Heimann-Ratain, *et al.,* 1985; Perry, *et al.,* 1986), opinions were solicited *after* participation in the various strategies. In both of these studies, greater support for non-rationally oriented strategies was observed. In this study, participation in some smoking prevention strategies may have helped the participants to better understand the strategies, and thereby may have altered their opinions. Students seemed to have difficulty understanding and relating to some suggested strategies, especially those that had to be considered in an abstract sense (such as examining cigarette advertisements,

and strategies that do not specifically address smoking, such as improvement of decision-making skills and self-confidence). A strength of this study not found in previous studies, however, is that adolescents' opinions were not sought immediately after exposure to various smoking prevention strategies, which helped to decrease the possibility of participants supporting enjoyable, rather than effective strategies.

A third question to be considered is "how similar are the definitions of the rational approach used by the focus group participants and the smoking prevention literature?" Little information is given in the literature regarding rationally oriented smoking prevention programs, as they are usually considered the control group, or the non-treatment group. From the little information given, it appears that rationally oriented programs give facts regarding the effects and consequences of cigarette smoking (Bruvold, 1993). The focus group participants, however, described two characteristics of the rational approach not stressed in the literature: the use of tangible demonstrations, and the use of scare tactics. It is possible that these added dimensions of the rational approach are responsible for the difference of opinion between the focus group participants and the smoking prevention literature.

A final question to be considered is to what extent the opinions of adolescents regarding effective smoking prevention strategies reflect *actual effectiveness* in decreasing intention to smoke. The striking difference between the opinions of the effectiveness of the rational approach to smoking prevention expressed by the focus group participants, and the consensus regarding its ineffectiveness in the literature indicates one of three things:

- the stated opinions of the focus group participants do not reflect true effectiveness of smoking prevention strategies,
- the consensus of the literature regarding the ineffectiveness of the rational approach is incorrect, or
- some combination of the above two statements is correct.

Further research into the opinions of adolescents regarding effective smoking prevention strategies will be necessary to answer this question.

B. A Societal Approach to Smoking Prevention

During the focus group interviews, the discussion of effective program approaches generally considered school-based interventions, and indicated support for the rational approach. When the opinions of the focus group participants regarding program approaches, delivery methods, leadership types, and regulatory approaches are considered together, however, one can see that the students took a very broad, societal approach to smoking prevention. Students said that the main reason adolescents begin to smoke is because of pervasive peer and social pressures to smoke, therefore, efforts aimed at reducing adolescent smoking should reduce these peer and social pressures. An advantage of placing greater emphasis on smoking prevention outside of the school, not identified by the research participants, is that adolescents who are truant or who have dropped out of school would be more easily reached. The inability of school-based programs to reach these adolescents, who are at high risk for smoking, is a major weakness of present smoking prevention interventions (Johnson, *et al.,* 1990).

This broad, societal approach to smoking prevention differs from the smoking

prevention literature in some very important ways. First, students saw only a small role for school-based smoking prevention interventions (in which the rational approach would be the most effective), compared with the rather dominant role of the school in the literature. To some extent the focus group participants liked to make blanket statements like "school is dumb" and "school is boring," however, there was sincerity in their statements that smoking prevention must occur on a larger social scale. This is reflected in their support for the use of delivery methods other than school, for the use of celebrities and other role models and authority figures as smoking prevention leaders, and for regulatory approaches such as family restrictions regarding smoking.

Second, the social reinforcement approach described in the literature focusses largely on *recognizing and resisting* peer and social pressures to smoke, while the focus group participants emphasized the need to *reduce* peer and social pressures to smoke. Strategies such as discussing peer pressures to smoke and recognizing social pressures to smoke (e.g., examining cigarette advertisements) were consistently rejected by the participants. Instead, they supported strategies that would decrease smoking among their peers and role models, and strategies that would make attractive smoking images less pervasive in society. The difference in the perspectives toward smoking prevention taken by adolescents and by the smoking prevention literature leads to some interesting considerations such as:

- how can health professionals *reduce* peer and social pressures to smoke?
- how can health professionals change the emphasis they have

placed on school-based smoking prevention (the traditional area of intervention) to a broader social scale?

- how can health professionals encourage parents to use family restrictions in a constructive manner, and to address smoking prevention in ways identified as effective by adolescents (such as discussing smoking at the appropriate age and describing their own smoking behaviour)?
- how can health professionals decrease media glamourization of smoking?

The necessity to consider this last question became obvious when the focus group participants named their favourite celebrity; many students indicated that they know their celebrity smokes, as a result of seeing him/her on television or in magazines.

C. Targeting Smoking Prevention by Gender and Smoking Status

Although overall trends and patterns in the responses of the focus group participants were evident, a number of differences in responses by gender and smoking status also emerged. Clearly, there is a need to direct different smoking prevention strategies to males and females, smokers and non-smokers. When the school is the main delivery method for smoking prevention, this is difficult to do. If smoking prevention is carried out on a broader social scale, however, as advocated by the focus group participants, such targeting may be easier to achieve. The use of multiple delivery methods and leadership types will result in boys and girls, smokers and non-smokers being exposed to smoking prevention strategies that may be specifically

effective for them.

