The Developmental Trajectory of Male Adolescent Alcohol Use

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THE DEVELOPMENTAL TRAJECTORY OF MALE ADOLESCENT ALCOHOL USE

BY

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Submitted in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy
Seton Hall University

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Abstract

The purpose of the following study was to examine the relationship between attachment and male adolescent alcohol use. The study was designed to evaluate whether components of the parent-child relationship, specifically affective quality, communication, trust, fostering of autonomy, emotional support, and alienation influence the use of alcohol in male adolescents during life-cycle transition periods. It was hypothesized that male adolescents reporting higher degrees of attachment and lower levels of alienation in the parent-child relationship would report significantly lower problem alcohol use in the first and fourth years of high school. It was also expected that higher levels of fostering of autonomy would be significantly related to lower levels of adolescent alcohol use among males when controlling for other components of the attachment relationship. Due to the empirical investigations attesting to the importance of attachment on psychological adjustment, the investigation of this relationship during critical periods was warranted. Analysis included descriptive statistics for the Parental Attachment Questionnaire, the Inventory of Parent and Peer Attachment-Parent Subscales, the Rutgers Alcohol Problem Index, and the demographic variables. Several multivariate analyses were conducted to establish if there was a significant association among the predictor variables, affective bonds, respect for autonomy, emotional support, trust, communication, parental alienation and the criterion variable, symptoms and consequences of problem alcohol use. Findings indicate that high levels of alienation in the parent-child relationship are significantly associated with high degrees of problem alcohol use. Although autonomy was found to have an inverse association with problem alcohol use, no predictions could be made regarding the construct ever and above all of
the other attachment variables. Significant differences were also discovered in problematic use of alcohol among first-year and fourth-year student participants. Participants in the senior year of high school on the average reported more symptoms and consequences of problem alcohol use than those in the freshman year of high school. Overall, data suggest that participants who perceive parental alienation are more likely to experience problem alcohol use if they are in an advanced grade at school. No other significant relationships were found.
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To me, this section is probably the most important. Although I value the contents of this manuscript, if it were not for the following people, I would not have even had the opportunity to complete one page of this project. I began writing this section early on in the process to serve as motivation to complete it.

Dr. Matsui was a valuable source of insight and a vast array of knowledge. His advice has added unique dimensions to this project.

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DEDICATION

I wish to dedicate this work to my father, William (a.k.a. Wally) for his invaluable support (in all forms) throughout the years. You have put me above all else, as selfless a person could ever be. A person can only aspire to be a parent like you.

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When everything seemed dark, the sun was always shining at Dad's. You are "the sunshine of my life." We have had so many years of fun together and I look forward to many, many more.

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Chapter I: Introduction

Introduction

Seventy six million Americans, about 43% of the U.S. population, are exposed to alcoholism in the family (U.S. Department of Health and Human Services, 2000). The Centers for Disease Control and Prevention (1993) have found that the onset of alcohol use rarely occurs after the age of 25. Beyond mortality, adolescent alcohol use (AAU) increases the risk of low academic achievement, early sexual initiation, teenage pregnancy, and involvement in delinquent activities (Hoffman, Mee-Lee, & Arrowood 1993).

Although there has been considerable investigation into the individual determinants of adolescent alcohol use (AAU), in comparison, research into the sociocultural factors has received minimal attention. Only in the past decade, has empirical scrutiny been focused on family factors involved in the etiology and course of AAU. For example, family conflict and the parent-adolescent relationship (Wills, Sandy, Yeager, & Shinar, 2001) have been found to have predictive power in the development of AAU. Based on these thematic conclusions, researchers continue to investigate the family processes that render certain adolescents vulnerable to alcohol use. Further investigation into the role of the family in the development of AAU can inform prevention and intervention efforts. Thus, the purpose of the current inquiry was to examine the impact of parental attachment on adolescent adaptation.

During adolescence, the individual must negotiate the “storm and stress” of the transitional period between childhood and adulthood. Internal and external conflicts arise from competing childhood pleasures and adult responsibilities. Throughout this
developmental stage, the adolescent must traverse the synergistic effects of biological changes and societal pressures and develop an independent identity. For adolescents, this period of exploration cannot occur without the establishment of a secure base in which the individual can return (Sartor & Youniss, 2002).

