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**Parenting Characteristics in Predicting
Adolescent Smoking and Drinking Expectancies and Intentions**

Robin P. Chapman

**A dissertation submitted to the Graduate Faculty in Educational
Psychology in partial fulfillment of the requirements for the degree of Doctor of
Philosophy, The City University of New York**

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ABSTRACT**Parenting Characteristics in Predicting
Adolescent Smoking and Drinking Expectancies and Intentions****by****Robin P. Chapman****Advisor: Helen Johnson, Ph.D.**

This study investigated the impact of parenting on early adolescent expectancies and intentions related to cigarette and alcohol use. Two aspects of parenting that were examined in this study were parenting styles and parental modeling. The study utilized self-report data collected from eight parochial schools located in the Bronx and upper Manhattan. The subject pool consisted of 420 seventh grade students. Information was gathered using a questionnaire format. The items on the questionnaire addressed characteristics of the student, the student's perception of family beliefs and practices, and the student's intentions and expectancies regarding smoking cigarettes and drinking alcohol. An active consent procedure was used in order to procure parental consent for children to participate in the study.

Results from this investigation support previous work that indicates that both parental style and parental modeling play an important role in preadolescent substance use. Specifically, this study lends support to and extends the body of work that has found that of the three parenting style variables (i.e., support,

control, and monitoring), parental monitoring is the most important contributor and predictor of preadolescent smoking and drinking cognitions and actual use. With regard to parental modeling, this study indicated that for smoking, mothers had more of an influence on their children's smoking cognitions and actual cigarette use compared to fathers. The results for drinking showed that children who perceived an adult that they live with as drinking tended to have higher intentions to drink, however, they did not adhere to more negative drinking expectancies.

This research study has important implications for school psychologists as they have an instrumental role in substance use prevention in the schools and communities. School psychologists need to be informed of the importance of certain aspects of parenting, such as parenting style and parental modeling, and how these aspects contribute to the development of adolescent cognitions and eventual substance usage. It would be beneficial to inform psychologists of intervention strategies that may be used with preadolescents and their families in order to facilitate the prevention of substance usage.

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Table of Contents

Title Page	i
Copyright Page	ii
Abstract	iv
Acknowledgements	vi
Table of Contents	viii
List of Tables	x
List of Appendices	xi
Chapter I - Introduction	1
Review of the Literature	7
Chapter II - Parenting	7
Parenting Styles	8
Support, Control, and Monitoring	10
Parental Modeling	17
Chapter III - Etiology of Cigarette and Alcohol Use	24
Behavioral Intention Theory	27
Chapter IV - Expectancy Theory	36
Chapter V - Summary	45
Chapter IV - Research Objective	49
Hypotheses	52
Chapter VII - Methods	57
Participants	57
Procedure	59

Measures.....	59
Data Analysis.....	68
Chapter VIII - Results.....	69
Chapter IX – Discussion.....	85
General Discussion.....	85
Limitations of the Study.....	95
Future Research	97
Implications for School Psychology.....	99
Appendices.....	101
References.....	124

List of Tables

Table	Page
1- Parenting Styles on Adolescent Substance Use.....	15
2- Demographic Information.....	58
3- Questionnaire Items Used in Data Analysis	61
4- Correlations Between Parental Style and Smoking and Drinking Cognitions	70
5- Multiple Regression Analyses Utilizing Maternal Parenting Style in Predicting Preadolescent Smoking and Drinking Cognitions.....	74
6- Multiple Regression Analyses Utilizing Paternal Parenting Style in Predicting Preadolescent Smoking and Drinking Cognitions.....	75
7- Independent T-Tests of Mean Smoking Cognition Scores by Perceived Maternal and Paternal Smoking.....	78
8- Independent Samples T-Tests of Mean Drinking Cognition Scores by Perceived Adult Drinking.....	80
9- Independent Samples T-Tests of Preadolescent Smokers' and Nonsmokers' Perceptions of Maternal and Paternal Support, Control, and Monitoring.....	83
10- Independent Samples T-Tests of Preadolescent Drinkers' and Abstainers' Perceptions of Maternal and Paternal Support, Control, and Monitoring.....	84

List of Appendices

Appendix	Page
A: Student Consent Form.....	101
B: Questionnaire Items	102

CHAPTER 1

INTRODUCTION

Adolescence is a developmental period wherein the physical and social position of a child changes to that of an adult (Baumrind, 1991a). Prior to and during this time period, parents are one of the most important socialization agents of children and adolescents. Although an important part of adolescence involves a gradual shift away from parents towards peers, research has found that strong parent-child relationships may help shield adolescents from engaging in higher levels of negative health-related behaviors, such as cigarette smoking and alcohol use (Baumrind & Moselle, 1985; Hundleby & Mercer, 1987; Naughton & Krohn, 1988).

Although there is a wide array of prevention programs that attempt to communicate the dangers of cigarette and alcohol use, the use of these substances is increasing among the adolescent population (Johnston, O'Malley, & Bachman, 1997). In this country, adolescent smoking and drinking have been identified as major health problems warranting serious concern (Baumrind, 1985). Data from the 1996 National Household Survey on Drug Abuse shows that each day in this country, approximately 3,000 adolescents under the age of 18 begin smoking cigarettes (National Institute on Drug Use, 1998a, 1998b). According to the National Survey Results on Drug Use from the Monitoring the Future Study, 1975 -1997 (Johnston, O'Mally, & Bachman, 1998) during the period from 1990-1997, there was an increase in smoking among adolescents.

This study found that the 1997 rates of current smoking, (i.e., smoking any cigarettes within the past 30 days), stands at 21% of eighth graders, 30% of tenth graders, and 37% of twelfth graders. Although there has been an increase in smoking among adolescents, Johnston and colleagues (1998) have found that alcohol use is even more prevalent among adolescents. Data for adolescents who have tried alcohol are 54% of eighth graders, 72% of tenth graders, and 82% of twelfth graders. In addition, binge drinking (i.e., adolescents who reported having five or more drinks in a row at least once in the prior two week period), was reported among 15% of eighth graders, 25% of tenth graders and 31% of twelfth graders.

The prevention of adolescent substance abuse relies on the identification of risk factors that lead to the initiation of substance use. It is critical to carefully examine the risk factors that contribute to the initiation into substance abuse as well as to focus upon factors that lend themselves to preventative intervention (Dishion & Loeber, 1985). According to Johnson and Pandina (1991) the role that parents play in the development of adolescent alcohol and drug use is an important determinant in the prevention of adolescent cigarette and alcohol use.

The research literature indicates that certain parenting behaviors have been linked to adolescent substance use. One type of parenting behavior is parenting styles. Darling and Steinberg (1993) define parenting style as “a constellation of attitudes toward the child that are communicated to the child and that, taken together, create an emotional climate in which the parent’s behaviors are expressed” (p. 488). A great deal of research has found parenting styles to

be a predictor of adolescent substance use (Barnes 1977, 1984, Barnes, Farrell & Carins, 1986, Barnes & Farrell 1992; Baumrind 1978, 1991b, 1991c; Brown, Mounts, Lamborn & Steinberg 1993; Dishion & Loeber, 1985). The research has shown that adolescents who abstain from substance use have parents who are highly supportive, moderately controlling and high in monitoring (authoritative) or low in support, and high in both control and monitoring (authoritarian).

Another aspect of parenting behavior involves modeling. The relationship that parental modeling has to adolescent substance use can be understood through Social Learning Theory (Bandura, 1977). This theory takes into account the pervasive effects of social influences on behavior. Social learning theorists believe that individuals learn through the observation of a model especially when that model's behavior is reinforced. Observational learning is defined as the "tendency for a person to reproduce actions, attitudes, or emotional responses exhibited by real life or symbolized models" (Bandura & Walters, 1967, p. 89). A great deal of the research literature has examined the role of parental modeling on adolescent substance use (Ary, Tildesley, Hops, & Andrews, 1993; Huba & Bentler, 1980; Johnson, Shontz, & Locke, 1984). The research has demonstrated that children who perceive their parents as engaging in substance use (e.g., smoking cigarettes and consuming alcohol) are more likely to imitate these behaviors (Engles, Knibble, Vries, Prop, & Van Breuelen, 1999).

To date, a great deal of the research conducted has examined the link between parenting and adolescent problem behaviors, such as cigarette smoking and alcohol use. In order to develop effective prevention programs, it is

important to identify the antecedents that result in actual smoking and drinking behaviors. These antecedents include alcohol and smoking related cognitions, such as intentions and expectancies.

Intentions to engage in cigarette smoking and alcohol use can be best understood utilizing the Behavioral Intention Theory (Ajzen & Fishbein, 1973). This theory has postulated that the intentions of adolescents to engage in cigarette smoking and alcohol use predict subsequent behavior (Chassin, Corty, Presson, Olshavsky, Bensenberg, Sherman, 1981; Grube, Morgan, & McGree, 1986; Schlegel, Crawford, & Sanborn, 1977; Sherman, Presson, Bensenberg, Corty, Olshavsky, 1982). The theory asserts that behavioral intentions are a function of two main determinants: an individual's attitude toward a behavior and the normative influences of others. The individual's attitude toward a behavior consists of his/her evaluation of the perceived value and consequences of engaging in that behavior. The normative influences of others include the individual's perception of other people's expectations of and attitudes towards a behavior.

Aside from intentions, another cognitive precursor to cigarette and alcohol use is expectancies. Expectancy theory involves the cognitive mechanisms by which early learning experiences come to influence future behavioral choices. The theory states that through repeated pairings of the perceptions of a behavior and certain outcomes, associations are stored in memory in the form of expectancies. These stored associations influence decisions made at future choice points (Smith & Goldman, 1995). There are two different types of

expectancies, effect expectancies and reaction expectancies (Johnson and Johnson, 1992). Effect expectancies refer to the anticipated effects resulting from consumption. Effect expectancies may be either positive or negative in nature. For instance, an individual who holds positive expectancies regarding substance use may believe that s/he will feel more relaxed if s/he drinks or smokes. Conversely, an individual who holds negative expectancies may believe that s/he will get sick from drinking or smoking. The other type of expectancy, reaction expectancies, refers to social effects resulting from consumption. For, instance, one may believe her/his company is more enjoyable if s/he drinks (Johnson and Johnson, 1996). The research literature has shown that adolescent alcohol and smoking expectancies are good predictors of actual substance use (Aas, Klepp, Laberg, & Aaro, 1995; Chassin, Presson, Sherman, & Edwards, 1991; Leigh, 1987; Webb, Baer, Francis, & Caid, 1993). The research has also shown that expectancies regarding cigarette and alcohol use begin very early in life and initially are primarily negative in nature. However, as children age, they begin to adhere more to expectancies that are positive (Johnson and Johnson, 1996).

Research conducted on substance use has examined the influence of several parenting variables including parenting styles and parental modeling. Unfortunately, most of the research deals with substance use subsequent to initiation. However, in order to reduce early experimentation with cigarettes and alcohol and develop effective intervention programs, it is necessary to examine the most proximal antecedents to actual smoking and drinking behavior. These

antecedents include cognitive precursors, such as intentions and expectancies. The goal of prevention, then, would be to target these cognitive precursors in a way that would reduce the likelihood of later substance use. The present study will investigate the impact of parenting behaviors, i.e., parenting styles and parental modeling, on adolescent alcohol and cigarette related cognitions, specifically, intentions and expectancies. In addition, this study will sample seventh graders since this is an age when experimentation is just beginning. Investigations aimed at seventh graders allow for a better understanding of how the initiation process occurs and thus can lead to prevention strategies, such as programs aimed at both parents and early adolescents.

CHAPTER II

REVIEW OF THE LITERATURE

This literature review begins by discussing family influences related to adolescent substance use. These influences include parenting characteristics. Theoretical models are presented for two aspects of parenting: parenting style and parental modeling. These aspects of parenting will be examined through research on parental socialization and social learning theory. This literature review then explores theoretical models regarding cognitions that are related to smoking and drinking. These theoretical models include the Behavior Intention Model and Expectancy Theory.

PARENTING

According to Steinberg (1996), adolescence is a developmental period that consists of major transitions. These transitions include biological changes, such as puberty; psychological changes, such as the ability to think more abstractly; and social changes, such as increased rights and responsibilities for the individual. Although every adolescent experiences these transitions, not every adolescent experiences them in the same manner. An adolescent's development through these transitions is shaped by environmental influences. One critical influence is the home environment, which includes parenting behavior.

Parents are important facilitators of the adolescent developmental process through supervision, discipline practices, and by providing a model of behavior (Johnson & Pandina, 1991). Several researchers (Baumrind, 1991c,

Holmbeck, Paikoff & Brooks-Gunn, 1995) believe that the goal of parenting during the adolescent transition is to produce individuals who are independent and self-reliant. In order to effectively reach this goal during this difficult transition, parents must continue to provide the adolescent with firm rules and guidance while gradually offering greater flexibility and responsiveness.

Parenting Styles

One important aspect of parental behavior that has been studied extensively in the past 25 years has been parenting styles (Holmbeck et. al., 1995). Darling and Steinberg (1993) define parenting style as “ a constellation of attitudes toward the child that are communicated to the child and that, taken together, create an emotional climate in which the parent’s behaviors are expressed” (p. 488). The research studies involving parenting styles have focused on a variety of adolescent outcomes, including academic achievement (Lamborn, Mounts, Steinberg, & Dornbusch, 1991), social competence (Lamborn et. al., 1991) and delinquent/antisocial behavior (Vuchinich, Bank, & Patterson, 1992). One important outcome that has been studied a great deal has been adolescent substance use, such as alcohol, cigarettes, and marijuana (Barnes, Farrell & Windle, 1987).

According to the research literature, parenting style has been found to be a good predictor of adolescent substance use (Barnes 1977, 1984, Barnes, Farrell & Carins, 1986, Barnes & Farrell 1992; Baumrind 1978, 1991b, 1991c; Brown et. al., 1993; Dishion & Loeber, 1985, Fletcher, Darling, Dornbusch & Steinberg, 1995; Johnson & Pandina, 1991; Lamborn, Mounts, Steinberg &

Dornbusch, 1991; Mercer & Kohn, 1980). Parenting styles have been classified and conceptualized in various ways. Many researchers have identified the constructs of support, control, and monitoring as critical components of parenting that predict substance use (Barnes 1977, 1984; Barnes, et. al. 1986, Barnes & Farrell, 1992; Dishion & Lober, 1985; Rollins & Thomas 1979).

There are three major research groups who have examined parenting styles. One group, headed by Barnes (Barnes 1977, 1984; Barnes, et. al. 1986, Barnes & Farrell, 1992), primarily studied the impact of parenting styles (i.e., support, control, and monitoring) on adolescent substance use. Their primary focus was on adolescent alcohol and illicit drug use. A group that utilized constructs similar to the Barnes group was headed by Patterson (Dishion & Loeber, 1985; Patterson & Stouthamer-Loeber, 1984; Patterson, DeBaryshe, & Ramsey, 1989). This group focused on the impact of parental monitoring on children and adolescent antisocial/delinquent behaviors. These researchers also looked at problem behaviors such as substance use. The third group that focused on parenting styles was headed by Steinberg (Fletcher, Darling, Dornbusch & Steinberg, 1995; Lamborn et. al., 1991). This group, like the Barnes and Patterson groups, also focused on the impact on parenting styles on adolescent substance use. However, they looked at other adolescent outcomes such as psychosocial development, school achievement, and internalized distress.

Support, Control, and Monitoring

The support and control constructs were originally conceptualized by Rollins and Thomas (1979). The support construct has been defined as parental behaviors towards the child which indicate to the child that he or she is accepted and loved. Operationally, this includes parental behaviors such as praise, encouragement, and physical affection. The control construct has been defined as parental behaviors towards the child which are intended to direct the child's behavior in a manner acceptable to the parent. This concept includes giving directions and instructions, imposing rules and regulations, making threats of punishment, and actual imposing of punishment. Several researchers have found that a related aspect of parental control is monitoring (Barnes & Farrell, 1992; Patterson & Stouthamer-Loeber, 1984). Parental monitoring has been defined as parental awareness of their child's whereabouts, and peers, and knowledge regarding what their child is doing (Barnes & Farrell, 1992).

According to the research literature, parental support, control and monitoring have a significant effect on an adolescent's decision to use alcohol and other drugs (Barnes, et. al. 1986; Barnes & Farrell, 1992). Research conducted by the Barnes group (Barnes & Farrell, 1992) examined adolescent use of alcohol and illicit drugs, such as marijuana. Subjects in the study were 699 adolescents and their parents. There was a diverse racial and ethnic makeup of subjects and the age of the adolescents ranged from 13 to 16. In order to obtain information regarding alcohol, drug use, and parenting style, both the adolescents and their parents completed self-report questionnaires and

participated in an interview. The self-report questionnaires contained sensitive types of questions, such as frequency and quantity of drug use, while the interviews contained questions related to parenting style. The findings of this study provide strong evidence that high parental support (e.g., parents giving praise, parents giving advice) along with high parental monitoring (e.g., how often a parent asks his/her child where s/he is going) are important deterrents of adolescent alcohol and drug use. In addition, it was found that providing adolescents with generalized explanations for their rules of behavior (e.g., parents telling their child why s/he should not have done something) was not effective in preventing substance abuse. Parents need to employ more concrete forms of control, such as monitoring the whereabouts of their children and providing specific rules for their children's behavior (e.g., time for being in at night, and completion of homework).