1. Gender Differences

Differences by gender are important for a variety of reasons. First, the literature indicates that boys and girls begin to smoke for different reasons and that smoking prevention interventions are not always equally effective in boys and girls (Stanton, *et al.,* 1993; Clayton, 1991; Abernathy & Bertrand, 1992); the findings of this research identify some specific strategies that may be effective for either boys or girls. Second, given the recent increase in smoking rates among adolescent girls (Health & Welfare Canada, 1990), knowledge of their opinions regarding effective smoking prevention strategies is particularly useful. In addition to the overall trends and patterns discussed earlier, the girls in this study advocated helping adolescents to deal with personal problems, discussing short term social effects, using radio and magazines as delivery methods, using older peers as leaders, and avoiding preaching about smoking.

In addition to examining which strategies are identified as effective by one gender and not the other, reasons why a strategy is not seen as effective by one gender, when it is by the other, should be investigated. For example, why are boys more supportive of, and more involved in extra-curricular activities? Are common extra-curricular activities designed with the interests and abilities of boys in mind? If so, what types of extra-curricular activities are appropriate for adolescent girls?

The existence of gender differences in adolescents' opinions regarding effective smoking prevention strategies may be a result of differences in boys' and girls' reasons for smoking, or of broader social differences between boys and girls. In this particular

study, apparent gender differences may also have been a result of using participants from only one grade. The girls in this study appeared to be, on the whole, more mature than the boys. Differences in the maturity of the participants of each group were reflected in the depth of discussion in each group. Female groups tended to be longer, as a result of more in depth discussions of effective smoking prevention strategies, as well as the emergence of more additional themes. Discussion in the male groups, especially the male never smokers' groups in which many participants were pre-pubescent, tended to remain more superficial. Therefore, it is possible that some of the observed gender differences may have been confounded by differences in developmental maturity. Further research in the area of adolescents' opinions of effective smoking prevention strategies should address differences in opinions by age or developmental stage.

2. Smoking Status Differences

Although cigarette smoking is extremely addictive, the progression from initial smoking to addictive smoking takes an average of two years (Hirschman & Leventhal, 1989); therefore, smoking prevention should still be directed at experimental and regular smokers. For this reason, it is important to observe differences by smoking status in adolescents' opinions regarding effective smoking prevention strategies. In this study, ever smokers were more supportive than never smokers of cigarette price increases and family restrictions. A possible explanation for this difference in opinions is that never smokers had to consider these strategies from a hypothetical point of view. Since it may be unwise, however, to direct smoking prevention strategies at never smokers that

require them to imagine themselves as smokers, means of targeting these strategies at experimental and regular smokers should be considered.

D. Cigarette Warnings and Female Ever Smokers

Female ever smokers were the only gender and smoking status combination to support cigarette warnings on packages as at least a potentially effective smoking prevention strategy. This is highlighted as a key finding because of the recent increases in female adolescent smoking (Health & Welfare Canada, 1990). Given the increases in smoking rates in this segment of the population, particular attention should be given to female ever smokers' opinions of effective smoking prevention strategies. Suggestions regarding cigarette package warnings included making the messages refer to short term effects of smoking rather than long term effects, changing the messages from time to time to keep them interesting, using easily understood language, and using practical warnings such as "smoking can put you in a wheelchair." The feasibility and effectiveness of using these suggestions on package warnings should be further evaluated. For example, what would be the feasibility and effectiveness on female smokers of a package warning that stated "most teenage males do not find female smokers attractive," or to use language similar to that of the female participants of this study, "hot guys don't like girls that smoke"?

IV. Strengths and Limitations of the Study

Little research has examined adolescents' opinions of effective smoking prevention strategies; in an effort to contribute to the body of knowledge regarding smoking prevention, this qualitative, exploratory study was conducted. A qualitative,

exploratory design was appropriate given the lack of previous research in this area, and the desire to understand the problems and priorities for action as seen by adolescents, the main target of smoking prevention efforts. As with any research, this study has both strengths and limitations; these strengths and limitations will be described in this section.

A. The Study Sample

1. The Sampled School

The participating school was selected because, in the opinion of key informants in the school system and Calgary Health Services, the students were at higher than average risk for smoking. The rationale for this criteria was to obtain a larger pool of smokers from which to sample, and to study non-smokers at high risk for smoking. Of the 53 students eligible to participate in this study, 26 (49.1%) were never smokers and 27 (50.9%) were ever smokers.