Through the provision of a secure base, parents balance support with enough flexibility that adolescents can securely engage in identity exploration (Sartor & Youniss, 2002). Identity exploration is related to the processes of individuation and autonomy (Bray, Adams, Getz, & McQueen, 2003). During adolescence, the individual must remain connected to his/her parents while simultaneously increasing autonomy from his/her family and develop intimate connections with peers.

Attachment and autonomy are integral parts of the same developmental processes (Bell, Forthun, & Sun, 2000). An attachment relationship characterized by support, trust, and communication promotes environmental exploration and social competence (Kenny, 1987). In contrast, children in an attachment relationship characterized by anger were found to be mistrustful and emotionally distant (Dozier & Kobak, 1992). The parent-child relationship serves as the foundation for socialization with peers, and positive attachment to parents will facilitate positive peer relations (McCallum, 1994). Thus, it appears that the attachment relationship is a continuing feature of individual development.

Relationships with parents transform as adolescents seek support from others, such as the peer group. Increased emphasis on peer interactions during adolescence may create an environment where social acceptance serves as an additional stressor (Isaakson & Jarvis, 1999). Adolescents entering and exiting high school may deal with increased
autonomy pressures in response to a new school environment that requires more self-
reliance amongst students (Powell, Farrar, & Cohen, 1985). Anxiety related to new
school procedures and the presence of older students have been found to be associated
with decreased adjustment to stressors (Barone, Aguirre-Deandreis, & Trickett, 1991).
However, Lord, Eccles, and McCarthy (1994) found that parents who were more
supportive of their adolescents' developmental need for autonomy helped make the
transition to a new school less disruptive.

It is believed that the inherent anxiety involved in school transitions will activate
the attachment system (Kenny, 1987). Whether identified as a positive or negative
change, major alterations in the daily context of events, increases tension (Dornbusch,
2000). Few studies have been focused on the transition into and out of high school
(Isaksen & Jarvis, 1999). The majority of empirical attention has been devoted to the
transition from high school to college, as moving away from home presents considerable
stressors. However, the development of autonomy, intimacy, and individuation coincide
with entering high school (Isaksen & Jarvis, 1999). Therefore, according to the authors,
many developmental tasks will be negotiated within the high-school context. Although
the psychosocial tasks differ at the beginning and end of high school, studies have
attested to the stability of attachment patterns (Ammaniti, van IJzendoorn, Speranza, &
Tambelli, 2000). Therefore, the current investigation was focused on individuals in the
first and fourth years of high school.

Kenny and Donaldson (1991) have found higher levels of social competence and
overall psychological well-being among affectively attached college freshman.
Schultheiss and Blustein (1994) discovered that among female college students, those
who were emotionally attached to their parents developed greater academic autonomy. Although several studies (Kenny, 1987; Lapsley, Rice, & Shadid, 1989) have demonstrated the importance of the attachment relationship to females, there is a paucity of research examining male attachment.

Perhaps due to society’s emphasis on male autonomy, in general, researchers have failed to acknowledge the importance of the parental attachment relationship in reducing male psychological distress. Typically, studies emphasizing relatedness as the basis for development are focused on the female experience. However, Bowlby (1988) contended that attachment relationships exert a similar influence on the development of both males and females. In accordance, Vivona (2000) failed to find qualitative or quantitative differences in attachment styles across genders.

Research has indicated that substance abuse progresses through various stages from experimentation to abuse. Contingent upon the substance (e.g., marijuana, opiates, inhalants), adolescents vary in terms progression of use. Although the course of substance use is distinct, a considerable amount of research has identified alcohol and tobacco as the first substance utilized (Hoffman et al., 1993). According to the Substance Abuse and Mental Health Services Administration’s (SAMHSA) most recent national Household Survey on Drug Abuse (NHSDA), there were 10.4 million drinkers ages 12 to 20 in 1998.

Studies consistently show that adolescent males report higher levels of overall alcohol use than do adolescent females (Voekl & Frone, 2000). Among youth aged 12-17, the highest risk of alcohol dependence is found in White, non-Hispanic males (Turner & Lloyd, 2003). Therefore, due to the higher prevalence of alcohol use among male
adolescents, the examination of the attachment relationship on adolescent male
adjustment is warranted.