The research group headed by Patterson also provided evidence that parental monitoring is an important deterrent of adolescent substance use. This research group, like the Barnes group, utilized the support, control, and monitoring constructs. However, researchers in this group combined Barnes' support and monitoring constructs into a *parental monitoring* construct, and Barnes' control construct is termed *parental discipline*. Patterson and colleagues (Patterson, DeBaryshe, & Ramsey, 1989; Patterson & Stouthamer-Loeber, 1984) have utilized a developmental model of antisocial behavior. This model presents evidence that specific parental practices in early childhood are important in the development of early aggressive and defiant behavior. Specifically, Patterson

and colleagues have shown that parental mismanagement (e.g., lack of or inconsistent monitoring) of early defiant behavior shapes further aggressive behavior through a process involving increasingly coercive parent-child interactions. In an effort to avoid these aversive and unpleasant discipline interactions, parents tend to become inconsistent in their discipline and monitoring which ultimately leads to an increase in the child's aggressive behavior. When the child enters school, this pattern of defiant and aggressive behavior is extended to the school environment and the child is often faced with academic failure and peer rejection. These outcomes result in a drift toward other aggressive peers and further antisocial/delinquent behavior is shaped and reinforced. Several researchers have shown that this model of antisocial/delinquent behavior can be generalized to problem behaviors such as substance use (Ary, Duncan, Biglan, Metzler, Noell, & Smolkowski, 1999; Ary, Duncan, Duncan, Hops, 1999; Dishion & Loeber, 1985).

A study conducted by Ary et. al. (1999) examined the impact of parental monitoring on adolescent substance use utilizing the Patterson et. al. antisocial developmental model. Participants in the study were 608 adolescents who ranged in age from 14 to 17 years. The mothers of each adolescent participant were also included in the study (if the female parent was unavailable then the male parent was recruited). Information was collected via a questionnaire format. Adolescents were asked to complete questionnaires regarding adolescent problem behaviors (e.g., substance use, antisocial behaviors, risky sexual behavior), family conflict (e.g., are the parents angry with their child on a

daily basis), and poor family involvement (e.g., do the family members support one another - similar to Barnes support construct). The parent questionnaire provided items on parental monitoring (e.g., how often the child goes where the parent tells them not to go) and peer deviance (how often the child associates with misbehaved peers). The findings of the study indicate that adolescent problem behaviors (i.e., substance use, antisocial behaviors, risky sexual behavior) are more likely to occur when families have a high level of conflict, a low level of involvement (e.g., low level of support), and low levels of parental monitoring. In addition, this study, like Patterson and colleagues, provides evidence that there is a specific developmental process that leads to adolescent problem behaviors. Specifically, low parental monitoring leads children to spend more time with deviant peers, which in turn results in an increased likelihood of the adolescent exhibiting problem behaviors.

The findings regarding the importance of support, control, and monitoring are consistent with a great deal of the parental socialization literature. Baumrind (1978, 1991a, 1991b, 1991c) elaborated on these three dimensions defining support as *responsiveness* and control and monitoring as *demandingness*. Baumrind (1978, 1991c) used the dimensions of responsiveness and demandingness to derive a four-fold classification of parenting behavior that illustrates how parents reconcile the dual needs of children for nurturance and limit-setting. The operational definitions of these four parenting types- authoritative, authoritarian, permissive, and rejecting-neglecting vary slightly depending on the social context, developmental period of the child, and the

method used to assess. *Authoritative* parents are both demanding and responsive. They monitor and set distinct standards for their children's behavior and are supportive rather than punitive in their disciplinary actions. They are also assertive while not being intrusive. Authoritative parents want their children to be socially responsible, self-regulated and cooperative. *Authoritarian* parents are demanding, directive and unresponsive. They try to control the behavior and attitudes of their children in accordance with a set of absolute standards. Authoritarian parents expect their children to obey their orders without an explanation. They also monitor their children's activities very closely. *Permissive (nondirective)* parents are more responsive and less demanding. They tolerate and accept their children's impulses, do not require mature behavior from their children and seek to avoid confrontation. *Rejecting-neglecting* parents are neither demanding nor responsive. They are not supportive of their children, and may actively reject or neglect their children altogether.

A research group headed by Steinberg (Fletcher, Darling, Dornbusch & Steinberg, 1995; Lamborn, Mounts, Steinberg & Dornbusch, 1991) utilized Baumrind's four-fold classification of parenting behavior in order to study adolescent outcomes such as substance use. A study conducted by Lamborn et. al. (1991) examined the effect that parenting style has on adolescent substance use (see Table 1). The subjects in the study were 4,100 ninth through twelfth grade students from diverse ethnic and socioeconomic

Table 1

Parenting Styles on Adolescent Substance Use (Lamborn et. al., 1991)

<u>Parenting Style</u>	<u>Adolescent Drug and Alcohol use</u>	<u>Adolescent self-esteem</u>	<u>Adolescent somatic complaints</u>
High support, moderate control, high monitoring (Authoritative)	No	High	
Low Support, high control, high monitoring (Authoritarian)	No	Low	
High support, low control, low monitoring (Permissive)	Yes	High	Yes
Low support, low control, low monitoring (Neglectful)	Yes	Low	

backgrounds. Data, including information regarding substance use and parenting styles, were collected via self-report questionnaires. The results of the study indicate that adolescents who came from *authoritative* homes were better adjusted, more competent and less likely than their peers to use alcohol and drugs. Adolescents who had described their parents as *authoritarian* were able

to conform to the standards of adults, and also were less likely than their peers to use alcohol and drugs. However, compared to their peers from authoritative and permissive households, these adolescents had lower self-esteem.

Adolescents who came from homes characterized as *neglectful* were less well adjusted compared to their counterparts from authoritative and authoritarian households, had low self-esteem and were more likely to use drugs and alcohol. The adolescents with *permissive* parents were similar to their counterparts from neglectful homes, in that they were more likely to engage in the use of alcohol and drugs. However, they scored highest on measures of self-esteem (i.e., social competence and self-confidence). These adolescents were more oriented towards activities valued by their peers, including some activities not valued by adults, such as the use of drugs and alcohol. These adolescents also reported greater somatic complaints than their counterparts from the other types of families. This may be related to more frequent substance use.

In summary, research has demonstrated that parenting style is an important contributor to adolescent substance use. Adolescents who abstain from substance use have parents who were described as being highly supportive, moderately controlling and high in monitoring (authoritative), or low in support, and high in both control and monitoring (authoritarian). Researchers have used various models to explain parenting styles. Since the support, control, and monitoring variables have been utilized as the foundation for all parenting style models, these constructs have been chosen for this study. This study will utilize the Barnes model as it has been shown to be comprehensive and

because of its primary focus on substance use. To date, the research conducted links parenting style to actual substance use behavior. While studying actual substance use behaviors is useful and important, it is not the best route to prevention. Once actual substance use behavior occurs, it is difficult to truly understand where prevention efforts would be the most valuable. In order to maximize prevention, it is important to look at proximal antecedents that precede actual substance use behavior. This includes research that examines the variables that mediate between parenting style and actual substance use. These variables include adolescent cognitions, specifically expectancies and intentions. This study will examine the relationship between parenting styles and adolescent cognitions regarding drinking and smoking.

Parental Modeling

While parenting styles have been demonstrated to be an important influence on adolescent substance use, another parental influence that has been studied extensively is parental modeling. Parental modeling and its influence on adolescent substance use can be understood from a social learning theory perspective.

Social learning theory was developed in order to explain the processes whereby social behavior is acquired and modified. The theory, unlike classical and instrumental conditioning, focuses on human behavior in dyadic and group situations and takes into account the pervasive effects of social influences on behavior (Bandura, 1986; Bandura and Walters, 1967). From this perspective, parents can be seen as an important social influence in their children's lives.

Social learning theorists emphasize that individuals learn through the observation of a model. These theorists regard observational learning as one of the most powerful mechanisms of socialization (Morris, 1990). Observational learning (also referred to as imitation) is defined as the "tendency for a person to reproduce the actions, attitudes, or emotional responses exhibited by real life or symbolized models" (Bandura and Walters, 1967, p.89). According to Bandura (1977) observational learning is governed by four component processes: attentional processes, retention processes, motor reproduction processes, and motivational processes. Attentional processes determine what is selectively observed from the modeling influence that one is exposed to, and what is extracted from such exposure. For instance, models who are on television are extremely effective in capturing a great deal of attention from individuals of all ages. Retention processes refers to the remembering of activities that have been modeled at a point in time. This type of process can be either imaginal (represented in imagery) or verbal. It has been demonstrated that individuals who code modeled activities into imagery or into words tend to learn and retain behavior better than those who simply observe the model. The third component of modeling comprises the motor reproduction processes. These processes involve converting symbolic representations into appropriate actions. Thus, in order to reproduce a behavior, an individual needs to organize his/her responses spatially and temporally in accordance with the modeled patterns. The fourth component, the motivational processes, distinguishes between acquisition and performance, as most individuals do not enact everything they

learn. For instance, individuals are more likely to adopt modeled behavior if it results in outcomes that are self-satisfying and valued rather than if it has unrewarding or punishing effects.

An important aspect of observational learning is reinforcement. In general, reinforcement-oriented theories assume that novel responses never emerge suddenly but are always the outcome of a long process of operant conditioning. That is, operant conditioning theory asserts that reinforcement needs to be experienced directly by an individual in order for a specific behavior to occur in the future. In contrast, social learning theorists state that reinforcement does not need to be experienced directly by the individual in order to be effective. In fact, an individual's behavior can be modified based on the reinforcement administered to a model. Social learning theorists refer to this type of reinforcement as *vicarious reinforcement* (Bandura and Walters, 1967). For instance, when an individual views a model who is successfully reinforced for his/her behavior, there is a tendency to behave in similar ways. Similarly, if the model is punished for his/her behavior, that observation would decrease the tendency for an individual to behave similarly (Bandura, 1977).

There is a great deal of evidence in the research literature that demonstrates the impact that modeling has on the learning of behavior. A classic experiment conducted by Bandura, Ross, and Ross in 1961, as cited by Bandura and Walters, (1967), investigated the effects of real-life models on the behavior of nursery-school children. The study utilized two groups of nursery school children. One group of children was exposed to models who exhibited

aggressive behavior, whereas the other group of children was exposed to models who exhibited passive and nonaggressive behavior. In both the aggressive and nonaggressive conditions, the researchers used a large plastic inflatable doll called a "bobo" doll. In the aggressive model condition, the model exhibited a series of aggressive acts (i.e., punching, kicking) towards the bobo doll. In contrast, in the passive and nonaggressive model condition, the model sat quietly and ignored the bobo doll. The results of the study indicated that those children who observed the aggressive model tended to act in an aggressive manner, whereas the children who observed the passive and nonaggressive model tended to act in a more inhibited and nonaggressive manner.

In 1963, Bandura, Ross, and Ross extended their study (stated above) to include videotaped human models and cartoon models. In this experiment, the nursery school participants were placed into three observation conditions: a filmed aggressive adult model, a filmed aggressive cartoon model (who displayed the same types of aggressive behaviors toward the bobo doll), and a filmed nonaggressive model. The results of the experiment indicated that those nursery school children who observed the human and cartoon model conditions tended to act in an aggressive manner towards the bobo doll, whereas those children who observed the nonaggressive condition tended to act in a passive manner towards the bobo doll. The authors concluded that children imitate the behavior to which they are exposed. In addition, the results of the study

indicated that videotaped-mediated models are as effective as real-life models in transmitting aggressive patterns of behavior.

In addition to aggressive behavior, there are other problem behaviors, such as cigarette smoking and alcohol use that can be understood through a social learning theory perspective. Essentially, smoking and drinking are learned behaviors that are acquired through social influences, specifically modeling and reinforcement. Typically, in this society, children and adolescents view adult models (i.e., their parents, older children, images seen via media) who are reinforced in a positive manner for exhibiting smoking and drinking behaviors. As a result, children and adolescents learn to imitate cigarette smoking and alcohol use as they feel that they too will experience the positive consequences that they have observed others experience (Wagenaar & Perry, 1995).

Several researchers have examined the role of parental modeling on adolescent substance use (Ary, Tildesley, Hops, & Andrews, 1993; Huba & Bentler, 1980; Johnson, Shontz, & Locke, 1984). It is important to note that there exists a large body of research that focuses on children of alcoholics (Chassin, Pitts, DeLucia, Todd, 1999; Sher, 1997; Windel & Tubman, 1999). That is, children who engage in drinking because their parent(s) is an alcoholic. However, for the purposes of this research study, the focus will be on a mainstream population.

A study conducted by Engles and colleagues (1999) examined the impact of parental and best friends' smoking and drinking on subsequent adolescent

usage. The study was part of a 5 year longitudinal research project concerned with the predictors of smoking and drinking behavior of adolescents in the Netherlands. The participants in the study were 1063 adolescents with a mean age of 12. Information was gathered via questionnaire. Participants were asked questions regarding how often they smoke or consume alcohol and questions about how often their best friends and parents smoke and consume alcohol. The results of the study indicate that adolescents who had parents who modeled smoking and drinking behaviors were more likely to imitate these behaviors. The study did not find evidence that best friends' modeling of smoking and drinking behaviors had an impact on an adolescent's subsequent usage. However, the researchers point out that the presence of smoking or drinking parents may interact with the potential effects of substance use by friends. For instance, adolescents who have parents that smoke may chose friends or may be more influenced by friends who smoke. Conversely, parents who do not smoke may be more active in preventing their children from smoking by exerting influence on friendship choices. The findings support research conducted by Huba & Bentler (1980), who reported that parental modeling of substance use has more impact when the adolescent is young and that peer modeling becomes more important as the child ages.

Although the research on adolescent substance use has emphasized the role of parenting styles and modeling, the relationship that these variables share with cognitive precursors (i.e., intentions and expectancies) to adolescent substance use has been unexplored. The importance of this research includes

determining where intervention efforts should be focused. That is, interventions directed towards parents, adolescents, or to both, may be the best way to reduce the likelihood of alcohol consumption and smoking. The next chapter will focus on intentions and expectancies prior to engaging in actual substance use, specifically in relation to smoking and alcohol consumption.

CHAPTER III

EITIOLOGY OF CIGARETTE AND ALCOHOL USE

Severe alcohol problems and heavy cigarette smoking are behaviors that do not arise suddenly and in full form in adolescence or adulthood. Rather, cognitions and attitudes regarding cigarette and alcohol use that promote these behaviors begin earlier in life and gradually develop over time (Zucker & Fitzgerald, 1991; Zucker, Kincaid, Fitzgerald, & Bingham, 1995). In recent years, the research literature has suggested that an individual's cognitions regarding substance use are an important factor in his/her initiation and maintenance of cigarette and alcohol use (Charlton & Blair, 1989; Chassin et. al., 1991; Leigh, 1987; Wetter, Smith, Kenford, Jorenby, Fiore, Hurt, Offord, Baker, 1994). Zucker and colleagues (Zucker et. al., 1995) have examined cognitions and have put forth a term called "cognitive schema". A cognitive schema is defined as "a superordinate structure within which children organize their knowledge about patterns of alcohol use, expectancies about the results of such use, and attitudes and intentions about their own eventual use" (p. 1011). These researchers found that children tend to formulate alcohol expectancies regarding cognitive and behavioral effects of drinking well before they reach adolescence, and in some instances as early as the preschool years (Zucker & Fitzgerald, 1991). In addition, evidence suggests that early childhood schemas about alcohol may be a marker of a heightened risk for subsequent substance abuse (Zucker et. al., 1995).

A study by Noll, Zucker, and Greenberg (1990) examined 57 preschoolers between the ages of two and a half to five years of age. In this study, children were asked to engage in a smelling game. The children were given a variety of substances to smell including alcoholic beverages, cigarettes, apple juice, Play-Doh, and perfume. As the children smelled these items they were asked to identify them. The children who were able to correctly identify a substance were given a variety of follow up questions, such as whether the child liked the substance and who uses the substance. In addition, information was collected from the parents of the children via questionnaire format. Items in the questionnaire included questions concerning actual alcohol usage and reasons for drinking.

The findings of this study provide evidence that alcohol cognitions develop as early as the preschool years. It was found that 79% of the children were able to correctly identify at least one alcoholic beverage odor and 86% of them knew that these substances were used only by adults. In addition, it was found that the children who were the most successful at recognizing alcoholic beverages had parents who drank more and who frequently used alcohol as a means of escape. This study confirms earlier research conducted by Gaines and his colleagues (Gaines, Brooks, Maisto, Dietrich, & Shagena, 1988) reporting a relationship between parental drinking and children's alcohol cognitions.

According to the research literature (Ajzen, 1988; Johnson and Johnson, 1992; Smith & Goldman, 1995), there are several different types of cognitions

related to cigarette and alcohol use. They include norms, expectancies and intentions. For purposes of this study the focus will be on expectancies and intentions.

Expectancies and intentions have a long history in psychology (Ajzen & Fishbein, 1973). Both of these types of cognitions have been central in current models of alcohol and substance use (Critchlow, 1986; Webb, Baer, Getz, & McKelvey, 1996). Specifically, expectancies refer to a broad class of cognitions regarding substances and the anticipated effects from their use. One type are effect expectancies, and have been shown to be positive or negative in nature. For instance, an individual who holds positive expectancies regarding substance use may believe that s/he will feel more relaxed if s/he drinks or smokes. Conversely, an individual who holds negative expectancies may believe that s/he will get sick from drinking or smoking. Another type, called reaction expectancies, refer to social effects resulting from consumption. For, instance, one may believe his/her company is more enjoyable if he/she drinks (Johnson and Johnson, 1996).