Bertrand & Abernathy (1993) carried out a study of smoking prevalence among Calgary students in the public and separate school systems. When the information from the students eligible for this study is compared with the Bertrand & Abernathy study (see Table 8), it appears that smoking rates in the participating school were *not* higher than average. This assumes, of course, that the students eligible to participate in this research project were representative of the entire participating school population. It should also be remembered that the methods of data collection in the two studies were different. In this study, students were required to provide their name and their smoking status, unlike the Bertrand & Abernathy study, where a numeric code was used to

identify participants. This may have resulted in under-reporting of smoking behaviour (Hansen, *et al.*, 1988), in which case the students of the participating school actually may have higher rates of smoking.

Table 8: Smoking Rates in the Participating School and in Calgary (Percent)

		Eligible Students	Calgary*
Never Smokers		49.1	49.3
Ever Smokers		50.1	50.7
Males	Never	50.0	49.4
	Ever	50.0	50.6
Females	Never	48.3	48.2
	Ever	51.7	51.8

*Bertrand & Abernathy (1993)

Although the criteria for school selection was adhered to, the criteria *may* not have been successful in selecting a school with students at higher than average risk for smoking, at least in terms of present smoking rates.

2. The Sampled Students

Eight focus groups were constructed from the eligible students in the participating school, using purposive sampling. In order to make generalizations to the larger adolescent population, random sampling of both the school and the students is necessary. It was not, however, the purpose of this study to make generalizations regarding the adolescent population, but rather to examine the range of adolescents' opinions regarding effective smoking prevention strategies. In this study, purposive sampling was quite useful, as it ensured that the opinions of male and female ever and

never smokers were assessed. While a sample size of eight may appear small compared to sample sizes used in quantitative studies, eight focus groups were adequate for this qualitative study. The sample size in a qualitative study should be at least as large as required to reach theoretical saturation, a point where little new information is provided in additional interviews (Krueger, 1988). In this study, similarities were seen between the first and second interviews, and these similarities continued throughout the eight focus groups. The sample size allowed for both theoretical saturation and for two groups of each gender and smoking status combination, an important consideration if comparisons based on study variables are to be made (Morgan, 1993).

B. Validity of the Self-Report Data

Self-report data was used to assign students to a particular focus group interview. In addition, the focus group interviews themselves consisted of self-report data.

1. Smoking Status

Smoking status was measured through a self-report prior to the selection of group participants. Students were assured, by both the researcher and their grade 8 health teacher, that smoking status would not be revealed to either teachers or parents. Consent forms were returned to the teacher, however, information forms (reporting smoking status) were placed in a sealed ballot box, that was opened only by the researcher. The validity of self-reports is increased by such measures to assure confidentiality (Hansen, *et al.*, 1988). To further assess the validity and reliability of the initial self-reports, participants were asked to anonymously report their smoking status at the end of the focus group interviews, after rapport with the facilitator had

been gained. Of the 35 participating students, 31 (88.6%) reported the same smoking status (never smoker, experimental smoker, regular smoker, or quitter) after their interview as before. When grouped as never smokers versus ever smokers (as done for the focus group interviews), 34 of 35 students (97.1%) reported similar smoking status before and after. The truthfulness of the self-reports was also evident during the interviews, as students often made comments about their smoking habits that reflected their self-report. For example, the regular smokers frequently talked about smoking, and quitters often talked about how they had tried smoking, but no longer smoked.

2. Opinions Regarding Effective Smoking Prevention Strategies

There are a number of reasons to believe that the data obtained in the focus group interviews is both valid and reliable. In a general sense, as discussed in Chapter Two, focus group interviews are a useful way to study a group phenomenon such as adolescent smoking behaviour. The use of focus group interviews to investigate a problem that lends itself to this method is likely to produce valid results (Krueger, 1988). In this study, the focus groups were conducted in a manner recommended by experts in the field. Open-ended questions, and techniques to encourage group interaction and expression of diverse opinions were used; both dynamics were observed in all groups.

Aspects of both the focus group questions, and the group responses indicate the reliability and validity of the data. Reliability of the focus group questions was enhanced through the use of the same facilitator, the same room, and the same interview format for each group. The focus group questions were examined by experts with

experience in the area of adolescent smoking prevention, and were revised according to their suggestions, prior to the first focus group interview. An examination of the actual questions used in each interview revealed that the line of questioning was very similar in all groups, with the exception of the first (pilot) group, where fewer suggestions were made by the researcher.

The responses given during the focus group interviews have high face validity, in that they appear believable, and were given sincerely. Morgan (1993) suggests that validity is also indicated when there are similarities in the responses obtained in different groups. Although there were some differences in responses by gender and smoking status, clear similarities in responses existed both within and between groups.

C. Data Analysis

1. General Comments

Written transcripts of each focus group interview were used during data analysis. The transcription of each interview from audio tape to computer file was subject to some error, as a result of the interactive nature of the group discussions. Students often interrupted one another, and multiple conversations existed at one time. To increase the accuracy of the written transcript, each interview tape was played three times and compared with the transcript. In addition, the researcher facilitated the focus group interviews *and* conducted the data preparation and analysis, and this allowed her to bear in mind the group dynamics and other elements of communication that cannot be recorded in a written transcript. Although it is not possible to entirely represent a group interview in a written transcript, attention to the preparation of the written transcripts

reduced possible errors in the transition.