The following study was conducted to examine the influence of the attachment
relationship on an adolescent's decision to use alcohol during critical life periods. In
particular, the transition involved in changing schools is acknowledged as a challenging
and stressful life event for both an adolescent and the family (Hirsch & DuBois, 1992).
Adolescent alcohol use may occur amidst the heightened degree of anxiety during the
individuation process when insecurely attached adolescents attempt to individuate from
their families and develop a personal sense of self. The adolescent may use alcohol to
cope with negative affective states or as a device to facilitate intimate relationships with
peers.

Parental prohibitions have been identified as one of the means by which children
learn to control their behavioral impulses (Siegel, 1999). Caregiver-directed regulation in
infancy progresses into independent self-regulation as the child develops (Egeland, Yates,
Appleyard, & van Dulmen, 2002). A positive relationship with an attachment figure
promotes and reflects the individual's adoption of conventional norms and values (Bell et
al., 2000). Hence, it is believed that with an increased level of parent/child attachment,
the adolescent will internalize prosocial values and develop behavioral self-regulation.
This developmental competency allows for the adolescent to experiment safely and
sample alternatives, but avoid excessive and problematic involvement in risk behaviors
(Bell et al., 2000).

Thus, the quality of parental attachment will facilitate or hinder the development
of risk factors associated with adolescent alcohol use. Therefore, it becomes relevant to
examine the influence of the attachment relationship on alcohol use.

**Problem Statement**

Adolescent problem behaviors affect not only the individual, but can also influence the family, community, and society. In an attempt to establish effective prevention and intervention efforts, researchers have emphasized the crucial role of connectedness to parents as a protective factor from many problem behaviors, including substance use (Resnick et al., 1997). In comparison to individual factors, there is a paucity of research on the influence of family factors in the development of adolescent alcohol use. Therefore, the current inquiry was conducted to explore the influence of attachment in male adolescent alcohol use during normative transitions. The intent of the study was to determine whether components of parental attachment, specifically affective quality, fostering of autonomy, emotional support, trust, communication, and alienation influence problem alcohol use in male adolescents.

It is believed that a secure attachment relationship will promote adolescent adaptation during stressful transition periods. Through responsive caregiving, the individual acquires self-regulatory abilities that provide the foundation for developmental competencies. In contrast, in insecure attachment patterns, the individual is inclined to experiment with a range of behaviors (including alcohol use) in order to decrease the awareness of socially generated emotional states.

**Research Questions**

The following research questions were investigated: Are higher levels of
communication, trust, emotional support, fostering of autonomy, affective quality, and lower levels of alienation significantly related to lower levels of problem alcohol use in males during critical transition periods? Are higher levels of fostering of autonomy significantly related to lower levels of problem alcohol use among males during critical transition periods when controlling for other components of the attachment relationship? Are there any significant differences in the problematic use of alcohol among first- and fourth-year student participants?

Definition of Key Terms

Attachment Variables

Attachment. Level of attachment is viewed as the amount of bonding and connection adolescents feel toward their parents. For the purposes of this study, attachment was operationally defined as the responses to the Parental Attachment Questionnaire (Kenny, 1987) and the Inventory of Parent and Peer Attachment; Parent Subscales (Armsden & Greenberg, 1987).

Affective Quality. The affective quality of the parent-relationship is defined as the degree to which an internal emotional state is externally revealed. Affective quality encompasses both the associated feelings and experiences. The affective quality of the parent-child relationship was assessed by the Affective Quality of Relationships 27-item subscale on the Parental Attachment Questionnaire (PAQ, Kenny, 1987).

Fostering of Autonomy. Fostering of autonomy is viewed as the degree to which parents actively promote an adolescent's mastery of the environment. Parental fostering of autonomy was defined as the responses to the 14-item Parents as Facilitators of
Independence subscale of the PAQ (Kenny, 1987).

*Parental Emotional Support.* Parental emotional support is identified as the level of parental availability, understanding, and respect. Parental support was assessed by the responses to the 13-item Parental Role in Providing Emotional Support subscale of the PAQ (Kenny, 1987).