Aside from expectancies, a more proximal influence to substance use is intentions to engage in use. Intentions constitute a motivational variable associated with acquisition of substances. As a result, intentions immediately precede acquisition and use of substances (Ajzen, 1988). For instance, an individual may believe that if s/he were offered a cigarette then s/he would smoke it.

Taken together, expectancies and intentions represent cognitive structures that develop through social-learning principles, such as modeling and vicarious learning. Specifically, children take in information and learn by observing others (i.e, parents, older siblings) perform a behavior. The knowledge and exposure to models leads children to develop specific expectancies and intentions towards that behavior. For instance, children who observe their parents being reinforced for smoking and/or drinking are more likely to adhere to positive smoking and/or drinking expectancies and will have higher intentions to smoke and/or drink (Bandura, 1986; Goldman et. al., 1987; Smith & Goldman, 1995).

Behavioral Intention Theory

Azjen and Fishbein (1973) proposed a theory called the Behavioral Intention Model (BIM) that deals with the prediction of a particular behavior within a well-defined situation. This model assumes that most behaviors studied are under volitional control (i.e., individuals can perform behaviors if they are inclined to do so, or not perform behaviors if they decide not to), and in specific situations, an individual may have specific intentions that influence overt behavior. BIM predicts that intentions are a function of two determinants; one determinant is a personal factor, and the other a social factor. The personal factor (also referred to as the "attitudinal factor") is defined as an individual's attitude toward the behavior. The second determinant, the social factor (also referred to as the "normative beliefs"), is the individual's perception of social pressure to perform a behavior.

Azjen and Fishbein proposed that both social and personal factors work in an additive fashion. The personal factor refers to the expectancy value of a behavior. That is, an individual's evaluation or attitude toward a target behavior is proposed to be a function of that behavior's perceived values and consequences to the individual. This personal factor is added to the social factor, which is the normative influence of the social environment. This social factor (i.e., normative belief) refers to an individual's perception of other people's expectations and attitudes toward engaging in a behavior. In the BIM, this normative belief is multiplied by the individual's motivation to comply with the perceived expectations of a given reference group. Therefore, the social influence experienced is increased if the motivation to comply with others is high. It is noted that the perceived expectations of a given reference group vary depending on the situation.

A study conducted by Schlegel and colleagues (1977) described this framework and applied it to adolescent intentions to consume alcohol. The sample in this study included 196 male high school students with a mean age of 15.9 years. Each student was given two questionnaires one month apart. The initial questionnaire included components of the Ajzen and Fishbein model (i.e., attitudes and normative beliefs). For instance, items included students' thoughts about what they expected to do or feel in the next month with respect to alcohol use. The follow-up questionnaire obtained measures of actual drinking behavior during the month that had elapsed. Each questionnaire contained measures that pertained to three types of alcohol (i.e., beer, hard liquor, and wine) and

their use in three social settings (i.e., at home with parents, at a party with friends, and at a pub). This resulted in nine different alcohol-situation sets included for analysis. For each of these sets, the attitude and normative components of the BIM were operationalized using a semantic differential format. The results of the study lend support to the BIM model for alcohol consumption by adolescents. The study revealed that in all of the nine alcohol-situation sets, a specific intention to drink was predicted from its corresponding attitude and normative beliefs. With regard to actual alcohol consumption, the results indicated weak correlations between intentions and actual behavior for a majority of the sample (i.e., 88%). The researchers attribute this finding to the fact that participants were not of legal drinking age.

Several researchers have sought to elaborate on Azjen and Fishbein's BIM. A study conducted by Sherman et. al., (1982) examined whether the attitude component of the BIM is a better predictor of behavior if the attitude was based on direct experience. The sample in this study consisted of 1,496 junior high and 1,733 high school students from a small Midwestern community who either never had smoked or who had tried a few cigarettes but who had not smoked in the past month. Subjects were given questionnaires that assessed attitudes, normative beliefs, and intentions to smoke. In addition, items regarding direct experience were also included (i.e., How often are you around adults who smoke cigarettes? Has anyone in your family ever had a sickness related to smoking?). The results of the study indicated that direct experience has an impact on the attitude component of the BIM in predicting behavioral

intentions. That is, the weight of the attitude component in predicting cigarette smoking intentions increased under levels of greater direct experience.

Specifically, the study found that adolescent intentions to smoke were better predicted by attitudes toward smoking in conjunction with the amount of previous direct experience with cigarettes.

Grube, Morgan, and McGree (1986) further elaborated on Azjen and Fishbein's BIM. These researchers introduced the concepts of behavioral norms and subjective norms. Behavioral norms were defined as beliefs regarding the behavior of others, whereas subjective norms were defined as beliefs regarding other people's expectations about performing a behavior. It is important to note that subjective norms were defined in a manner analogous to the definition of normative beliefs mentioned above.

Grube et. al. conducted a study in order to demonstrate that the behavioral norms or the perceived behavior of others were central to the initiation and maintenance of substance use by adolescents. In addition, these researchers disagreed with Azjen and Fishbein's notion that the factors involved in the prediction of behavioral intentions were additive. Instead, they predicted that the factors involved would be interactive. The subjects in the Grube et. al. study were 752 sixth grade students in Dublin, Ireland and 162 first year student teachers from a college in Dublin. Both students and teachers were given questionnaires to fill out anonymously. The questionnaires included items pertaining to actual smoking behavior and intentions to smoke (i.e., students were asked how many cigarettes they were likely to smoke, on average, each

day during the next month). The questionnaires also included items measuring subjective norms and behavioral norms. For instance, subjective norms were assessed by having respondents indicate how important people in their lives (mother, father, or peers) felt about their cigarette use. The behavioral norms were assessed by having the respondents indicate how many cigarettes they perceived that these important people in their lives smoked daily. Attitudes toward smoking were measured as well. The findings of the study supported the assertion that behavioral norms interact with the BIM. Specifically, the behavioral norm measure of perceived peer smoking was found to be more important as a predictor of smoking intentions and behavior compared to the subjective norm measures. The results suggest that behavioral norms are distinct from subjective norms and can contribute independently to smoking intentions and actual smoking behavior. This holds true especially in the case of adolescent smoking, where there is an inconsistency between modeling and messages directed toward this behavior. For instance, parents may prohibit their children from smoking (message), however, at the same time, suggest that smoking is acceptable through their own smoking behavior (parental modeling). In addition, the results of the study suggest that the BIM should be modified to include interactive effects between attitudes and normative beliefs. Grube et. al. suggest that this will allow for a better understanding of how beliefs are organized and how they relate to intentions and behaviors.

Similar to Grube et. al., a study conducted by Webb and colleagues (1996) examined the influence of perceived parental attitudes on adolescents'

intentions to engage in substance use. However, Webb et. al. focused on parental attitudes regarding children's alcohol use in general, whereas Grube et. al. examined parental attitudes toward their own child's smoking behavior (i.e., subjective norms). In addition to parental attitudes, Webb et. al. examined the influence of peer attitudes. Specifically, Webb and colleagues investigated whether children's attitudes toward alcohol use are influenced by their perceptions of parental and peer attitudes towards alcohol use. They also examined whether the children's attitudes influenced their intentions to consume alcohol, and whether these intentions to drink led to actual consumption. In the researchers' model, intentions served as a mediator between children's attitudes and actual alcohol consumption. The study followed 119 predominantly white children from fifth to seventh grade. Information was gathered using a questionnaire format and the children in the study were assessed at two timepoints, in fifth and seventh grade. As fifth graders, subjects completed a questionnaire that assessed intentions to use alcohol. As seventh graders, subjects completed a questionnaire that assessed actual alcohol use, as well as attitudes towards use and intentions to engage in use. Questionnaire items also included perceived parental attitudes toward alcohol use (i.e., how does your mother/father feel about kids your age drinking?), peers perceived attitudes toward alcohol use (i.e., how do most of your friends feel about kids your age drinking alcohol?), and their attitude toward alcohol use (i.e., how do you feel about kids your age drinking alcohol?). Findings of the study indicated that perceived parent and peer attitudes toward alcohol use influenced the formation

of attitudes in fifth graders towards alcohol use. These attitudes predicted the fifth graders' intentions to consume alcohol. Furthermore, fifth graders' intentions were found to impact on the actual consumption of alcohol they reported approximately two years later in seventh grade.

The intention to smoke or drink precedes the emergence of actual behavior by months or even years, and since the prevalence of smoking and drinking behavior is quite low in early adolescence, the identification of intentions is an important variable for investigation. Research has shown that the intention to use substances such as cigarettes and alcohol is associated with the subsequent initiation of the behavior (Aas, Klepp, Laberg & Edvard, 1995; Chassin et. al., 1981; Grube, et. al., 1986; Quine & Stephenson, 1990). Furthermore, there is evidence that the factors important to the adolescent's intentions to smoke or drink are the same factors that place him/her at risk to initiate smoking or drinking.

Several researchers have examined the relation between intentions and actual substance use during adolescence. A study conducted by Chassin et. al. (1981) investigated the attitudes and normative beliefs of non-smokers about smoking. The participants in the study were 4,638 middle and high school students from a Midwestern state. Students were asked to complete a questionnaire in order to assess how their beliefs and certain peer, sibling, and parental variables contributed to their intentions to smoke in the future. The results of the study found that intentions to smoke were influenced by the modeling of smoking behaviors of peers, older siblings and parents. For both

middle and high school students, peers smoking status had an impact on intentions to smoke in the future. For middle school students only, older sibling's, and father's smoking status were related to intentions to smoke cigarettes in the future. In addition, for both middle and high school students, parental and older sibling's smoking status were related to actual smoking behavior among adolescents.

A similar study conducted by Quine and Stephenson (1990) examined how modeling cigarette and alcohol use by parents, older siblings, and peers influences both smoking and drinking intentions. The subjects in the study were 2,336 Australian children between the ages of 10-12. Students in the study were asked to complete questionnaires which included smoking and drinking behaviors of parents, peers, and siblings. The questionnaires also contained items that assessed intentions to smoke and/or drink as well as actual substance use. The results indicated that parent and peer modeling influenced both smoking and drinking intentions among adolescents. However, in the case of alcohol, parental modeling also influenced actual drinking on the part of adolescents, whereas this relationship was not present for smoking. These results suggest that parental models exert a strong influence on preadolescents' intentions to engage in substance use, especially alcohol.

There has been a great deal of research examining the role of parental modeling on adolescent intentions to smoke and drink. However, parenting styles and their impact on adolescent intentions have not been investigated. It is plausible to assert that parenting styles may influence the development of

adolescent intentions to use cigarettes and consume alcohol. Therefore, additional study of these variables is warranted, especially in samples that are more heterogeneous. This would allow for greater generalization of the research findings. In addition, parental modeling in conjunction with parenting style has not been examined. Therefore, it is possible that both variables together influence adolescent intentions to smoke cigarettes and drink alcohol.

Chapter IV

EXPECTANCY THEORY

Aside from intentions to engage in smoking cigarettes and drinking alcohol, a more distal influence on substance use is expectancies. Expectancies have been found to play an extremely important role in the initiation and maintenance of substance use (Leigh, 1989). The term expectancy refers to “an intervening variable of a cognitive nature. Whether explicit or implied, this cognitive variable is understood to be knowledge (information, encodings, schema, scripts, and so on) about relationships between events or objects in the real world” (Goldman et. al., 1987, p. 183). According to Smith and Goldman (1995), expectancy theory describes the cognitive mechanisms by which early learning experiences come to influence future behavioral choices. Essentially, expectancy theory describes how new behavior is acquired. The theory states that through the repeated pairings of the perceptions of a behavior and certain outcomes, associations are stored in memory in the form of expectancies. These stored associations then influence decisions made at future choice points. The expectation of a valued reinforcer from a given behavior will then increase the likelihood of that behavior occurring in the future.

Within the research literature, there are two types of expectancies, effect expectancies and reaction expectancies. Effect expectancies are beliefs regarding the direct impact of alcohol consumption. Effect expectancies have been shown to be of a positive or negative nature. Within positive effect expectancies there are both positive and negative reinforcement expectancies

(Johnson & Johnson, 1992). Positive reinforcement expectancies are the beliefs about alcohol's ability to evoke positive changes. For instance, positive reinforcement expectancies may result in the belief that one will have more fun when drinking. Negative reinforcement expectancies are beliefs that alcohol has the ability to reduce or eliminate negative feelings, such as social anxiety. For instance, an individual who adheres to negative reinforcement expectancies may believe that alcohol consumption will eliminate feelings of shyness. In contrast to positive effect expectancies are negative effect expectancies. Individuals who adhere to negative effect expectancies maintain negative beliefs regarding the effects of drinking and smoking. For instance, a child who adheres to negative effect expectancies may believe that feelings of sickness would result from cigarette use and alcohol consumption. Negative effect expectancies are believed to serve as deterrents to alcohol initiation (Johnson & Johnson, 1996).

In addition to expectancies about the direct effects of drinking and smoking, there also are beliefs regarding the social consequences of these behaviors. These beliefs are called reaction expectancies. According to Johnson and Johnson (1996), reaction expectancies can be defined as expectancies regarding the anticipated reactions of significant others (i.e., friends, parents) to drinking or smoking. These anticipated reactions range from approval and acceptance to disapproval and rejection. For instance, one may believe that other people (e.g., friends) would like them more if s/he drank. Johnson (1991) stated that reaction expectancies of friends and parents may influence drinking immediately because they function as either encouraging or

discouraging the quantity of intake. Further, reaction expectancies may influence future drinking as they provide information regarding the probable future reactions of friends and parents to subsequent drinking.

Previous studies with adults have shown that reaction expectancies have an impact on both ethnic (Johnson, 1991) and gender drinking differences (Johnson & Gallo-Treacy, 1993). Other studies have examined reaction expectancies in children and young adolescents. An important study conducted by Johnson and Johnson (1996) examined first, fourth, and seventh graders' reaction expectancies. Specifically, the study explored the motives children attribute to adolescent drinking, and the anticipated social consequences for an adolescent's acceptance or refusal of a drink. The participants in the study were 60 children, ten males and ten females each from grades (one, four, and seven). The subjects in the study were presented with two vignettes in which the lead character, a 13 or 14 year old, was offered a beer to drink by friends and, depending on the vignette, either drank or refused to drink the beer. Subjects were then individually interviewed and were asked questions regarding the adolescent's motivation for drinking (e.g., why did s/he drink the beer?), as well as expected parental and peer reactions to drinking (e.g., how will his/her parents feel about his/her drinking the beer?). Results of the study revealed that across the three grade groups the children believed that parents would react negatively to adolescent consumption of beer. However, the children believed that the adolescent's consumption of beer would not be deterred by anticipated negative parental reactions. Further, the children viewed adolescent

consumption of beer as related more closely to anticipated peer reactions rather than to anticipated parental reactions. For instance, the children believed that peers would react negatively (i.e., negative reaction expectancy) if the adolescent refused to consume beer. An important finding of this study was that compared with the first graders, more of the fourth and seventh graders provided social reasons to explain the adolescent's decision to consume beer. Therefore, by fourth grade, children believe that drinking is influenced by society, especially by one's peer group. These findings support research conducted by Miller, Smith, & Goldman (1990), who reported that fourth grade is an age where children begin to show a greater receptivity to societal influences. In addition, these researchers also reported that there is a shift in alcohol-related cognitions occurring approximately around third or fourth grade. That is, there is a sharp increase in children's adherence to positive expectancies at this age.

The development of smoking and drinking expectancies does not necessarily involve direct experience with cigarettes and alcohol (Smith and Goldman, 1995). In fact, children form expectancies well before they intend to smoke or drink (Gustafson, 1992; Smith and Goldman, 1995) and as early as the preschool years (Zucker & Fitzgerald 1991). Many researchers have found that these expectancies develop within children through social-learning principles, such as modeling and vicarious learning (Goldman et al., 1987; Gustafson, 1992; Johnson and Johnson, 1995, 1996; Smith and Goldman; 1995; Zucker et al., 1995). For instance, children receive information and develop knowledge indirectly through the observation of others (parent, older sibling), modeling

others (parental modeling, peer modeling), and through access to the mass media. The integration of this knowledge and exposure to different smoking and drinking experiences leads children to develop attitudes and expectancies regarding cigarette and alcohol use. At a later time, children (or by now adolescents) decide whether or not to drink when alcohol is made available. Alcohol-related expectancies are considered intervening variables that transcend this time lag and govern later alcohol consumption choices. According to Gustafson (1992), when expectancies first begin to develop they are broad and general in nature and then with more extensive experience of drinking or smoking, expectancies are shaped and thus they become more specific.

Several researchers (Cumsille & Sayer, 1998; Smith et. al., 1990; Webb, Baer, Francis, & Caid, 1993) found that as children age, they tend to adhere to more positive expectancies. This may be the result of the belief by children that alcohol or cigarette consumption enhances social behavior and reduces stress. A study conducted by Gustafson (1992) examined Swedish adolescents and found that by 12 years of age, prior to any extensive drinking experience, adolescents held positive expectancies towards drinking alcohol. In addition, as these adolescents progressed from age 12 to 15, expectancies developed further in a positive direction and these adolescents believed that alcohol would enhance social behavior, reduce tension, and increase arousal.