Potential for bias also existed in the creation of codes, and their application to the written transcripts. Attempts were made to reduce this bias in three ways. First, elements of the constant comparative method (Glasser & Strauss, 1963) were used in the creation of the codes, as described in Chapter Two. While some codes and their definitions were quite straight forward (e.g., print media as a delivery method), others, such as addressing motivation to smoke, required more thoughtful consideration. At each new occurrence of data from such a code, the data was compared to previous instances of that code, to ensure consistency. This exercise served to create new codes, to combine previous codes, and to modify existing codes as necessary.

Second, at the completion of coding all eight focus group interviews, each transcript was reviewed, to ensure consistency of the coding over all groups. Third, two health professionals with experience in this research area were asked to code one of the transcripts. One person was given the codes and definitions used by the researcher, while the other person created original codes and definitions for the transcript. While there were some slight variations in the coding of the transcripts, in both cases there was a high level of inter-rater reliability. There were no differences in coding that were not easily resolved when discussed.

Finally, potential for bias and error existed in the examination of the data for trends and patterns, for similarities and differences from the smoking prevention literature, and for differences in responses according to gender and smoking status. To increase the accuracy of the analysis, an overview grid was created. An overview grid

is a chart containing a descriptive summary of the opinions obtained in each group on each topic (Morgan, 1993). As the overview grid was constructed, suspected trends and patterns in the responses were noted. When coding of the transcripts was complete (after construction of the overview grid), these potential trends and patterns were investigated by examining the appropriate segments of coded data, and initial suspicions were either confirmed or denied. After these suspected codes were examined, all remaining codes were examined to ensure that no overall trends and patterns had been missed. During this examination of the data for overall trends and patterns, notes were made regarding suspected differences in responses from the smoking prevention literature, as well as differences in responses by smoking status or gender. Again, these suspicions were investigated by examining the appropriately coded data. Use of an overview grid, examination of data by coded segments, and a general immersion in the data all served to help the researcher address the research questions set out at the beginning of this study, and to reduce errors and biases in the process. While coding and analyzing qualitative data is not as structured and invariable a process as coding and analyzing quantitative data, the procedures followed in this study would likely result in another researcher reaching similar conclusions based on the data collected.

2. Analysis by Smoking Status

When the data was analyzed by smoking status, fewer differences in opinions were observed than when it was analyzed by gender. This may have been due to the grouping of students as never smokers and ever smokers. This was done because of the small number of eligible students for each focus group, and likely served to

decrease any differences based on smoking status. Of the ever smokers in this study, 13 of 18, or 72% described themselves as "quitters," meaning they have tried smoking but have not smoked in the past month. During the course of the focus group interviews, many of these quitters said they had tried smoking once or twice many years ago and were now committed to remaining non-smokers. Therefore, the differences in responses by ever smoking and never smoking probably do not represent the true differences between smokers and non-smokers. The limitation of analyzing ever smokers versus never smokers also affects the analysis by gender *and* smoking status. Because of these limitations, and the examination of differences in responses by two study variables in a qualitative, exploratory study, findings based on gender and smoking status together should be regarded as preliminary in nature.

V. Significance of the Study

This study has achieved its objective of examining the opinions of adolescents regarding effective smoking prevention strategies. Specifically, trends and patterns in adolescents' opinions have been noted, a comparison with the literature has been carried out, and differences in opinions based on gender and smoking status have been explored. These tasks are significant because little research has been conducted in this area.

As well as obtaining opinions of the participants regarding the effectiveness of specific smoking prevention strategies, this study revealed the participants' overall vision of effective smoking prevention. This vision represents a challenge to health professionals, because it goes beyond the traditional school-based smoking prevention

intervention to a much broader, societally-based approach. The participants described an approach to smoking prevention that involves using many delivery methods, positive and negative role models, and *reduction* (rather than simply recognition or resistance) of peer and social pressures to smoke. Not insignificantly, this vision would also see the reduction of hypocrisy and apathy toward smoking and smoking prevention on the part of authorities.

This study has revealed a great deal about the opinions of adolescents regarding effective smoking prevention strategies. The information gained in this study can serve to accomplish several things:

- to design smoking prevention interventions that reflect adolescent priorities,
- to recognize differences between smoking prevention strategies identified as effective by health professionals and those identified as effective by adolescents,
- to target males and females, smokers and non-smokers in appropriate ways, and
- to provide a foundation for further research in this area, both to validate the findings of this study and to further explore issues raised in this research.

VI. Future Research

While this study reveals a great deal of information about potentially effective smoking prevention strategies, it also raises a number of questions for future research.