A great deal of the research studies conducted have assessed expectancies using the Alcohol Expectancies Questionnaire (AEQ) (Brown,

Cremer, & Stetson, 1987; Christiansen & Goldman, 1983; Christiansen, et., al., 1989). This instrument is a structured questionnaire and concerns the potentially positive effect of alcohol consumption (Smith, Rivers, & Stahl, 1992). However, the assessment of only positive expectancies while excluding negative expectancies may limit the significance of research findings as negative expectancies are critical to an understanding of alcohol use in children as well as adults (Johnson & Johnson, 1992). The importance of negative expectancies in an adult Puerto Rican population has been demonstrated in a study conducted by Johnson, Gurin, and Rodriguez (1996). These researchers compared the alcohol expectancies of drinkers (heavy, moderate, and light) to abstainers (current and lifetime) and found that each held different expectancies toward alcohol consumption. In general, drinkers adhered to more positive expectancies and the abstainers adhered to more negative expectancies regarding alcohol consumption. In other words, positive expectancies are extremely important to the maintenance of drinking and negative expectancies are extremely important to abstaining. As children and young adolescents are generally abstainers, negative expectancies need to be examined as deterrents to the initiation of alcohol consumption in later adolescence and adulthood (Johnson & Johnson, 1992, 1995).

Several researchers have demonstrated the importance of understanding both positive and negative expectancies in children. A study conducted by Johnson & Johnson (1995) investigated alcohol-related beliefs through the examination of both positive and negative expectancies of children in first,

fourth, and seventh grade. The participants in the study were 60 children, 10 males and 10 females from each grade, attending a catholic school. In the study, the children were each individually presented with a task that asked them to identify a behavior or a feeling associated with consuming certain substances that an experimenter placed on a table in front of them. The substances presented to the children were a carton of milk, can of soda, can of beer, and a bottle of cough syrup. Children were asked to identify which liquid might cause individuals to act or feel a certain way (e.g., which of these would make a person happy if s/he drank it?). The results revealed developmental trends for a child's belief regarding the effects of alcohol consumption. The researchers found that as children age, they tended to adhere more to positive expectancies. However, they also found that older children (seventh graders) tended to adhere to more negative expectancies compared to younger children (first graders). The researchers suggest that the fact that all expectancies increase with age reflects the increasing salience of alcohol-related beliefs as children transition into adolescence.

There is a great deal of evidence in the research literature that demonstrates that expectancies predict actual smoking and drinking behavior (Chassin et. al.,1991; Christiansen, Smith, Roehling, & Goldman,1989). A study conducted by Chassin et. al. (1991) examined how smoking expectancies are related to actual use. Specifically, Chassin et. al. investigated the social-psychological predictors of young adult smoking. Some of the social-psychological factors in this study included parental and peer modeling of

smoking, values placed on academic success and independence, and expectancies regarding smoking. The adolescent participants in the study were between the ages of 11 and 17. Data were collected using a questionnaire format at two time points. The participants were first assessed between 1980 and 1983 (when they were between the ages of 11 and 17). A follow up study was then conducted from 1987 through 1988, through mailed questionnaires, when they were between 15 and 24. Results of the study indicated that negative expectancies of the social consequences of smoking and values placed on academic success and independence were related to adolescent smoking but not to adult smoking. Conversely, negative expectancies regarding health consequences of smoking were related to adult but not adolescent smoking.

With regard to alcohol expectancies, several researchers have demonstrated that alcohol expectancies predict actual use. A longitudinal study conducted by Christiansen et. al. (1989) examined whether alcohol expectancy responses can predict alcohol consumption one year later. In this study, participants were between 11 and 14 years of age and were examined in the seventh grade and again in the eighth grade. Data were collected using a questionnaire format. Results indicated that those seventh graders who adhered more to positive expectancies regarding alcohol consumption showed a higher incidence of alcohol use in the eighth grade.

There has been considerable interest in the development of expectancies and their interaction with various family influences. A great deal of the research literature has focused on parental modeling of substance use and its impact on

children's expectancies towards usage (Brown, Creamer, & Stetson, 1987; O'Malley & Maisto; 1985; Smith, Rivers, & Stahl, 1992). However, this research has specifically focused on parental abuse and children of alcoholics. Since this study examines a normal population, these studies do not provide sufficient support for this research. To date, the research examining the impact of parental modeling and parenting styles on adolescent expectancies to smoke cigarettes and consume alcohol is nonexistent. Previous research has shown that parenting styles contribute significantly to adolescent substance use (Barnes, 1977; Barnes et. al. , 1986; Baumrind, 1978, 1991b, 1991c; Dishion & Loeber, 1985) and parental modeling contributes to both adolescent intentions to engage in use as well as actual use (Ary et. al., 1993; Engles et. al., 1999; Huba & Bentler, 1980; Johnson et. al ., 1984; Quine & Stephenson, 1990). Since expectancies are cognitions that are antecedents to actual substance use, it is hypothesized that parental modeling and parenting style will have an impact on adolescent expectancies to smoke cigarettes and consume alcohol. An investigation of the most proximal antecedents of substance use behavior is extremely important in order to maximize prevention. That is, once the roles of intentions and expectancies are determined in relation to adolescent substance use, clearly articulated methods for changing these cognitive precursors (i.e., intentions and expectancies) may be implemented. This, in turn, may ultimately serve to reduce subsequent adolescent cigarette smoking and alcohol use.

Chapter V

SUMMARY

This literature review has examined parenting behaviors (parenting styles and parental modeling) and adolescent cigarette and alcohol cognitions (intentions and expectancies) in relation to adolescent substance use. Research has shown that parents are extremely important socialization agents of children and adolescents. Furthermore, parents who have strong relationships with their children may help to shield their children from substance abuse (Baumrind & Moselle, 1985; Naughton & Krohn, 1988).

One type of parenting behavior that has been linked to adolescent substance use is parenting styles. Research has demonstrated that parenting styles predict adolescent substance use (Barnes 1977, 1984, Barnes, Farrell & Carins, 1986, Barnes & Farrell 1992; Baumrind 1978, 1991b, 1991c). The research literature has shown that adolescents who abstain from substance use have parents who are highly supportive, moderately controlling and high in monitoring (authoritative) or low in support, and high in both control and monitoring (authoritarian). To date, a link between parenting styles and actual substance use has been established. While studying actual substance use behaviors is important, it is not the best route to prevention. In order to maximize prevention, it is important to recognize the immediate attitudes (proximal antecedents) that precede actual substance use behavior. This includes adolescent cognitions, specifically, intentions and expectancies. This

current study will examine the relationship between parenting styles and adolescent cognitions regarding smoking cigarettes and drinking alcohol.

Another type of parenting behavior involves modeling. Modeling, both direct and vicarious, can best be understood through Social Learning Theory. This theory asserts that behavior is acquired in a social setting. The principles of imitation, modeling, and reinforcement have been shown to be important in the development of children's alcohol and smoking cognitions (i.e., expectancies and intentions). It has been demonstrated that parents serve as powerful role models to their children. Those parents who model smoking and drinking behaviors may also be more likely to have children who adhere to positive expectancies and higher intentions towards cigarette and alcohol use. This current study will examine the relationship between parental modeling and adolescent cognitions regarding smoking cigarettes and drinking alcohol.

Although research has found that some parenting behaviors (i.e., parenting styles and parental modeling) have an impact on adolescent substance use behavior, in a pre-adolescent population the actual use of cigarettes and alcohol is quite low. However, it is during this time period that cognitions regarding the use of these substances develop and the likelihood of future use increases. Cognitions, such as intentions and expectancies, are instrumental in current models of alcohol and substance use as they have been shown to be precursors to substance use behavior (Critchlow, 1986; Webb et al., 1996). Intentions to engage in cigarette smoking and alcohol use can best be understood through the Behavioral Intention Theory. This theory has been

utilized in regard to substance use behaviors and it has been found that the intentions of adolescents to engage in cigarette smoking and alcohol use predict subsequent behavior (Chassin et. al., 1981; Grube et. al., 1986; Schlegel et. al, 1977; Sherman et. al., 1982).

Expectancies, in addition to intentions, are cognitive precursors to cigarette and alcohol use. According to expectancy theory, behavioral choices are shaped by earlier learning experiences which are stored in memory as expectancies. Associations between perceptions of behavior and certain outcomes (positive or negative) are stored in memory as expectancies. Hence, pre-adolescents have stored in memory the expectations of what will occur if they engage in cigarette and alcohol use. There are two different types of expectancies, effect expectancies and reaction expectancies (Johnson and Johnson, 1992). Effect expectancies refer to the anticipated effects resulting from consumption, whereas reaction expectancies refer to social effects resulting from consumption. Research has also shown that expectancies regarding cigarette and alcohol use begin very early in life and initially are primarily negative in nature. However, as children age, they begin to adhere more to expectancies that are positive. The research literature has demonstrated that adolescent alcohol and smoking expectancies are good predictors of actual substance use (Aas et. al, 1995; Chassin et. al. 1991; Leigh, 1987; Webb et. al, 1993).

As stated previously, substance use cognitions such as intentions and expectancies are precursors to actual substance use. The value of

understanding the relationship between intentions, expectancies, and substance use is ultimately to develop prevention programs and interventions. With this in mind, it is important to understand the influences impacting on the formation of smoking and drinking intentions and expectancies. These influences include parenting styles and parental modeling. Based on the research presented, there is reason to expect that parenting styles and parental modeling will play an important role in the development of smoking and drinking intentions and expectancies.

Chapter VI

RESEARCH OBJECTIVE

The study focused on two aspects of parenting behaviors, specifically, parenting styles and parental modeling, as important influences on the development of adolescent substance use cognitions. Parenting styles have been found to have an impact on actual adolescent substance use (Barnes 1977, 1984; Baumrind 1978, 1991b, 1991c). Many researchers have identified the constructs of support, control, and monitoring as critical components of parenting styles (Barnes et. al., 1986; Dishion & Lober, 1985; Rollins & Thomas, 1979). In fact, research has shown that parental support, control, and monitoring have a significant effect on an adolescent's decision to engage in substance use (Barnes & Farrell, 1992; Steinberg, 1987). Moreover, research has shown that parental modeling also has an impact on actual substance use behaviors. Parents are seen as role models and children learn to smoke and drink through social learning principles such as imitation, modeling and reinforcement.

Research has demonstrated that substance use cognitions, such as expectancies and intentions, are precursors to actual substance use behavior. Therefore, in order to reduce early cigarette and alcohol use and to develop effective intervention programs, it is important to examine the cognitions that are present prior to actual experimentation.

This study investigated the impact of parenting styles (i.e., support, control, and monitoring) and parental modeling on pre-adolescent expectancies

and intentions to smoke cigarettes and drink alcohol. The study has utilized a pre-adolescent sample, as this is an age where expectancies and intentions are forming in preparation for future experimentation and possible use. It is important to note that stronger adherence to negative expectancies has been shown to function as a deterrent to subsequent substance use. Delineating the relationships between parenting styles, parental modeling, intentions, expectancies, and substance use will allow for the development of more effective prevention programs and interventions.

The independent variables for this study are parenting styles (i.e., support, control, and monitoring) and parental modeling. It has been demonstrated that parenting styles predict adolescent substance use (Barnes 1977, 1984; Baumrind 1978, 1991b, 1991c). Specifically, parental support (i.e., parental behaviors towards the child which indicate to the child that he or she is accepted and loved), parental monitoring (i.e., parental awareness of their child's whereabouts, who their child's peers are, and knowledge regarding what their child is doing) and parental control (i.e., parental behaviors towards the child which are intended to direct the child's behavior in a manner acceptable to the parent) have been found to be salient factors in the prevention of adolescent substance use. Since stronger adherence to negative expectancies functions as a deterrent to actual use, it is important to identify the parenting styles that maintain these negative expectancies. With regard to modeling, research has shown that children who observe their parents smoking and drinking are more likely to imitate their behavior. Given the association between parental modeling

and adolescent substance use, it is anticipated that parental modeling will have an impact on adolescent smoking and drinking cognitions. Specifically, it is important to examine whether adolescents who report their parents as smoking and/or drinking will be more likely to adhere to higher positive expectancies and higher intentions towards smoking and drinking.

The dependent variables for this study are smoking and drinking intentions and expectancies. An intention is defined as an individual's plan to execute a behavior in the future. Intentions are the most proximal precursors to cigarette and alcohol usage. Research has shown that the intention to use substances such as cigarettes and alcohol is associated with the subsequent initiation of the behavior (Chassin, et. al., 1981; Quine & Stephenson, 1990).

Expectancies are schemas that encode information regarding the outcome associated with either smoking cigarettes or drinking alcohol. Expectancies have been found to predate and predict actual smoking and drinking usage (Aas et. al, 1995; Chassin et. al., 1991). The research literature has demonstrated that while individuals adhere to both positive and negative expectancies, it is the relative strength of adherence that is important. That is, individuals who adhere more strongly to positive expectancies are more likely to engage in cigarette smoking and alcohol use, whereas individuals who adhere more strongly to negative expectancies are less likely to engage in cigarette smoking and alcohol use (Johnson & Johnson, 1992, 1995; Miller, et. al., 1990). Further, research has shown that expectancies regarding cigarette and alcohol use begin very early in life and initially are primarily negative in nature.

However, as children age, they begin to adhere to more positive expectancies (Johnson & Johnson, 1996). It is important to note that since the emphasis of this research is on prevention, it is necessary to focus on negative expectancies since they serve as a deterrent to use. The most central question is, what are the factors that increase negative expectancies? Therefore, negative expectancies will be the outcome variable used in the analyses.

Hypotheses:

It has been widely suggested, both theoretically and empirically, that parenting styles influence adolescent substance use (Barnes 1984; Baumrind 1991b). In order to maximize the effectiveness of prevention programs, it is important to examine the relation between the parenting style variables (i.e., support, control, and monitoring) and adolescent smoking and drinking cognitions (i.e, negative expectancies and intentions). In light of the previous research findings, the following hypotheses are proposed:

There are three hypotheses concerning the relationship of the parenting style variables (support, control, and monitoring) to the negative expectancy scores and the intention scores.

H1a. For both cigarette and alcohol use, there will be a positive relationship between mother's perceived support and negative expectancy scores (i.e., the higher the perceived support, the higher the negative expectancy scores will be), and a negative relationship between mother's perceived support and intention scores (i.e., the higher the perceived support, the lower the intention scores will be).

H1b. For both cigarette and alcohol use, there will be a positive relationship between father's perceived support and negative expectancy scores (i.e., the higher the perceived support, the higher the negative expectancy scores will be), and a negative relationship between father's perceived support and intention scores (i.e., the higher the perceived support, the lower the intention scores will be).

H2a. For both cigarette and alcohol use, there will be a positive relationship between mother's perceived control and negative expectancy scores (i.e., the higher the perceived control, the higher the negative expectancy scores will be), and a negative relationship between mother's perceived control and intention scores (i.e., the higher the perceived control, the lower the intention scores will be).

H2b. For both cigarette and alcohol use, there will be a positive relationship between father's perceived control and negative expectancy scores (i.e., the higher the perceived control, the higher the negative expectancy scores will be), and a negative relationship between father's perceived control and intention scores (i.e., the higher the perceived control, the lower the intention scores will be).

H3a. For both cigarette and alcohol use, there will be a positive relationship between mother's perceived monitoring and negative expectancy scores (i.e., the higher the perceived monitoring, the higher the negative expectancy scores will be), and a negative relationship between mother's

perceived monitoring and intention scores (i.e., the higher the perceived monitoring, the lower the intention scores will be).

H3b. For both cigarette and alcohol use, there will be a positive relationship between father's perceived monitoring and negative expectancy scores (i.e., the higher the perceived monitoring, the higher the negative expectancy scores will be), and a negative relationship between father's perceived monitoring and intention scores (i.e., the higher the perceived monitoring, the lower the intention scores will be).

Although it is possible to examine these variables individually, a more complete analysis involves examining how the three parenting styles function together. It is suggested that when the parenting styles (i.e., support, control and monitoring) are examined together they may exhibit a different pattern of prediction regarding smoking and drinking expectancies and intentions. Therefore, the parenting style variables, consisting of monitoring, control, and support will be examined together. Research has shown that when these variables are examined together, monitoring is the strongest predictor (Ary et al., 1999; Chapman, 1997; Patterson et. al. 1992). Therefore, this will be entered into a regression equation first, followed by control and then support. This results in the following hypothesis:

H4. When parental monitoring, parental support, and parental control are entered into a regression equation with smoking and drinking cognitions, all three parental variables will be significant, and the largest effect will be for parental monitoring.

It has been demonstrated that parents serve as powerful role models to their children. Research has shown that children who perceive their parents as smoking cigarettes and consuming alcohol are more likely to imitate these behaviors (Engles et. al., 1999). If a parent receives positive reinforcement for smoking and drinking in the presence of a child, then that should result in the formation of positive expectancies for those substances. With a focus on prevention, it is important to examine the cognitive precursors to substance use, that is, intentions and expectancies and how these precursors are related to perceived parental practices.

H5a. Children who perceive their mothers as smoking regularly will have lower negative expectancy scores for smoking compared to children who do not perceive their mothers as smoking regularly.

H5b. Children who perceive their mothers as smoking regularly will have higher intention scores for smoking compared to children who do not perceive their mothers as smoking regularly.

H6a. Children who perceive their fathers as smoking regularly will have lower negative expectancy scores for smoking compared to children who do not perceive their fathers as smoking regularly.

H6b. Children who perceive their fathers as smoking regularly will have higher intention scores for smoking compared to children who do not perceive their fathers as smoking regularly.

H7a. Children who perceive an adult that they live with as consuming alcohol regularly will have lower negative alcohol expectancy scores compared

to children who do not perceive an adult that they live with as consuming alcohol regularly.

H7b. Children who perceive an adult that they live with as consuming alcohol regularly will have higher drinking intention scores compared to children who do not perceive an adult that they live with as consuming alcohol regularly.

As an exploratory analysis, the relationship between parenting styles (i.e., support, control, and monitoring), parental modeling, expectancies, and intentions will also be examined in the preadolescents who are already experimenting with cigarettes and alcohol. This subgroup of children is predicted to be small since research has shown that few children at this age have experimented with cigarettes and alcohol.

Chapter VII

METHODS

Participants

This study utilized data from the Teen Attitude Study, a longitudinal project that has examined the ecological contexts of young adolescents' attitudes and experiences regarding smoking and drinking. The study began in the Fall of 1997 and has followed cohorts of public school and catholic school students in New York City from sixth through eighth grade. The present study examined a subsample which consisted of seventh graders from eight catholic schools located in the Bronx and upper Manhattan. The subject pool was comprised of 420 students, 181 males (43.1%) and 239 females (56.9%), drawn from low socioeconomic status communities. The racial breakdown of this subject pool was 67.6% Latino, 10% African American, 1.7% Asian, 1.7% Caucasian, 18% other and 1.0 % of the subjects did not indicate ethnicity. Of these participants, 40.5% live with both of their parents, 21.9% live exclusively with their mothers, .2% live exclusively with their fathers, 12.1% live with one of their parents and another relative or family member, and the remaining 25.3% live with one of their parents and a stepparent. In addition, .5% of the subjects did not indicate who they lived with. Additional demographic information is presented in Table 2.

Table 2

Demographic Information

Variable		%
Ethnicity of Subject	Latino	67.6%
	African American	10.0%
	Asian	1.7%
	Caucasian	1.7%
	Other	18.0%
	Did not indicate	1.0%
Guardians that subject lives with	Both parents	40.5%
	Mothers only	21.9%
	Fathers only	.2%
	One parent and another relative	12.1%
	One parent and a stepparent	25.3 %
Nation of subjects birth	U.S.	87.6%
	Other	10.2 %
	Did not indicate	2.1%
Age when subject came to U.S.	0-5 years	8.1%
	6-9 years	3.9%

Procedure

This cross-sectional investigation draws on self-report data. An active consent procedure was used to procure parental consent for children to participate in the study. The eight schools sent consent forms home with students for their parents to indicate whether or not they would like their child to participate in the study. The students returned the signed forms to the school. Once the test forms were signed and returned, testing arrangements were made with the school principals. Questionnaires were administered to seventh grade students during their regularly scheduled school day by researchers who went into their classrooms. Students who were administered the questionnaire were informed about the intent and the purpose of the study, the procedures used to guarantee confidentiality, and their rights as participants in a research study. Students were also informed that if any of the questions made them uncomfortable they could leave those questions blank. The protocol was approved by the Queens College Institutional Review Board (IRB).

Measures

The instrument used in this study is a questionnaire that consists of 152 items and takes approximately 40 minutes for the students to complete. The items were derived from studies that have investigated attitudes and lifestyle choices as well as from standardized questionnaires. Although several other areas were evaluated with this instrument, only the parenting variables and the substance use cognition variables were chosen for this study. This was done as these variables best addressed the hypotheses of this study. The questionnaire

items for the present study cover characteristics of the student, the student's perception of family beliefs and practices, and the student's intentions and expectancies regarding smoking cigarettes and drinking alcohol. These questions were measured as either dichotomous or continuous variables (i.e., a Likert type scale). The questionnaire items were grouped together to measure a particular construct. These constructs were then summed and averaged to produce a variable to be used in the data analysis. Table 3 list the items used in the data analysis. The variables in this investigation and their derivations are as follows:

Smoking and Drinking Intentions:

The intention measure refers to students plans to engage in smoking and drinking behavior. The intention items for both smoking and drinking were derived from Aas et. al. (1995), Quine & Stephenson (1990), and Webb and colleagues (1995). There were three intention items for smoking which are measured by using a yes and no answer format, for instance, "Do you think that you will try a cigarette soon?". The scores from these items were summed and averaged and ranged from 0 to 3. With regard to drinking intentions, there were two drinking intention items which were measured using a 5 point scale scored from 1 to 5 (1= not at all to 5= a lot). For instance, "If one of your best friends were to offer you a drink would you drink it?". The scores from these items were summed and averaged and ranged from 1 to 10.

Table 3

Questionnaire Items Used in Data Analysis

Parenting Style Items (Barnes et. al., 1987)

Support Items

Support items are scored: 1=strongly agree, 2=agree, 3=neutral, 4=disagree, 5=strongly disagree

1. S/he is always a good listener.
2. I find it easy to discuss problems with her/him.
3. I can discuss my beliefs with her/him without feeling restrained or embarrassed.

Control Items

Control items are scored: 1=always, 2=frequently, 3=sometimes, 4=hardly ever, 5=never

Does your mother/father:

1. Completely ignore you for awhile.
2. Take away your privileges (T.V., movies, dates).
3. Yell, shout or scream at you.
4. Use other punishments.
5. Warn you not to do the same thing again.
6. Tell you why you shouldn't have done something.
7. Tell you how s/he expects you to act in the future.

Monitoring Items

Monitoring items are scored: 1= knows everything, 2= knows most things, 3= knows some things, 4= knows a little, 5= knows nothing

How much does your mother/father know about:

1. Who your friends are and what they are like?
2. What you do with a boyfriend or girlfriend?
3. How much you do or don't use tobacco, alcohol, marijuana, or other drugs?
4. What your school is like, who your teachers are, what you are studying?
5. Where you are and what you are doing when you are not at home?

Table 3 (continued)

Questionnaire Items Used in Data Analysis

Smoking and Drinking Intention Items (Aas et. al., 1995; Quine & Stephenson, 1990; Webb & Colleagues, 1995)

Smoking intention items

1. Do you think that you will try a cigarette soon?
 yes no
2. If one of your best friends were to offer you a cigarette, would you smoke it?
 yes no
3. Do you think you will be smoking cigarettes 1 year from now?
 yes no

Drinking intention items

1. By next year I think I might be drinking alcohol.
 not at all a little some Quite a bit a lot
2. If one of your best friends were to offer you a drink, would you drink it?
 Definitely not maybe not don't know maybe yes definitely yes

Perceived Parental Smoking and Drinking Items

Perceived parental smoking items

1. Does your mother/female guardian smoke regularly?
 yes no
2. Does your father/male guardian smoke regularly?
 yes no

Perceived parental drinking items

1. Does any adult you live with ever drink alcohol?
 yes no don't know
2. Does any adult you live with ever get high or drunk from alcohol?
 yes no don't know

Table 3 (continued)

Questionnaire Items Used in Data Analysis

Smoking and Drinking Expectancy Items (Brown et. al., 1987; Leigh, 1989)

All expectancy items are scored 1=no chance, 2=very unlikely, 3=likely, 4=very likely, 5=certain to happen

Negative Smoking Expectancy Items

If I smoke cigarettes:

1. I feel ashamed of myself
2. I feel guilty
3. I get a cough
4. I feel sad or depressed
5. I feel sick

Negative Drinking Expectancy Items

If I drink alcohol:

1. I become clumsy or uncoordinated
2. I feel ashamed of myself
3. I get into fights
4. I can't concentrate
5. I feel guilty
6. I get a hangover
7. I get mean
8. I feel sad or depressed
9. I feel sick

Smoking and Drinking Expectancies:

The expectancy measure refers to the outcomes that the student expects from smoking cigarettes and drinking alcohol. The expectancy items for both smoking and drinking were derived from the *Adolescent Alcohol Expectancy Questionnaire* (Brown, et. al., 1987) and from the *Effects of Drinking Alcohol Scale* (Leigh, 1989). Items from both of these scales were included as the former scale solely addresses positive expectancies. As expectancies are either positive or negative in nature, it was important to incorporate both of these types of items. In addition, it is important to note that the structure of the alcohol expectancy items were modified to apply to cigarette smoking.

The expectancy portion of the questionnaire incorporates items regarding personality changes that may occur (e.g., "If I smoke/drink then I am more outgoing"), the expectations of what friends will think (e.g., "If I smoke/drink then I am more accepted by others"), and bodily sensations that will occur (e.g., "If I smoke/drink then I feel good"). Expectancy items from this questionnaire have been used with two previous samples (Johnson & Johnson, 1996). Factor analyses for both of the previous samples have found that positive and negative expectancies emerged as two distinct factors (Johnson & Johnson, 1996). As a result, the positive expectancy items and the negative expectancy items were each summed and averaged in order to obtain an overall positive expectancy score and an overall negative expectancy score.

The questionnaire generates four expectancy scores (i.e., a smoking and drinking negative expectancy score and a smoking and drinking positive

expectancy score). For smoking, the negative and positive expectancy scores each range from 5 to 30. For drinking, the negative expectancy score ranges from 9 to 54, and the positive expectancy score ranges from 6 to 36. For the Alcohol Expectancies Questionnaire (AEQ), Brown and colleagues' work indicated an internal consistency of $\alpha = .72$. In addition, test-retest reliability for this instrument was reported to be .52. With regard to validity, predictive validity has been found in association with total abstinence ($r=.71$) and time without drinking problems ($r=.53$).

Parenting Styles:

Parental support. Parental support is defined as parental behaviors towards the child which indicate to the child that he/she is loved, accepted and valued. These parental behaviors include praising, encouraging, and giving physical affection. The parental support items were derived from Barnes and colleagues (Barnes & Farrell, 1992; Barnes et. al., 1987; Barnes & Windle, 1987).

Support was measured with 3 items each for the mother and father. The items assessed the adolescent's perceptions that their mother/father is a good listener, there is communication, that problems can be discussed openly without feeling restrained or embarrassed. For example, one support item asked, "is your mother always a good listener?" The 5 response categories were strongly agree, agree, neutral, disagree, strongly disagree. A numerical value of 1 to 5 was assigned to each response category (1=strongly disagree to 5=strongly agree). The scores from each of the items were summed and averaged for a

mother/father support score that ranged from 3 to 15. The internal consistency of Barnes and colleagues scale indicated an alpha level for mother support and father support of .80 and .84, respectively.

Parental Control - Parental control is defined as parental behaviors towards the child which are intended to direct the child's behavior in a way that is acceptable to the parent. These parental behaviors include reprimands, the explanation of rules, and the taking away of privileges. The parental control items were developed by Barnes and colleagues (Barnes, Farrell & Windle, 1987; Barnes & Windle, 1987; Barnes & Farrell, 1992; Rollins & Thomas, 1979).

Control was measured with 7 items each for the mother and father. The items assessed the adolescents' perceptions that their mother/father completely ignores them for awhile, takes away their privileges, yells or screams at them, warns them not to do the same thing again, tells them why they should not have done something, and tells them how to act in the future. For example, one of the control items was, "does your mother take away your privileges?" The response categories were always, frequently, sometimes, hardly ever, and never. A numerical value of 1 to 5 was assigned to each response category (i.e., 1=never to 5=always). The scores from each of the items were summed and averaged for a mother/father control score that ranged from 7 to 35. The internal consistency of the Barnes and colleagues scale indicated an alpha level for mother control and father control of .73 and .85, respectively.

Parental Monitoring- Parental monitoring is defined as parental awareness of their child's whereabouts, and peers, and knowledge regarding

what their child is doing (Barnes & Farrell, 1992). The parental monitoring items were derived from the Oregon Youth Study (Patterson, et. al., 1984). These items reflect the adolescent's perception of their parents knowledge of their whereabouts, how much they use or do not use substances, who their peers are, and what is occurring in school.

Monitoring was measured with 5 items each for the mother and father. The items assessed adolescents' perceptions that their mother/father knows who their friends are, favorite subjects, boyfriend/girlfriend, drug habits, what school is like, and what the adolescent is doing when they are home or away from home. For example, one of the monitoring items was, "how much does your mother/father know about who your friends are and what they are like?" The response categories were knows nothing, knows a little, knows some things, knows most things, and knows everything. A numerical value of 1 to 5 was assigned to each response category (i.e., 1=knows nothing to 5=knows everything). The scores from each of the items were summed and averaged for a mother/father monitoring score that ranged from 5 to 25.

Parental Modeling

Parental modeling was measured by items on the questionnaire which ask whether or not the child's parents smoke cigarettes and drink alcohol. It is important to note that this measure is using the adolescents' report of the perceived use of the substance by the parent. A great deal of research has investigated the difference between the perceived and actual use by a parent. In this study, perceived use is more important as it contributes to the

expectancies and intentions that the preadolescent holds in regard to parental use. There were two modeling questions for smoking which were measured by using a yes and no answer format, for instance, "does your mother/female guardian smoke regularly?" The scores from these items were summed and averaged and ranged from 0 to 2. With regard to modeling questions for drinking, there were two modeling items that were measured using a yes and no format, for instance, "does any adult you live with ever drink alcohol?". The scores from these items were summed and averaged and ranged from 0 to 2.

Data Analysis:

In order to examine the first three hypotheses regarding perceived parental style, negative expectancies and intentions, bivariate correlations were calculated. Specifically, each parenting style (support, control, and, monitoring) was correlated with smoking and drinking negative expectancies and intentions. For the fourth hypothesis, a regression analysis was used whereby parental monitoring was entered first, followed by parental control, which was then followed by parental support. For the remaining hypotheses, multiple T-tests were conducted in order to compare children who perceived their parents as smoking cigarettes to children who perceived their parents as not smoking cigarettes on positive expectancies for smoking. Additional T-tests were conducted in order to compare these two groups on intentions to smoke cigarettes. In addition, the same analyses were conducted for alcohol consumption.

Chapter VIII

RESULTS

This chapter presents the results of the study. Hypotheses 1 through 3 were investigated utilizing bivariate correlation coefficients in order to examine the relations between perceived parental style (i.e., support, control, and monitoring), and negative expectancies and intentions for smoking and drinking. Hypothesis 4 was examined with regression analyses in order to determine how parenting styles (support, control, and monitoring) function together when predicting smoking and drinking expectancies and intentions. In addition, for hypotheses 5 through 7, t-test analyses were done to examine the cognitions of children who perceive their parents as smoking or drinking compared to children who do not perceive their parents as engaging in these behaviors. Further exploratory analyses using t-tests were conducted in order to examine the relationship between parental styles, parental modeling, expectancies, and intentions in preadolescents who are already experimenting with cigarettes and alcohol compared to preadolescents who have not experimented.

Hypotheses 1 through 3 were analyzed utilizing bivariate correlation coefficients. For each of these analyses, three variables were created by summing and obtaining a mean score for perceived parenting style, negative expectancies, and intentions. The results are displayed in Table 4. The first set of hypotheses examined perceived parental support. Hypothesis 1a stated that for both cigarette and alcohol use, there would be a positive relationship between mother's perceived support and negative expectancy scores (i.e., the

Table 4

Correlations Between Parental Style and Smoking and Drinking Cognitions

Parenting Variable	Cognitions			
	Negative Smoking Expectancies	Negative Drinking Expectancies	Smoking Intentions	Drinking Intentions
Maternal Support	.12* (394)	.07 (377)	-.18** (393)	-.32** (411)
Paternal Support	.08 (347)	.02 (332)	-.18** (343)	-.26** (360)
Maternal Control	.11* (400)	.07 (383)	.13* (399)	.12* (418)
Paternal Control	-.02 (350)	-.01 (332)	-.06 (345)	-.08 (362)
Maternal Monitoring	.24** (398)	.26** (382)	-.27** (396)	-.41** (415)
Paternal Monitoring	.15* (361)	.14* (345)	-.19** (356)	-.31** (375)

*p<.05, **p<.001

() = n

higher the perceived support, the higher the negative expectancy scores will be), and a negative relationship between mother's perceived support and intention scores (i.e., the higher the perceived support, the lower the intention scores will be). The results indicated that perceived maternal support was significantly correlated with negative smoking expectancies ($r(394) = .12, p < .016$) and with both smoking ($r(393) = -.18, p < .001$) and drinking ($r(411) = -.32, p < .001$) intentions. This indicates that there is a relationship between these variables, however, the relationship is not strong. Maternal support was not significantly

correlated with negative drinking expectancies ($r(377) = .07, p < .156$). It should be noted that the number in the parenthetical next to r connotes the sample size.

Hypothesis 1b asserted that for both cigarette and alcohol use, there would be a positive relationship between father's perceived support and negative expectancy scores (i.e., the higher the perceived support, the higher the negative expectancy scores will be), and a negative relationship between father's perceived support and intention scores (i.e., the higher the perceived support, the lower the intention scores will be). The results indicated that perceived paternal support was significantly correlated with both smoking ($r(393) = -.18, p < .001$) and drinking ($r(360) = -.26, p < .001$) intentions. This indicates that there is a relationship between these variables, however, the relationship is not strong. Paternal support did not correlate with smoking ($r(347) = .08, p = .162$) or drinking ($r(332) = .02, p < .723$) expectancies.