First, differences in the opinions of never smokers and each of experimental smokers, regular smokers, and quitters should be investigated, in order to examine potentially effective smoking prevention strategies at different stages of smoking behaviour. Second, different age groups should be studied, in order to present appropriate smoking prevention strategies to various age groups, and to investigate any relationship between the effects of gender and age or developmental stage on adolescents' opinions. Third, the validity of these results should be verified using a different method, perhaps a quantitative survey.

In addition to these modifications of the present study, several other research questions should be considered. Many specific questions were outlined in the discussion of the key findings, however, some general questions are:

- To what extent do the smoking prevention strategies identified by adolescents as effective actually decrease intention to smoke?
- How can adolescents' opinions and priorities for smoking prevention be used to make smoking prevention interventions more palatable to their participants?
- How can some of the strategies suggested by the research participants (such as reduction of peer and social pressures to smoke and reduction of the perception of apathy and hypocrisy on the part of authorities) be implemented and/or facilitated by health professionals?

VII. Summary

Knowledge of the opinions of adolescents regarding effective smoking prevention strategies is important for a number of reasons. Understanding adolescents' opinions on this topic can lead to smoking prevention programs that reflect adolescents' priorities for action, to further research into effective smoking prevention strategies, and ultimately, to a reduction in the uptake of cigarette smoking by adolescents. Given the magnitude of the effect of smoking on health, health care, and society, these are worthwhile activities.

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APPENDIX A: LETTER TO PARENTS

Dear Parent/Guardian: May 11, 1994

I am a student in the Department of Community Health Sciences at the University of Calgary. As part of my program, I am doing research in smoking prevention. This is an important area, since smoking is a major threat to health.

I will be conducting focus groups, or group interviews, to obtain adolescent opinions of what would be effective in smoking prevention. The groups will consist of five to eight students, all boys or all girls. The groups will be held at the school, during health class. The group will be asked four questions about smoking prevention.

Attached is a consent form, where you may indicate permission for your child to participate in this study. Once you have given consent, your child will be allowed to volunteer to participate in a group interview. In order to see if students have different opinions about smoking prevention depending on whether or not they smoke, your child will be asked to report his/her smoking experience. To increase honesty in these reports, students have been assured that their smoking experience will be kept confidential from both teachers and parents. I will be talking with both smokers and non-smokers. Your child's interest in being in this study does not indicate that he/she smokes.

If you have any questions, please do not hesitate to call me at 220-5330 or 283-9010, my supervisor, Dr. W. Thurston, at 220-4286, or the sponsoring teacher, (NAME), at (SCHOOL PHONE NUMBER). Please have your child return this consent form by **Thursday, May 19th.**

Thank you.

Laura Godard
MSc Student, Department of Community Health Sciences
University of Calgary

Sponsoring Teacher
Participating School

APPENDIX B: CONSENT FORM

Research Project Title:

Adolescent Opinions Regarding Effective Smoking Prevention Strategies

Investigators:

Laura Godard (Msc Student), Dr. W.E. Thurston (Assistant Professor)

Sponsor:

Department of Community Health Sciences, University of Calgary

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This form is only part of informed consent, or your agreement to be in this study. It should give you an idea of what the study is about and what it will mean to be in it. If you would like to know more about this study please feel free to ask. Please read this carefully.

The purpose of this study is to learn about what would help adolescents not to smoke. This will be done with focus groups, or group interviews. These groups will have 5-8 students, either all boys or all girls, who have similar smoking habits. They will be audio-taped.

Students who are in an interview will be asked four questions about smoking and smoking prevention. They will have a chance to give their opinion.

Being in a group interview is voluntary. Students who come to a group interview will not have to say anything if they do not want to.

Students who participate in a group interview will receive a gift certificate from McDonald's for a Big Mac.

Laura Godard (MSc Student) and her supervisor Dr. W. Thurston, will have information from the group interviews. The list of students in the focus groups will be destroyed after the study is done. The audio-tapes will also be destroyed after the study.

If you sign this form, it means that you understand the information about being in this study and agree to be in it. This does not change your legal rights or release the researchers, sponsor, or involved institutions from their legal or other responsibilities. You are free to drop out of this study at any time. Ask questions at any time by calling Laura Godard (220-5330 or 283-9010) or Dr. W. Thurston (220-4286).

If you have any questions about your rights in being in this study, please call the Office of Medical Bioethics, Faculty of Medicine, University of Calgary, at 220-7990.

A. To be filled out by the parent:

_____ I give my permission for my child to participate in the research project "Adolescent Opinions Regarding Effective Smoking Prevention Strategies."

Student's name: _____

Parent's signature: _____

Date: _____

_____ I **do not** give my permission for my child to participate in the research project "Adolescent Opinions Regarding Effective Smoking Prevention Strategies."

B. To be filled out by the student:

___ **I would like to be in a group interview.**

Please sign your name below and ask an adult (teacher, parent) to sign as a witness. Laura Godard will sign under investigator and then give you a copy of this form.

_____ _____
Student Signature Date

_____ _____
Witness Date

_____ _____
Investigator Date

Please answer the questions on the information form, and return with your consent form.

You will receive a letter through the school that will tell you when your group interview will be.

___ I do not want to be in a group interview.

APPENDIX C: INFORMATION FORM

Please answer these questions and return them with your consent form.

1. Name: _____

2. Male Female (circle one)

3. Which of the following best describes you? (Your answer will not be given to your teachers or your parents.)

   _____ I have never smoked a cigarette.
   _____ I smoke once in a while (less than every week).
   _____ I smoke regularly (every week).
   _____ I have tried smoking, but I have not smoked for the last month.

4. Period of your health class: _____

APPENDIX D: FOCUS GROUP QUESTIONS

Introduction

Thank you for coming out to this group discussion today. My name is Laura Godard, and I'll be leading our discussion about smoking prevention this morning. To help me get to know you a little better, I'd like it if we could go around the room and if each of you could tell me what your favourite subject in school is (if you have one) and what your favourite hobby or sport is.

Thank you for sharing. As I mentioned before, we are going to be having a discussion about smoking prevention today. Before we begin, I would like to explain some "ground rules" (written on flip chart) that will make the discussion run smoothly:

1. I would ask that only one person respond at a time. If more than one person talks at a time, it will be very difficult for me to understand the tape after.

2. You do not have to answer a question if you do not want to.

3. Although I may refer to you by name during our discussion, when I transcribe the tape I will not use your real name.

4. There are to be no comments about others' personal smoking habits - e.g. "I know you don't really smoke, you just say you do!"

5. Comments made during this discussion are to be kept confidential. I will not tell anyone - "Julie said that she thinks ..." and I would appreciate it if you did not repeat what others in the group have said.

6. If you do not understand what I am asking, please ask me to explain.

7. There are no right or wrong answers

8. Speak loudly.

9. Please try to remember that we are talking about helping people not to start smoking, not about helping people to quit smoking.

Are there any questions? If not, let's begin.

Program Approaches

I would like all of you to write down an answer to the following question: If your job was to help people your age not to start smoking, what would you do? I'd like all of

you to write down three specific things you would do. They might specifically be about smoking, or they might not. Just write down the first things that come to your mind. After, we'll write down all of the answers and discuss them.

OK. I'd like each of you to read out your answers, and I will write them down. Thank you. Are there any other ideas? Are there things not specifically related to smoking that you would do? e.g., extra-curricular activities, learning about making good decisions?

Suggestions:
- long term health consequences
- demonstrations
- decision making
- self-esteem/self-confidence
- extra-curricular activities
- learning about peer pressure
- looking at cigarette ads
- public commitments
- practicing saying no - role playing

Now I would like you to tell me which of these activities would be most likely to help people your age decide not to smoke?

What makes _____ better than the others? What is good about it?

Are there other opinions about which activity is best?

Delivery Methods

I'd like to move on to a new topic now, that is where smoking prevention programs should be held. Let's start off by making a list of where you have seen or heard anti-smoking messages in the past.

That's great. Are there places where smoking prevention should be done, that are not on this list?

What is good and bad about each place?

Which of these places is the best way to teach about smoking prevention? What makes ___ better than the other places? What is good about it?

Are there other opinions about which place is best?

Leadership Types

Now I'd like to talk about who should teach people your age about smoking and smoking prevention.

Who has taught you or talked to you about smoking prevention in the past?

Are there other groups of people who should teach about smoking prevention?

Great. Now I would like each of you to write down the answer to this question - If you could get anyone in the world to teach people your age about smoking prevention, who would it be?

I'd like each of you to read out your answers. Thanks. Does anyone want to add anything to our list?

Which one of these types of leaders is the best? What makes them better than the others?

Are there other opinions about the best type of leader?

Regulatory Approaches

Finally, I'd like to talk about rules and laws that would help people your age not to start smoking.

What laws and rules exist now that discourage you from smoking? Do they help?

What other laws or rules would discourage you from smoking? In your school? In your family? In your community? Would they help?

Suggestions:
- price/taxes
- ability to buy
- warnings - ads, packages
- plain packaging
- smoke-free policies
- advertising restrictions

Which of these laws or rules would be most effective in helping people your age not to start smoking?

How would these laws or rules help people to not start smoking?