The second set of hypotheses examined perceived parental control. Hypothesis 2a stated that for both cigarette and alcohol use, there would be a positive relationship between mother's perceived control and negative expectancy scores (i.e., the higher the perceived control, the higher the negative expectancy scores will be), and a negative relationship between mother's perceived control and intention scores (i.e., the higher the perceived control, the lower the intention scores will be). The results indicated that perceived maternal control was significantly correlated with negative smoking expectancies ($r(400) = .11, p < .031$) and with both smoking ($r(399) = .13, p < .008$) and drinking ($r(418) = .12, p < .017$) intentions. This indicates that there is a relationship

between these variables, however, the relationship is not strong. Maternal control was not correlated with negative drinking expectancies ($r(383) = .07$, $p < .149$).

Hypothesis 2b asserts that for both cigarette and alcohol use, there would be a positive relationship between father's perceived control and negative expectancy scores (i.e, the higher the perceived control, the higher the negative expectancy scores will be), and a negative relationship between father's perceived control and intention scores (i.e., the higher the perceived control, the lower the intention scores will be). The results indicated that perceived paternal control was not significantly correlated with any of the outcome variables and therefore, Hypothesis 2b was not supported.

The third set of hypotheses examined perceived parental monitoring. Hypothesis 3a predicted that for both cigarette and alcohol use, there would be a positive relationship between mother's perceived monitoring and negative expectancy scores (i.e, the higher the perceived monitoring, the higher the negative expectancy scores will be), and a negative relationship between mother's perceived monitoring and intention scores (i.e., the higher the perceived monitoring, the lower the intention scores will be). The results indicated that perceived maternal monitoring was significantly correlated with both negative smoking ($r(398) = .26$, $p < .001$) and drinking ($r(382) = .24$, $p < .001$) expectancies and with smoking ($r(396) = -.27$, $p < .001$) and drinking ($r(415) = -.41$, $p < .001$) intentions. This indicates that there is a relationship between maternal monitoring, negative smoking and drinking expectancies, and

smoking intentions, however, the relationship is not strong. Further, this also indicates that there is a relationship between maternal monitoring and drinking intentions. These results provide full support for this hypothesis.

Hypothesis 3b posits that for both cigarette and alcohol use, there would be a positive relationship between father's perceived monitoring and negative expectancy scores (i.e, the higher the perceived monitoring, the higher the negative expectancy scores will be), and a negative relationship between father's perceived monitoring and intention scores (i.e., the higher the perceived monitoring, the lower the intention scores will be). The results indicated that perceived paternal monitoring was significantly correlated with both smoking ($r(361) = .15, p=.004$) and drinking ($r(345) = .14, p=.008$) negative expectancies and with smoking ($r(356) = -.19, p=.001$) and drinking ($r(375) = -.31, p<.001$) intentions. This indicates that there is a relationship between these variables, however, the relationship is not strong. This also indicates that full support for this hypothesis is provided. It is important to note that these findings for both maternal and paternal monitoring corroborate earlier evidence that parental monitoring is the most salient aspect of parenting style (Ary et. al., 1999; Chapman, 1997; Patterson et. al., 1992).

For hypothesis 4, multiple regression analyses were used to examine the relative contributions of the parenting variables (support, control, and monitoring) to preadolescent adherence to smoking and drinking expectancies and intentions. Table 5 presents the results of these analyses for maternal parenting style and Table 6 presents the results of these analyses for paternal

Table 5

Multiple Regression Analyses Utilizing Maternal Parenting Style in Predicting Preadolescent Smoking and Drinking Cognitions

Variable	R	B	SE B	Beta
<u>Negative Smoking Expectancies</u>	.288			
Support		.015	.135	-.007
Control		.190	.087	.108*
Monitoring		.459	.097	.272**
<u>Negative Drinking Expectancies</u>	.259			
Support		-.275	.232	-.070
Control		.186	.151	.063
Monitoring		.804	.170	.279**
<u>Smoking Intentions</u>	.294			
Support		-.089	.015	-.036
Control		.022	.009	.114*
Monitoring		-.045	.011	-.245**
<u>Drinking Intentions</u>	.438			
Support		-.066	.027	-.131*
Control		.032	.017	.083
Monitoring		-.127	.020	-.341**

*p<.05, **p<.001

parenting style. The results of these analyses indicated that the monitoring variable was consistently the predictor that explained the most variance.

Specifically, for both mothers and fathers, monitoring was the parenting variable

Table 6

Multiple Regression Analyses Utilizing Paternal Parenting Style in Predicting Preadolescent Smoking and Drinking Cognitions

Variable	R	B	SE B	Beta
<u>Negative Smoking Expectancies</u>	.143			
Support		-.019	.138	.009
Control		-.054	.079	-.039
Monitoring		.203	.087	.153*
<u>Negative Drinking Expectancies</u>	.179			
Support		-.337	.243	-.088
Control		-.152	.138	-.064
Monitoring		.500	.154	.215**
<u>Smoking Intentions</u>	.208			
Support		-.021	.015	-.081
Control		-.037	.008	-.026
Monitoring		-.019	.009	-.147*
<u>Drinking Intentions</u>	.314			
Support		-.051	.028	-.107
Control		-.076	.016	.008
Monitoring		.025	.018	-.248**

*p<.05, **p<.001

that best explained preadolescent adherence to negative smoking and drinking expectancies and intentions. In addition, it was also found that for mothers, the

support and control variables were significant predictors of adherence to negative expectancies and intentions.

Due to the possibility that parental influence varies with the gender of the child, bivariate correlation coefficients were conducted. Specifically, correlations were utilized in order to examine the relations between the gender of the preadolescent and each of the perceived parenting styles (support, control, and monitoring). The results regarding perceived maternal parenting style indicated that the male preadolescents, compared to their female counterparts, perceived their mothers as being more controlling ($r(418) = .10, p < .001$). The results also showed no significant difference between the gender of the child and maternal support ($r(411) = .09, p < .001$) and maternal monitoring ($r(415) = .06, p < .001$). With regard to perceived paternal parenting style, the results showed significant correlations between the perceived paternal parenting variables (support, control, and monitoring) and gender. Specifically, the preadolescent males perceived their fathers as being more supportive ($r(360) = .30, p < .001$), more controlling ($r(362) = .18, p < .001$) and more likely to monitor their whereabouts ($r(375) = .11, p < .001$) compared to their female counterparts.

For the next set of hypotheses, independent samples t-test analyses were conducted to examine the cognitions of children who perceive their parents as smoking or drinking compared to children who do not perceive their parents as engaging in these behaviors. Table 7 presents the results of these analyses for parental smoking behaviors and Table 8 presents the results of these analyses for adult drinking behavior.

Hypotheses 5a and 5b examined the cognitions of children who perceived their mothers as smoking cigarettes. Hypothesis 5a stated that children who perceived their mothers as smoking regularly would have lower negative expectancy scores for smoking compared to children who did not perceive their mothers as smoking regularly. The results supported the hypothesis, indicating that children who perceived their mothers as smoking regularly had lower negative expectancy scores for smoking ($t(394) = 3.19, p < .002$). Hypothesis 5b then asserted that children who perceived their mothers as smoking regularly would have higher intention scores for smoking compared to children who did not perceive their mothers as smoking regularly. The results supported the hypothesis, indicating that children who perceived their mothers as smoking regularly had higher smoking intention scores ($t(393) = 2.27, p < .024$).

Table 7

Independent Samples T-Tests of Mean Smoking Cognition Scores by Perceived Maternal and Paternal Smoking

	Parent perceived as smoker	Parent perceived as nonsmoker	t	d.f.
I. Mothers				
Smoking Negative Expectancies	17.38 (n=42)	21.29 (n=354)	3.19**	394
Smoking Intentions	.59 (n=41)	.28 (n=354)	2.27*	393
II. Fathers				
Smoking Negative Expectancies	20.63 (n=67)	20.94 (n=319)	.31	384
Smoking Intentions	.27 (n=70)	.33 (n=316)	.53	384

Note. *p<.05; **p<.001

Hypotheses 6a and 6b examined the cognitions of children who perceived their fathers as smoking cigarettes. Hypothesis 6a stated that children who perceived their fathers as smoking regularly would have lower negative expectancy scores for smoking compared to children who did not perceive their fathers as smoking regularly. The results of the analysis showed that there was no significant difference in negative expectancy scores between children who perceived their fathers as smoking regularly compared to children who did not perceive their fathers as smoking regularly ($t(384) = .31, p < .759$), therefore, hypothesis 6a was not supported. Hypothesis 6b then asserted that children who perceived their fathers as smoking regularly would have higher intention scores for smoking compared to children who did not perceive their fathers as smoking regularly. The results for this hypothesis also showed no significant difference between children who perceived their fathers as smoking regularly compared to children who did not perceive their fathers as smoking regularly ($t(384) = .53, p < .596$), therefore, hypothesis 6b was not supported. It is important to note that although the findings were not significant for father's smoking, they were significant for mother's smoking.

Hypotheses 7a and 7b examined the cognitions of children who perceived an adult that they live with as consuming alcohol. Hypothesis 7a stated that children who perceived an adult that they live with as consuming alcohol regularly would have lower negative alcohol expectancy scores compared to children who had not perceived an adult that they live with engaging in this behavior. The results did not support the hypothesis as there was no significant

Table 8

Independent Samples T-Tests of Mean Drinking Cognition Scores by Perceived Adult Drinking

	Adult perceived as drinking	Adult perceived as abstaining	t	d.f.
<u>Cognitions</u>				
Negative Drinking Expectancies	35.89 (n= 241)	36.95 (n=105)	.70	344
Drinking Intentions	.56 (n=123)	1.53 (n=253)	5.48**	374

Note. *p<.05; **p<.001

difference in negative expectancy scores between children who perceived an adult that they live with as consuming alcohol regularly compared to children who did not perceive an adult they live with as consuming alcohol regularly ($t(344) = .70, p < .486$). Hypothesis 7b then asserted that children who perceived an adult that they live with as consuming alcohol regularly will have higher drinking intention scores compared to children who do not perceive an adult that they live with as consuming alcohol regularly. The results supported the hypothesis, indicating that children who perceived an adult that they live with as consuming alcohol regularly had higher drinking intention scores ($t(374) = 5.48, p = <.001$).

Exploratory analyses were conducted to examine the relationship between parenting styles (i.e., support, control, and monitoring), parental modeling, expectancies, and intentions in preadolescents who have already experimented with cigarettes and alcohol. For this analysis, independent samples t-tests were conducted whereby children who have already experimented with cigarettes and alcohol were compared to children who have not already experimented.

One such exploratory analysis examined the impact of parenting styles on cigarette use, comparing children who have experimented with cigarettes to those who have not. Table 9 presents the results of this analysis. The results indicated that children who have not experimented with cigarettes have mothers who are higher in both support ($t(403) = 4.77, p < .001$) and monitoring ($t(407) = 7.79, p < .001$). Similar findings were apparent for fathers, specifically, children

who had not experimented with cigarettes have fathers who were higher in both support ($t(353) = 2.56, p < .05$) and monitoring ($t(368) = 4.79, p < .001$).

A subsequent exploratory analysis examined the impact of parenting styles on alcohol use comparing children who have experimented with alcohol to those who have not. Table 10 presents the results of this analysis. The importance of monitoring was again apparent, specifically, children who have not experimented with alcohol have mothers ($t(394) = 4.22, p < .001$) and fathers ($t(358) = 2.58, p < .010$) who are higher in monitoring. The results also showed that children who have not experimented with alcohol have mothers who are higher in control ($t(397) = 2.36, p < .019$).

Additional exploratory analyses were also conducted examining the impact of parental modeling on cigarette and alcohol use comparing children who have experimented to those who have not. Several chi-square analyses were conducted. The results indicated that children who perceived their mothers as smoking regularly were more likely to experiment with cigarettes ($X^2(1) = 11.23, p < .001$), and alcohol ($X^2(1) = 4.97, p < .026$). The results also showed that children who perceived an adult in their home as consuming alcohol regularly were more likely to experiment with alcohol ($X^2(2) = 25.77, p < .001$).

Table 9

Independent Samples T-Tests of Preadolescent Smokers' and Nonsmokers' Perceptions of Maternal and Paternal Support, Control, and Monitoring

	Smokers	Nonsmokers	t	d.f.
Maternal Variables				
Support	9.21 (n= 57)	11.40 (n=348)	4.77**	403
Control	23.33 (n=57)	22.67 (n=355)	1.06	410
Monitoring	15.03 (n=56)	19.69 (n=353)	7.79**	407
Paternal Variables				
Support	9.33 (n= 51)	10.66 (n=304)	2.56*	353
Control	19.16 (n=50)	20.37 (n=307)	1.39	355
Monitoring	12.46 (n=54)	16.50 (n=316)	4.79**	368

Note. p* < .05; **p < .001

Table 10

Independent Samples T-Tests of Preadolescent Drinkers' and Abstainers' Perceptions of Maternal and Paternal Support, Control, and Monitoring

	Drinkers	Abstainers	t	d.f.
Maternal Variables				
Support	10.30 (n=33)	11.24 (n=361)	1.57	392
Control	24.48 (n=33)	22.64 (n=366)	2.36*	397
Monitoring	16.06 (n=32)	19.41 (n=364)	4.22**	394
Paternal Variables				
Support	10.19 (n=32)	10.51 (n=313)	.50	343
Control	20.23 (n=31)	20.16 (n=316)	.06	345
Monitoring	13.39 (n=33)	16.18 (n=327)	2.58**	358

Note. *p<.05; **p<.001

CHAPTER IX

DISCUSSION

This study investigated the impact of parental style and parental modeling on early adolescent expectancies and intentions towards cigarette and alcohol use. Thirteen hypotheses were posed to examine this relationship. Additional exploratory analyses were conducted as well. The results of the correlational analyses, multiple regression analysis, t-tests, and chi square analyses showed mixed support for the hypotheses. A general discussion of the results, along with the limitations of the study, ideas for future research and implications for school psychologists are presented below.

General Discussion

The results of this investigation indicate that parental styles and parental modeling have a significant influence on preadolescent smoking and drinking expectancies, intentions, and use. The findings of this study support and extend prior research indicating that both parenting styles and parental modeling play an important role in preadolescent substance use. Research has shown that parental support, control, and monitoring have a significant effect on an adolescent's decision to engage in cigarette and alcohol use (Barnes & Farrell, 1992; Steinberg, 1987). Research has also shown that parental modeling has an impact on substance use behaviors (Chassin et. al., 1981; Quine & Stephenson, 1990).

A salient finding of this study was that both perceived maternal and paternal monitoring contributed to preadolescent smoking and drinking

cognitions. That is, mothers and fathers who monitored their children's whereabouts and knew who their children's peers were had children who adhered to negative smoking and drinking expectancies. Further, these children also had lower intentions to engage in smoking and drinking. In addition, monitoring was found to be the most important predictor of preadolescent smoking and drinking cognitions in comparison to other parenting style variables (i.e., support and control). As cognitions have been found to precede actual behavior, this finding lends support and extends the body of research that examined the importance of parental monitoring on adolescent substance use (Ary et. al., 1999).

With regard to parental support, the results showed that maternal support contributed to preadolescent smoking expectancies and to smoking and drinking intentions. Specifically, mothers who were supportive and who listened to their children's concerns had children who adhered more to negative smoking expectancies. These children also had lower intentions to engage in smoking and drinking. One interesting finding was that maternal support did not contribute to preadolescent adherence to negative drinking expectancies. This finding indicates that children at this age may be in the process of changing their beliefs regarding the negative consequences of drinking. That is, as children age, there may be a shift in their adherence to more positive expectancies regarding alcohol consumption (Gustafson, 1992; Johnson & Johnson, 1996).

In this study, paternal support contributed to preadolescent smoking and drinking intentions. That is, fathers who were supportive and who listened to

their children's concerns had children who had lower intentions to engage in smoking and drinking. Paternal support, however, did not contribute to preadolescent adherence to negative smoking and drinking expectancies. A possible explanation for this finding may again be due to the possibility that children of this age may adhere more to positive, rather than negative, smoking and drinking expectancies (Gustafson, 1992; Johnson & Johnson, 1996).

With regard to parental control, the findings showed that maternal control contributed to preadolescent adherence to negative smoking expectancies, and to smoking and drinking intentions. That is, mothers who impose rules and regulations, make threats of punishment, and carry out punishments, had children who adhered more to negative smoking expectancies. These children also had lower intentions to engage in smoking and drinking. Similar to the above findings for support, maternal control did not contribute to preadolescent adherence to negative drinking expectancies. An explanation for this finding is the same as previously mentioned. That is, as children age, there may be a shift in their adherence to more positive expectancies regarding alcohol consumption (Gustafson, 1992; Johnson & Johnson, 1996).

The finding regarding paternal control showed that these variables did not contribute to any of the preadolescent smoking and drinking cognitions. This was a surprising result compared to paternal support and monitoring. One explanation for this finding may be that fathers are not exerting as much influence on their children in the home as compared to the mothers role in the home. A possible reason for this may be explained by results showing that

fathers work outside the home more consistently than mothers and may spend less time with their children. As a result, fathers may not be disciplining their children as much as mothers are. That is, they may not be able to direct their child's behavior, impose rules, or make threats of punishment simply because they are not home as often as the child's mother. According to the U.S. Bureau of Labor Statistics (1999), there was a large disparity between males and females in the labor force. This disparity was especially apparent in regard to Hispanic males and females. This is important to note as 67.6% of the participants in this study were from Hispanic households.