APPENDIX E: CODES AND DEFINITIONS

Code	Definition
I. Program Approach (PA)	The overall approach or orientation of a smoking prevention program. Program approaches evident in the literature are rational, developmental, social norms, and social reinforcement. Two miscellaneous program approaches also arose.
A. Rational Approach (RAP)	A program approach in which attempts are made to change attitudes toward smoking through the provision of factual information about smoking, including effects and consequences.
1. Long Term Health Effects (LTH)	Discussion of future health consequences of smoking such as lung cancer, heart disease, and emphysema.
2. Demonstrations (DEM)	Viewing of tangible examples of the effects of smoking, such as pictures of lung tumours, comparisons of the lungs of smokers and non-smokers, or pictures or visits with people who suffer from smoking related diseases.
3. Physiologic Effects (PE)	Discussion of the immediate physiologic effects of smoking (e.g., presence or absence of a "high," relaxation, etc.). Does not refer to short term detrimental health effects (see social reinforcement approach below).
4. Addiction (ADD)	Learning about cigarette addiction.
5. Ingredients in Cigarettes (INGR)	Discussion of the effects of chemical ingredients in cigarettes.
6. Cost (COST)*	Discussion of the financial cost of smoking.
7. Effects of Second Hand Smoke (SEC)*	Learning about the effects of second hand smoke.

Code	Definition
A. Developmental Approach (DEV)	A program approach in which attempts are made to prevent smoking through the improvement of self-esteem, and improvement of skills such as decision-making, anxiety reduction, communication, and self-improvement.
1. Decision-Making Skills (DMS)	Improvement of skills to be able to evaluate a behaviour (smoking) under consideration.
2. Self-Confidence Improvement (SCI)	Improvement of confidence as a means to prevent smoking. This could include improvement of self-esteem and self-improvement.
3. Dealing With Problems (PROB)	Learning to cope with problems (e.g., depression, family problems, stress), for which smoking may be seen as a way of coping.
C. Social Norms Approach (SN)	A program approach that seeks to prevent adolescent smoking through the provision of activities, as an alternative to cigarette use.
1. Extra-Curricular Activities (ECA)	Participation in activities such as clubs or sports teams in order to reduce cigarette use.
D. Social Reinforcement Approach (SR)	A program approach that addresses the social pressures associated with smoking, including recognizing and resisting social pressures to smoke, and immediate physical and social consequences of smoking.
1. Short Term Health Effects (STH)	Discussion of the immediate effects of smoking on health, for example, decreased athletic performance and cough.
2. Short Term Social Effects (STS)	Discussion of the social effects of smoking that are experienced immediately, for example, unpleasant smell on hair and clothes, bad breath.
3. Resistance Strategies (RS)	Practice of strategies for resisting social pressures to smoke, such as role-playing how to say "no" to offers to smoke.

Code	Definition
4. Public or Personal Commitments (PUB)	Public or personal declarations of intention not to smoke.
5. Advertisement Study (AS)	Examination of the pressures to smoke found in cigarette advertisements, for the purpose of recognizing and resisting these pressures.
6. Reduction of Peer and Social Pressures to Smoke (PPR)	Reduction of external pressures to smoke (e.g., offers from others, smoking by role models), or, increasing the external pressures to not smoke.
7. Examination of Motivation to Smoke (MOT)*	Recognition and/or reduction of internal pressures to smoke (e.g., to achieve image). Although internal pressures may be influenced by peer or social pressures, this refers to a personal, introspective reflection.
E. Miscellaneous Approaches (MISC)*	Smoking prevention strategies that do not fit in with the rational, developmental, social norms, or social reinforcement approaches described above.
1. Try Smoking (TRY)*	Try smoking once, in order to see that it is not a desirable habit.
2. Deter Smoking (DET)*	Discourage adolescents from smoking until they are older (e.g., age 20), because non-smokers of this age are unlikely to ever begin smoking.
II. Delivery Method (DM)	The location or medium used to deliver smoking prevention messages. For example, schools, television, community centres.
A. School (SCH)	The school as a site for smoking prevention programs, either in the classroom, through optional, extra-curricular activities, or during school assemblies.
B. Television (TV)	The television as a medium for smoking prevention, either in smoking prevention commercials, or through television programs.

Code	Definition
C. Radio (RAD)	The radio as a medium for smoking prevention.
D. Print Media (PM)	Delivery of smoking prevention messages through print media such as magazines, newspapers, and books. This could include celebrities endorsing non-smoking, as well as "break-free" ads.
E. Health Facilities (HF)	Health facilities as a location for smoking prevention delivery, such as physicians' offices, hospitals, or community health centres.
F. Community Organizations (CO)	Community sites as a location for smoking prevention delivery. For example, community centres, community sports teams.
G. Pamphlets & Posters (PAM)	Delivery of smoking prevention messages through brief, written materials such as pamphlets, flyers, posters.
H. Home (HOME)	Delivery of smoking prevention messages in the home of adolescents (most often through family members).
I. Public Places (PPL)*	Smoking prevention (or anti-smoking messages) delivered through public places such as buses, bus stations, shopping centres, and restaurants.
J. Cigarette Warnings (CW)*	Warnings of the effects of cigarette smoking, found either on cigarette packages or in cigarette advertisements.
K. Games (GAME)*	The use of popular games to deliver smoking prevention (e.g., Nintendo games).
III. Leadership Type (LT)	The type of person who delivers a smoking prevention message or program. Both categories of leadership types, and characteristics of leaders were discussed.
A. Categories of Leaders	The category of person who delivers a smoking prevention message or program, for example, teachers or peers.