When examining the relations between the parenting style variables and gender, the findings showed that gender was a significant contributor to the parenting style variables. Specifically, the results regarding maternal parenting style showed that maternal control had more of an impact on the male preadolescents compared to their female counterparts. However, no gender differences were observed with regards to perceptions of maternal support or maternal control.

With regard to paternal parenting style, the results showed significant gender differences in perceptions of paternal parenting styles. Males perceived higher levels of paternal support, control, and monitoring than their female counterparts. An explanation for this finding may be that preadolescents tend to identify with their same sex parent more than their opposite sex parent (Starrels, 1994).

In summary, parenting styles have been found to play an important role in preadolescent smoking and drinking cognitions. Specifically, of the three different parenting styles examined, maternal and paternal monitoring were found to be the most important contributor and predictor of preadolescent smoking and drinking cognitions. Mothers and fathers who take an active role in their children's lives and who monitor their children's whereabouts may actually deter their children from eventual cigarette and alcohol use. With regard to the parenting styles support and control, mothers were found to have a greater influence on their children's cognitions than fathers were, except in the case of negative drinking expectancies. For fathers, the data revealed that paternal support was only influential for preadolescent smoking and drinking intentions, whereas paternal control did not have an impact on any of the preadolescent substance use cognitions. These findings may be attributed to the reduced contact that fathers have with their children. Specifically, fathers are not spending as much time with their children compared to mothers, as they are more likely to be out in the labor force (U.S. Bureau of Labor Statistics, 1999).

It is important to note that there is a lack of research examining the impact of parenting styles on preadolescent smoking and drinking negative expectancies and intentions. However, previous research has shown that parenting styles contribute to adolescent substance use (Baumrind, 1978, 1991b, 1991c). Therefore, the findings of the present study extend this research literature since this study examined expectancies and intentions which are precursors to actual use.

The findings of this investigation partially support the research literature that has found that perceived parental cigarette and alcohol use have an impact on preadolescent smoking and drinking cognitions and actual use (Quine and Stephenson, 1990). With regard to perceived maternal cigarette use, the findings showed that mothers had a significant impact on their children's cognitions towards smoking. Specifically, children who perceived their mothers as smoking cigarettes had lower negative expectancies and higher intentions towards smoking compared to children who did not perceive their mothers engaging in this behavior. With regard to paternal cigarette use, the results showed that fathers did not seem to have an impact on their children's cognitions towards smoking. As stated previously, this finding may be due to the fact that in many circumstances the mother may be the primary caregiver. As a result, during this preadolescent time period, the mother's behavior may have more of an impact on the child compared to the father's for this population.

With regard to perceived adult drinking behavior, the results supported the research literature regarding preadolescent drinking intentions. The findings showed that children who perceived an adult that they lived with as consuming alcohol regularly had higher drinking intentions compared to children who did not perceive an adult that they live with as consuming alcohol regularly. The results regarding drinking expectancies were not supported. That is, there was no significant difference in adherence to negative drinking expectancies between children who did perceive an adult that they lived with as drinking regularly compared to children who did not perceive an adult that they lived with

as engaging in this behavior. An explanation for this finding, as mentioned previously, is that children at this age may be in the process of changing their beliefs regarding the negative consequences of drinking and as a result, there may be a shift in their adherence to more positive expectancies regarding alcohol consumption (Gustafson, 1992; Johnson & Johnson, 1996). Further, it is interesting to note that these findings also may be limited based on the manner that the survey questions were phrased. Specifically, the children answering the survey were not queried regarding the gender of the adult or their relationship to the adult (e.g., mother or father). This is especially salient given the findings regarding maternal and paternal influence.

In summary, the findings regarding perceived parental cigarette use on preadolescent cognitions towards smoking indicated that perceived maternal smoking had a much greater impact on preadolescent cognitions compared to perceived paternal smoking. Specifically, preadolescents who perceived their mothers as smoking had lower negative expectancies and higher intentions towards smoking compared to children who did not perceive their mothers engaging in this behavior. The findings for perceived adult drinking supported the research literature regarding intentions to engage in drinking. However, the findings with regard to negative drinking expectancies were not supported. This finding may be due to the fact that children at this age may be in the process of changing their beliefs regarding the negative consequences of drinking, and as a result, there may be a shift in their adherence to more positive expectancies regarding alcohol consumption (Gustafson, 1992; Johnson & Johnson, 1996). In

addition, these findings may also be limited based on the manner that the survey questions were phased.

It is important to note that the findings of this study regarding the impact of perceived parental modeling on preadolescent smoking and drinking intentions corroborate earlier research by Quine and Stevenson (1990). In contrast, there is a lack of research examining the impact of perceived parental modeling on smoking and drinking negative expectancies. However, research has shown that parental modeling has an impact on actual substance use (Engles et. al., 1999). Specifically, children who observed their parents smoking cigarettes and consuming alcohol were more likely to engage in these behaviors. Therefore, the findings of the present study extend this research literature as this study examined expectancies which are precursors to actual use.

The results of the exploratory analyses regarding the impact of parental styles on actual preadolescent experimentation with cigarettes and alcohol supported the research literature (Ary, et. al. 1999; Fletcher et. al., 1995; Lamborn et. al., 1991). The findings showed that for actual cigarette and alcohol use, the importance of parental monitoring was again apparent, specifically, maternal and paternal monitoring were found to be influential in deterring preadolescent experimentation. Further, maternal and paternal support were also found to be influential in deterring preadolescent experimentation with these substances. These findings corroborate earlier findings that parental monitoring

and parental support are important deterrents to adolescent substance use (Barnes & Farrell, 1992).

The findings from the exploratory analysis that examined the impact of perceived parental cigarette usage on actual preadolescent experimentation were again significant for mothers but not for fathers. Specifically, children who perceived their mothers as smoking regularly were more likely to experiment with both cigarettes and alcohol. It is important to note that the smoking behavior of mothers impacted not only on preadolescent experimentation with cigarettes but with alcohol as well. An explanation for this may be that once children have experimented with cigarettes it is plausible to hypothesize an increased likelihood that they would experiment with alcohol. This assertion is based on research showing that both cigarettes and alcohol are often used concurrently and considered “gateway” drugs (National Institute on Alcohol Abuse and Alcoholism, 1998). In addition, it is important to note that mothers again, had more of an impact on their children compared to fathers. An explanation for this may be due to the role that the mother assumes as primary caregiver (Holmbeck, et. al., 1995).

In summary, when examining actual experimentation with cigarettes and alcohol, the results showed that perceived parental monitoring and support were influential in deterring preadolescent experimentation with cigarettes and alcohol. The findings regarding perceived parental modeling showed again the importance of the impact of mother’s behavior on children. Specifically, mothers

who smoked had more of an impact on their children's cigarette and alcohol use compared to fathers who smoked.

When examining the results of this study, it is worthy to note that the preadolescent participants were asked to provide information based on perceptions of their parents or other adult behavior. Subsequent to gathering information regarding the participant's perceptions of their parents, their own smoking and drinking negative expectancies and intentions were examined. Since research has shown that perceptions are components that shape expectancies (Smith & Goldman, 1995) and intentions (Ajzen & Fishbein, 1973), it is important to consider the accuracy of the perception of the preadolescent participant. With this in mind, the research on adolescent development has shown that adolescence is a time period that has been characterized as passing through a period of storm and stress in an effort to establish an identity separate from their parents (Muuss, 1996). During this period, adolescent cognitions and personality are characterized by egocentric thinking, idealism, and daydreaming (Rice, 1999). As a result of the nature of their thinking, adolescents often have distorted perceptions of reality. Therefore, the smoking and drinking cognitions that adolescents maintain may be based on biased or incorrect information. However, it is important to note that perceptions of substance use are the components that shape the smoking and drinking cognitions and therefore are as important as actual use (Morgan & Grube, 1991).

Limitations of the Study

One limitation of this study concerned the difficulties that arose due to the use of a self-report instrument. When using a self-report instrument, there is the limitation of the bias inherent in the individual participant. It is possible that some of the participants may not have answered the survey questions honestly. This may be due to the fact that they did not feel like participating at the time and chose random answers rather than reading the questions thoroughly and choosing an appropriate answer. Another possible response style could have been based on a desire to perceive themselves a certain way and chose certain answers based on their perceptions (e.g. thinking that smoking or drinking is “cool” so that they don’t perceive themselves as “uncool”). In addition, even though the participants were assured of confidentiality, many of them were concerned. This was apparent by the questions that the participants asked when the proctors explained confidentiality procedures during the survey administration. It is important to note that although any one of these issues mentioned above could have impacted on the results, it was apparent based upon the time most participants required to complete the questionnaires that most answers were given in a thoughtful manner.

Another limitation of the study included difficulties with the sample chosen. For this study, the survey was administered to seventh grade catholic school students in an urban area. This constrains the generalizability of the results to different types of students living in other areas. Future research would

need to include more diverse samples, for instance, children attending public school, rural or suburban areas, and a more heterogeneous population.

In addition to the previous limitations noted, as mentioned above, some of the findings may be limited based on the manner that the survey questions were phrased. That is, for the two survey questions regarding perceived parental alcohol usage, the children answering the survey were not queried regarding the gender of the “adult”, their relationship to the “adult” (e.g., mother or father), the quantity of alcohol consumed by the “adult” or frequency of alcohol consumption by the “adult”. This information is salient to understand given the critical role and differential role that each parent plays.

A further limitation of this study was that the gender of the child was not examined. Information regarding gender might have proven a significant factor to the study. For instance, for this study, a child’s gender may impact on their perception of their mothers and fathers substance use behavior differentially. Research has shown that preadolescents tend to identify with their same-sex parent more than their opposite-sex parent (Starrels, 1994). Therefore, the perception of smoking or drinking may have more of an impact on the child if the parent engaging in that behavior is the same sex as the child. Future research should examine not only parental use, but also which parent the child more closely identifies with and if that parent smokes or drinks. In addition, future research may also be based upon regression analyses with gender included as it could account for a significant portion of variance in predicting substance use cognitions and parenting styles.

An additional limitation of this study was that positive expectancies regarding smoking cigarettes and drinking alcohol were not examined. It is important to note that the research literature indicates that as children age, they begin to adhere more strongly to positive expectancies towards drinking (Gustafson, 1992; Johnson & Johnson, 1996). This trend was seen in the findings, specifically when maternal support did not contribute to negative drinking expectancies. Perhaps this finding may be due to the fact that children are exposed to an abundance of positive information regarding alcohol consumption. For instance, they may see their parents drinking alcohol, their parent's friends drinking alcohol, and older siblings/peers drinking alcohol. They may also see advertisements portraying alcohol consumption in a positive light. As a result of this exposure, children of this age may adhere to more positive expectancies regarding alcohol.

The AEQ scale that the expectancy items were derived from might have also been a limitation to this study. That is, the AEQ is composed of a small number of items. As a result, this scale had low reliability which reduces the likelihood of finding significant relations with this measure. Future research is warranted with expectancy measures that possess higher reliability.

Future Research

Since parental behaviors have been shown to have a strong influence on preadolescent cigarette and alcohol cognitions and use, research needs to be conducted whereby parental behavior is examined by querying not only the child, (as was done in this study) but by querying the parents as well. Parents

could be asked questions regarding their parental style and their cigarette and alcohol use. Additional information can also be gathered regarding the parent's perception of their spouses smoking and drinking behaviors as well. Gathering information from both the child and parent allows for a more complete picture of the family and demonstrates the importance of the role that parents play.

Future research may also investigate actual rather than perceived parental substance use and its impact on preadolescent smoking and drinking cognitions. Although the perception of parental substance use is important and does provide a great deal of information, gathering data on actual parental usage is also desirable. This research would then show to what extent perceived use and actual use correspond and predict preadolescent substance use cognitions. In this way, it can be shown whether the children's perception and reality are in agreement.

Although it was predicted that father's parental style and perceived smoking behavior would have a significant impact on preadolescent smoking and drinking expectancies and intentions, the results failed to support that prediction. According to the research literature, fathers are less involved in caregiving and tend to spend less time at home with their preadolescent children compared to mothers (Holmbeck, et. al, 1995). In addition, research on Hispanic households has shown that fathers work outside the home more consistently than mothers and as a result may spend less time with their children (U.S. Bureau of Labor Statistics, 1999). This is relevant information as the majority of the participants in this study were Hispanic. Therefore, while fathers have

clearly defined parenting styles, their social role may prevent them from having as strong an impact as mothers might have on preadolescent substance use cognitions. Future research and attention regarding the impact of paternal parenting style on substance use behavior is warranted in understanding adolescent substance use.

Implications for School Psychology

This research study has important implications for school psychologists, as they are instrumental in substance use prevention within schools and communities. This study has shown that both parenting styles and parental modeling play an important role in the development of preadolescent smoking and drinking expectancies and intentions. It is important that school psychologists understand how these aspects of parenting contribute to the development of expectancies, intentions and eventual substance use in order to develop and facilitate effective substance use prevention programs. When developing and carrying out interventions, school psychologists need to take into account that parents play a critical role in prevention. This is especially important since many school-based prevention programs and the media have reinforced the idea that peers, not parents, are the critical determinant of adolescent experimentation with cigarettes and alcohol (Johnson & Johnson, 2001). Since school psychologists work closely with children and their families, they are in a prime position to convey to families that parents are extremely important socialization agents for their children.

It is important to note that this research has found that parental style, especially monitoring, plays a salient role in prevention. It is important that school psychologists take this into account and educate parents. School psychologists may assist by helping parents build relationships with other parents and establish networks in the community so that parents know who their children are with and what they are doing. Further, based on the findings in this study regarding perceived parental modeling, school psychologists need to educate parents about the impact of smoking and drinking behaviors on their children. School psychologists should convey to parents that preadolescents are looking for models and as a result, they are closely scrutinizing the adults in their environment. With this in mind, parents need to be made aware that even though their children may be distancing themselves and becoming more autonomous, they are still relying on their parents to guide them and serve as role models. As a result, parents need to know that they have some control on whether their influence is positive or negative.

Appendix A

The National Institute of Health is sponsoring a study about the beliefs of students your age about drinking alcohol and smoking. The study is being done by Dr. Helen L. Johnson and Dr. Patrick B. Johnson from Queens College. Your participation is important to the success of this study. Participation involves answering questions about yourself, your friends, and some of your life experiences, including questions about drinking alcohol and smoking and your relationships with your family. Your answers will be kept entirely confidential. We will not show your answers to anybody. We will be asking you to complete questionnaires again next year and the following year.

We would like you to help us in this study. Should you decide later on that you do not want to continue participating in the study, you can stop at any time. If there is any question you do not want to answer, you can leave it blank. If you are willing to participate in this study, please sign your name on the line below. Then, print your name on the next line.

Thank you for your cooperation.

Please sign your name

Please print your name

Queens College/CUNY
IRB APPROVED:
03/18/99 to 03/17/02

6. What language do you usually speak at home?

- | | |
|---|---|
| <input type="checkbox"/> 1 Only English | <input type="checkbox"/> 4 Mostly Spanish, some English |
| <input type="checkbox"/> 2 Mostly English, some Spanish | <input type="checkbox"/> 5 Only Spanish |
| <input type="checkbox"/> 3 Spanish and English equally | <input type="checkbox"/> 6 Other (PLEASE SPECIFY BELOW) |

Mostly English, some _____
 English and _____ equally
 Mostly _____, some English
 Only _____

7. What language do you speak with most of your friends?

- | | |
|---|---|
| <input type="checkbox"/> 1 Only English | <input type="checkbox"/> 4 Mostly Spanish, some English |
| <input type="checkbox"/> 2 Mostly English, some Spanish | <input type="checkbox"/> 5 Only Spanish |
| <input type="checkbox"/> 3 Spanish and English equally | <input type="checkbox"/> 6 Other (PLEASE SPECIFY BELOW) |

Mostly English, some _____
 English and _____ equally
 Mostly _____, some English
 Only _____

8. In what country were you born?

- | |
|---|
| <input type="checkbox"/> 1 United States |
| <input type="checkbox"/> 2 Other (PLEASE SPECIFY BELOW) |
-

9. If you were not born in the United States, how old were you when you came to live here?

_____ Years Old

10. How far did your mother (or female guardian) go in school? (Please check the answer). My mother:

- a. Went to some school, but did not graduate from high school
- b. Graduated from high school, but did not go to college
- c. Went to college, but did not graduate
- d. Graduated from college
- e. Continued in school after graduating from college
- f. Don't know

11. Does your mother (or female guardian) have a job? (Check one)

Yes No

If yes, what sort of work does she do? (For example: nurse, teacher, bus driver, office worker).

12. How far did your father (or male guardian) go in school? (Please check the answer). My father:

- a. Went to some school, but did not graduate from high school
- b. Graduated from high school, but did not go to college
- c. Went to college, but did not graduate
- d. Graduated from college
- e. Continued in school after graduating from college
- f. Don't know

13. Does your father (or male guardian) have a job? (Check one)

 Yes No

If yes, what sort of work does he do? (For example: teacher, bus driver, construction worker, salesman).

The next questions are about yourself and your feelings. Please circle the answer that is best for you.