Code	Definition
1. Peers (PEER)	Adolescents who are perceived to be similar to their audience in terms of their experience and understanding of the pressures to smoke. This category may include same age or slightly older peers, siblings, and other same age family members such as cousins.
2. Teachers (TEA)	Classroom teachers as smoking prevention leaders.
3. Experts (EXP)	People perceived to know a great deal about smoking and smoking prevention, such as physicians, nurses, and researchers.
4. Parents & Older Family (PAR)*	Parents and older family members (such as grandparents) as a leadership type for smoking prevention. Their efforts may be intentional (e.g., discussion of smoking) or unintentional (e.g., adolescent's observation of family members' smoking behaviour).
5. Celebrities (CEL)*	Well-known individuals such as sports stars, actors, and singers, who endorse non-smoking.
6. Patients and Their Families (PAT)*	People who have a smoking-related disease, or people with a family member with a smoking-related disease.
7. Sports Coaches (COA)*	Coaches of community or school sports teams.
B. Characteristics of Leaders	Characteristics of the types of leaders described above.
1. Attractive People (ATT)	People who are physically and/or socially attractive. This could include peers, older peers, celebrities, etc.
2. Smokers or Quitters (S/Q)*	People who presently smoke, or who have smoked in the past (i.e., not never smokers).

Code	Definition
3. Non-Smokers (NS)*	People who do not presently smoke (i.e., never smokers or quitters).
3. Normal People (NORM)*	Average, local, non-famous people. The use of normal people forms part of the realistic approach (see additional themes, below).
IV. Regulatory Approaches (RA)	A law or rule that may contribute to smoking prevention. For example, age restrictions for purchasing tobacco, advertising restrictions.
A. Age Restrictions (AR)	Age restrictions for purchasing, possessing, or smoking cigarettes.
B. No-Smoking Policies (NSP)	Policies that create non-smoking areas such as smoke-free workplaces and non-smoking sections of restaurants, schools, and shopping centres.
C. Price Control (PC)	Efforts to alter smoking prevalence through altering the price of cigarettes (through taxation).
D. Advertising Restrictions (ADR)	Legislated restrictions on cigarette advertising, such as Canada's ban on cigarette advertising on broadcast media.
E. Cigarette Warnings (CW)	Warnings of the effects of cigarette smoking, found on cigarette packages or in cigarette advertisements.
F. Plain Packaging (PP)*	Legislation to limit the colours and designs that can be used on cigarette packages.
G. Family Restrictions (FAM)*	Family rules or standards that may prevent adolescents from smoking.
H. Cigarette Restrictions (CIGR)*	Restrictions on the types or amounts of cigarettes that can be sold.
I. Sports Team Rules (TEAM)*	Rules on sports teams that might prevent adolescents from smoking (e.g., suspension for smoking).

Code	Definition
V. Additional Themes (AT)**	Themes that emerged in the discussion that were not specifically addressed in the focus group questions.
A. Prevention Strategies	Additional information that related to effective smoking prevention.
1. Age for Intervention (AGE)	Comments regarding the appropriate age for various smoking prevention interventions.
2. Gender Differences (GEN)	A strategy that may be more effective for one gender than the other, in the opinions of the participants.
3. Realistic Approach (REAL)	An approach to smoking prevention in which average, normal people and real events are portrayed. For example, a realistic approach would show actual consequences of smoking, such as getting lung cancer, rather than non-realistic events such as turning into a cigarette.
4. Out of Date (OLD)	Movies, videos, and pamphlets that are out of date, in terms of fashions, hair styles, speech, etc.
5. Scare Tactics (SCARE)	Presenting the facts about smoking in an exaggerated or extreme way, to scare the audience about the consequences of smoking.
6. Making Smoking Prevention Interesting (INT)	Strategies to make students more interested in smoking prevention interventions.
7. Give Adolescents a Choice About Smoking (CHOICE)	Allow adolescent to make their own choice about smoking, and do not try to force them to abstain from smoking.
B. Other Themes	Additional information that did not relate specifically to smoking prevention.

Code	Definition
1. Apathy (AP)	A belief that those in authority (e.g., teachers) are not doing anything to prevent or stop smoking, either because they are not concerned or, because the problem is too big.
2. Hypocrisy (HYP)	Situations where adolescents observe people giving mixed messages about smoking.
3. Helping Adolescents to Quit Smoking (QUIT)	Strategies to help adolescent smokers who wish to quit.
4. Fatalism (FAT)	An attitude that people who want to smoke will do so, and that nothing can be done to stop them.
5. Why Adolescents Begin to Smoke (WHY)	Reasons why adolescents take up smoking.

*These strategies were not evident during the review of literature.
**Additional themes arose during the focus group interviews; these themes were not intended to be addressed in the focus groups, however, participants volunteered opinions on these topics.