	True	Sort of True	False
14. I like to try new things.	1	2	3
15. I'll try anything once.	1	2	3
16. I sometimes do "crazy" things just to be different.	1	2	3

Here are some ways you might have felt during the past week. Please tell me how often you have felt this way during the PAST WEEK by circling your answer.

17. During the past week, I felt depressed.

NOT AT ALL (0 DAYS)	RARELY (1 DAY)	SOME OR A LITTLE OF THE TIME (2 DAYS)	OCCASIONALLY (3-4 DAYS)	MOST OR ALL THE TIME (5-7 DAYS)
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18. During the past week, I felt sad.

NOT AT ALL (0 DAYS)	RARELY (1 DAY)	SOME OR A LITTLE OF THE TIME (2 DAYS)	OCCASIONALLY (3-4 DAYS)	MOST OR ALL THE TIME (5-7 DAYS)
-------------------------	-------------------	--	----------------------------	------------------------------------

Now we'd like to ask you some questions about smoking cigarettes. Please check the answer that is best for you.

19. How old were you when you smoked your first whole cigarette, that is, smoked more than just a puff?

If you've never smoked, write 0. _____ Years Old

20. About how often have you smoked cigarettes?

- 0 Do not smoke at all
 1 Less than once a year
 2 Less than once a month, but at least once a year
 3 About once a month
 4 Three or four days a month
 5 One or two days a week
 6 Three or four days a week
 7 Every day

21. Does your mother/female guardian smoke regularly?

Yes No

22. Does your father/male guardian smoke regularly?

Yes No

23. Does your best friend smoke regularly?

Yes No

If you smoke cigarettes, please tell us how often you smoke in the following situations by circling the best answer. If you don't smoke, skip questions 24-26 and move on to question 27.

I smoke cigarettes when I am:

	Never	Sometimes	Often	Always
24. talking with my friends	1	2	3	4
25. drinking alcohol	1	2	3	4
26. by myself	1	2	3	4

Here is a list of things that sometimes happen to people after they smoke cigarettes. We would like to know which of these things you think would probably happen to you. Even if you don't smoke, please circle the number that best describes what you think would happen to you if you did smoke.

If I smoke cigarettes:

	No Chance	Very Unlikely	Unlikely	Likely	Very Likely	Certain To Happen
27. I am more accepted by others	1	2	3	4	5	6
28. I feel good	1	2	3	4	5	6
29. I feel ashamed of myself	1	2	3	4	5	6
30. I have a good time	1	2	3	4	5	6
31. I feel guilty	1	2	3	4	5	6
32. I get a cough	1	2	3	4	5	6
33. I feel happy	1	2	3	4	5	6
34. I am more outgoing	1	2	3	4	5	6
35. It takes away my bad moods and feelings	1	2	3	4	5	6
36. I feel sad or depressed	1	2	3	4	5	6
37. I feel sick	1	2	3	4	5	6

Now we'd like to ask you some questions about drinking alcohol. By alcohol we mean beer, wine, cocktails or liquor. If you have never had a drink of alcohol skip questions 38 and 39 and move on to question 40.

38. How old were you when you had your first real drink, other than just a taste?
_____ Years Old

39. With whom did you have your first drink? (You do not have to give us the name of the person. Instead, please tell us the relationship of this person to you, for example: girlfriend, boyfriend, father, brother, etc.)

Please check the answers that are correct for you.

40. About how often have you drunk any kind of alcoholic beverage (beer, wine or liquor)?

- 0 Do not drink alcoholic beverages at all
- 1 Less than once a year
- 2 Less than once a month, but at least once a year
- 3 About once a month
- 4 Three or four days a month
- 5 One or two days a week
- 6 Three or four days a week
- 7 Every day

41. If you drink, how much do you usually drink on one occasion?

- 0 Nothing, I never drink
- 1 Less than one drink
- 2 One or two drinks
- 3 Three to five drinks
- 4 Six to twenty drinks

If you drink alcohol, please tell us how often you drink in the following situations by circling the best answer. If you don't drink, skip questions 42-44 and move on to question 45.

	Never	Sometimes	Often	Always
I drink alcohol when I am:				
42. talking with my friends	1	2	3	4
43. smoking cigarettes	1	2	3	4
44. by myself	1	2	3	4

45. During the past year, about how many times have you gotten drunk or very high from alcohol?

- 0 None
- 1 1 time
- 2 2-3 times
- 3 4-5 times
- 4 6-10 times
- 5 Once a month
- 6 Twice a month
- 7 Once a week or more

The next question is about smoking marijuana.

46. How old were you the first time you smoked marijuana? If you've never smoked marijuana, write 0.

_____ Years Old

Now please think about your closest friend, the friend you spend the most time with.

47. Is this friend: ___ Male ___ Female

48. How old is this friend?

___10 years old	___13 years old	___ Other
		(Write in age) _____
___11 years old	___14 years old	
___12 years old	___15 years old	

49. About how often would you say this closest friend drinks any kind of alcoholic beverage (beer, wine or liquor)?

- ___0 Does not drink alcoholic beverages at all
- ___1 Less than once a year
- ___2 Less than once a month, but at least once a year
- ___3 About once a month
- ___4 Three or four days a month
- ___5 One or two days a week
- ___6 Three or four days a week
- ___7 Every day

50. How many drinks does this person usually have at one time?

- ___0 Nothing, my friend never drinks
- ___1 Less than one drink
- ___2 One or two drinks
- ___3 Three to five drinks
- ___4 Six to twenty drinks

51. During the past year, about how many times has this person gotten drunk or very high from alcohol?

- 0 None
- 1 1 time
- 2 2-3 times
- 3 4-5 times
- 4 6-10 times
- 5 Once a month
- 6 Twice a month
- 7 Once a week or more

Here is a list of things that sometimes happen to people after they drink alcohol (beer, wine, or liquor). We would like to know which of these things you think would probably happen to you. Even if you don't drink alcohol, please circle the number that best describes what you think would happen to you if you did drink.

If I drink alcohol:

	No Chance	Very Unlikely	Unlikely	Likely	Very Likely	Certain To Happen
52. I am more accepted by others	1	2	3	4	5	6
53. I become clumsy or uncoordinated	1	2	3	4	5	6
54. I feel good	1	2	3	4	5	6
55. I feel ashamed of myself	1	2	3	4	5	6
56. I get into fights	1	2	3	4	5	6
57. It takes away my bad moods and feelings	1	2	3	4	5	6
58. I can't concentrate	1	2	3	4	5	6
59. I have a good time	1	2	3	4	5	6
60. I feel guilty	1	2	3	4	5	6
61. I get a hangover	1	2	3	4	5	6
62. I feel happy	1	2	3	4	5	6
63. I get mean	1	2	3	4	5	6
64. I am more outgoing	1	2	3	4	5	6
65. I feel sad or depressed	1	2	3	4	5	6
66. I feel sick	1	2	3	4	5	6

Now we'd like you to tell us about how the people close to you feel about drinking and smoking. Please circle the number that fits best.

	Very much against	Against it	Doesn't care about it	For it	Very much for it
How does your mother or female guardian feel about kids your age:					
67. smoking cigarettes?	1	2	3	4	5
68. drinking alcohol?	1	2	3	4	5

How does your father or male guardian feel about kids your age:

69. smoking cigarettes?	1	2	3	4	5
70. drinking alcohol?	1	2	3	4	5

How do most of your friends feel about kids your age:

71. smoking cigarettes?	1	2	3	4	5
72. drinking alcohol?	1	2	3	4	5

73. Does any adult you live with ever drink alcohol?

Yes No Don't Know

74. Does any adult you live with ever get high or drunk from alcohol?

Yes No Don't Know

75. What is your general feeling about drinking alcohol?

I think that drinking alcohol is : (Check one)

very good good bad very bad

Sometimes people do something a few times and then decide that they don't want to do it anymore. Please tell us how hard it would be to stop smoking or drinking by checking the best answer below.

76. If I started smoking cigarettes:

I could stop smoking whenever I wanted to.

It would be very hard to stop once I was used to smoking cigarettes.

I could not stop smoking cigarettes without special help.

77. If I started drinking alcohol:

I could stop drinking whenever I wanted to.

It would be very hard to stop once I was used to drinking alcohol.

I could not stop drinking without special help.

78. If I started smoking marijuana:

I could stop smoking whenever I wanted to.

It would be very hard to stop once I was used to smoking marijuana.

I could not stop smoking marijuana without special help.

We'd like you to tell us how much your mother/female guardian knows about things in your life. Please circle the number that best describes each statement. If there is no female adult living in your home, skip questions 79-83 and move on to question 84.

How much does your mother know about:

	Knows Everything	Knows Most Things	Knows Some Things	Knows A Little	Knows Nothing
79. Who your friends are and what they are like?	1	2	3	4	5
80. What you do with a boy-friend or girlfriend?	1	2	3	4	5
81. How much you do or don't use tobacco, alcohol, marijuana, or other drugs?	1	2	3	4	5
82. What your school is like, who your teachers are, what you are studying?	1	2	3	4	5
83. Where you are and what you are doing when you are not at home?	1	2	3	4	5

We'd like you to tell us how much your father/male guardian knows about things in your life. Please circle the number that best describes each statement. If there is no male adult living in your home, skip questions 84-88 and move on to question 89.

How much does your father know about:

	Knows Everything	Knows Most Things	Knows Some Things	Knows A Little	Knows Nothing
84. Who your friends are and what they are like?	1	2	3	4	5
85. What you do with a boy-friend or girlfriend?	1	2	3	4	5
86. How much you do or don't use tobacco, alcohol, marijuana, or other drugs?	1	2	3	4	5
87. What your school is like, who your teachers are, what you are studying?	1	2	3	4	5
88. Where you are and what you are doing when you are not at home?	1	2	3	4	5

Now we'd like you to read about the students described below. They all are around your age. Please tell us how much a person like this would drink by circling the number of the answer.

	Not at all	A little	Once in a while	Quite a bit	Very much
89. John does very badly in school. John drinks alcohol	1	2	3	4	5
90. Lynn doesn't get along with many students at her school. Lynn drinks alcohol	1	2	3	4	5
91. Ruth does very well in school. Ruth drinks alcohol	1	2	3	4	5
92. Doug is great at sports. Doug drinks alcohol	1	2	3	4	5
93. Tom cuts school a lot. Tom drinks alcohol	1	2	3	4	5
94. Beth is one of the most popular students in her school. Beth drinks alcohol	1	2	3	4	5
95. Tammy never misses school. Tammy drinks alcohol	1	2	3	4	5

Now we'd like you to tell us about how you get along with your mother or female guardian. Please circle the number that tells how true each sentence is about your feelings for her. If there is no female adult living in your home, skip questions 96-98 and move on to question 99.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
96. She is always a good listener.	1	2	3	4	5
97. I find it easy to discuss problems with her.	1	2	3	4	5
98. I can discuss my beliefs with her without feeling restrained or embarrassed.	1	2	3	4	5

Now we'd like you to tell us about how you get along with your father or male guardian. Please circle the number that tells how true each sentence is about your feelings for him. If there is no male adult living in your home, skip questions 99 -101 and move on to question 102.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
99. He is always a good listener.	1	2	3	4	5
100. I find it easy to discuss problems with him.	1	2	3	4	5
101. I can discuss my beliefs with him without feeling restrained or embarrassed.	1	2	3	4	5

Now we'd like you to tell us about what your mother/female guardian does when you don't do what she tells you to do. Please circle the number of the answer that best fits each sentence. If there is no female adult living in your home, skip questions 102-108 and move on to question 109. Does your mother:

	Always	Frequently	Sometimes	Hardly Ever	Never
102. Completely ignore you for a while.	1	2	3	4	5
103. Take away your privileges (TV, movies, dates).	1	2	3	4	5
104. Yell, shout or scream at you.	1	2	3	4	5
105. Use other punishments.	1	2	3	4	5
106. Warn you not to do the same thing again.	1	2	3	4	5
107. Tell you why you shouldn't have done something.	1	2	3	4	5
108. Tell you how she expects you to act in the future.	1	2	3	4	5

Now we'd like you to tell us about what your father/male guardian does when you don't do what he tells you to do. Please circle the number of the answer that best fits each sentence. If there is no male adult living in your home, skip questions 109-115 and move on to Question 116. Does your father:

	Always	Frequently	Sometimes	Hardly Ever	Never
109. Completely ignore you for a while.	1	2	3	4	5
110. Take away your privileges (TV, movies, dates).	1	2	3	4	5
111. Yell, shout or scream at you.	1	2	3	4	5
112. Use other punishments.	1	2	3	4	5
113. Warn you not to do the same thing again.	1	2	3	4	5
114. Tell you why you shouldn't have done something.	1	2	3	4	5
115. Tell you how he expects you to act in the future.	1	2	3	4	5

The next questions are about smoking cigarettes. Please check the correct answer.

116. Have you ever smoked a cigarette?

Yes No

117. Have you ever tried or experimented with cigarette smoking, even a few puffs?

Yes No

118. Do you think you will try a cigarette soon?

Yes No

119. If one of your best friends were to offer you a cigarette, would you smoke it?

Yes No

120. Do you think you will be smoking cigarettes 1 year from now?

Yes No

The next questions are about brothers and sisters who are older than you are. If you don't have any older brothers and sisters, don't answer questions 121-123.

121. Does your brother or sister smoke regularly?

Yes No

122. Does your brother or sister ever drink alcohol?

Yes No

123. Does your brother or sister ever get high or drunk from alcohol?

Yes No

124. We would like to know whether there are other people in your age group, brothers, sisters, cousins or friends, who live with you and your family. Please circle below the age of anyone in your household, and for each, check male or female.

	Age in years								
	10	11	12	13	14	15	16	17	18
Male	—	—	—	—	—	—	—	—	—
Female	—	—	—	—	—	—	—	—	—

125. What is your general feeling about smoking cigarettes?
I think that smoking cigarettes is: (Check one)

very good good bad very bad

126. By next year I think I might be drinking alcohol.

Not at all A little Some Quite a bit Alot

127. If one of your best friends were to offer you a drink, would you drink it?

Definitely not Maybe not Don't know Maybe yes

Definitely yes

128. Do you think that if a person your age is smoking cigarettes or drinking alcohol, he or she will be more likely to eventually use marijuana?

a great deal more likely somewhat more likely no more likely

129. Do you think that if a person your age is using marijuana, he or she will be more likely to eventually use other illegal drugs like heroin or cocaine?

a great deal more likely somewhat more likely no more likely

130. When I make a decision, I do not stick to it if my friends think I've made a bad choice.

always most of the time sometimes hardly ever never

131. My friends' opinions are important to me.

always most of the time sometimes hardly ever never

132. When I make a decision, I do not stick to it if my brothers or sisters think I've made a bad choice.

always most of the time sometimes hardly ever never

133. My brothers' and sisters' opinions are important to me.

always most of the time sometimes hardly ever never

Please circle the number that best fits your feelings.

134. How well can you resist peer pressure to do things that can get you into trouble?

1	2	3	4	5	6	7
Not well at all	Not too well	Pretty well	Very well			

135. How well can you resist peer pressure to smoke cigarettes?

1	2	3	4	5	6	7
Not well at all	Not too well	Pretty well	Very well			

136. How well can you resist peer pressure to drink beer, wine or liquor?

1	2	3	4	5	6	7
Not well at all	Not too well	Pretty well	Very well			

137. How well can you control your temper?

1	2	3	4	5	6	7
Not well at all	Not too well	Pretty well	Very well			

Now we'd like you to tell us about how you get along with your best friend and the brother or sister you feel closest to. Please circle the number that tells how true each sentence is for each of them. If you don't have any brothers or sisters, please skip questions 142-147 and move on to question 148.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
138. With my best friend, I can discuss my beliefs without feeling restrained or embarrassed.	1	2	3	4	5

139. What are your best friend's general feelings about smoking cigarettes and drinking alcohol?

140. My best friend thinks that smoking cigarettes is: (Check one)

very good good bad very bad

141. My best friend thinks that drinking alcohol is: (Check one)

very good good bad very bad

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
142. With my closest sibling, I can discuss my beliefs without feeling restrained or embarrassed.	1	2	3	4	5

143. My closest sibling is (check one) Male Female

144. My closest sibling's age is _____ years

145. What are your closest sibling's general feelings about smoking cigarettes and drinking alcohol?

146. My closest sibling thinks that smoking cigarettes is: (Check one)

very good good bad very bad

147. My closest sibling thinks that drinking alcohol is: (Check one)

very good good bad very bad

We'd like you to share some of your general opinions and feelings with us. Please circle the number that tells how true you believe each statement is.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
148. Students who smoke cigarettes and drink alcohol are more likely to experiment with marijuana than students who don't smoke or drink.	1	2	3	4	5
149. Students who smoke marijuana are more likely to experiment with cocaine than students who don't smoke marijuana.	1	2	3	4	5
150. If a person drinks alcohol every weekend, s/he needs to drink more alcohol to get drunk or high than a person who rarely drinks.	1	2	3	4	5
151. Answering some of the questions on this questionnaire made me feel uncomfortable.	1	2	3	4	5

152. Sometimes students get upset when they are asked to answer questions by adults. How upset do you think most students would get answering the questions you just answered?

Very upset ____ Somewhat upset ____ A little upset ____ Not at all ____

THANK YOU VERY MUCH FOR YOUR COOPERATION IN THIS STUDY!

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