*Trust.* Trust is defined as the positive affective experience associated with the accessibility of attachment figures. This item was assessed by the 10-item Trust subscale of the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987).

*Quality of Communication.* Quality of communication is viewed as the perception that an attachment figure is sensitive and responsive to the individual’s emotional states and helpful with concerns. Quality of communication was defined by the responses to the 9-item Communication subscale of the IPPA (Armsden & Greenberg, 1987).

*Alienation.* Alienation is defined as the negative affective experience of anger resulting from unresponsive attachment figures. This item was assessed by the 6-item Alienation subscale of the IPPA (Armsden & Greenberg, 1987).

**Definition of Other Terms**

*Adolescence.* For the purposes of the present study, the period of adolescence is defined as an individual in between the chronological ages of 13 and 19 years.

*Freshman.* For the purposes of the present study, a freshman is defined as a student in his first year of high school in between the chronological ages of 13 and 15 years.
Senior. For the purposes of the present study, a senior is defined as a student in his fourth year of high school in between the chronological ages of 17 and 19 years.

Alcohol Use. Alcohol is defined as a beverage containing ethanol. Although considered a licit (i.e., legal) substance for adults, alcohol use is legally prohibited to those under the age of 21 years. Alcohol use and alcohol related problems were assessed by responses to the 23-item Rutgers Alcohol Problem Index (RAPI; White & Labouvie, 1989).

Background of the Problem

Theoretical models. The stage of adolescence has long been acknowledged as a critical developmental period. According to Erikson (1963), the major task of adolescence is viewed as identity formation, a process of exploration that eventually leads to the development of a separate sense of self. In order to develop an independent identity, children must enhance the self-regulatory skills that will sustain them during the multiple transitions inherent in adolescence.

Adolescence necessitates transformation across numerous spheres of life. “While struggling to define their individuality [sic] and to discern their own needs, desires, and goals, adolescents delve deeply within themselves, yet at the same time are confronted by a broad spectrum of physical and emotional options in the external world” (Magen, 1998, p. 11). Psychosocial changes propel the individual to reconsider moral, emotional, and social views (Dubov, Pargament, & Tarakshwar, 2000) within an expanding milieu.

The potential for growth during this period is counterbalanced by the risks associated with sexual, delinquent, and substance-using behaviors. The adolescent
traverses these challenges through a process of exploration. In general, adolescents pass through a stage of experimentation in which they are not committed to a particular interest (Baer & Bray, 1999). However, some pursuits prevail and become an enduring part of their lives. Thus, how the individual negotiates the transition between childhood and adulthood has interminable consequences.

Although many individuals successfully negotiate the transition to adolescence, some will experience a decrease in self-esteem and begin to participate in risky behaviors, such as substance use (Brody & Ge, 2001). Evidence indicated a significant relationship between the age of adolescents and the proportion that experiment with drugs (Akers, Krohn, Lanza-Kaduce, & Radosevich, 1979). Research implied that the prevalence of substance use increases with age during adolescence, with the peak years of involvement during young adulthood (Hirschi & Gottfredson, 1995). Thus, as adolescents mature, the numbers of experimenters increases. These results and related studies (e.g., Bailey & Huébard, 1991) suggest that the factors that initiate substance abuse may be associated with developmental processes.

The self has been identified as the foundation of personality and a critical construct of socioemotional development (Niida & Pierce, 2000). From a developmental perspective, the self is derived from an individual’s ability to interpret and organize experience. Although children are active participants in their own development, the self is also the result of socialization processes. “The organized self is a derivative of the organized complexity in which the infant participates, setting forth ‘enduring themes of organization’ for personality development” (Sroufe, 2000, p. 67).

Historically, the family has been viewed as performing the critical function of
initial socialization. Based on the theory of cybernetics, family-systems theorists viewed psychological problems as circular, recursive events in an interpersonal context (Guttman, 1991). Although family-systems theorists assign some measure of autonomy and independence to the child, he or she is ultimately maintained by the homeostatic features of the family system (Nida & Pierce, 2008). Individual deviations are viewed as the result of interactions among family members.

A systems approach reduces the notion of individual pathology by emphasizing the organizational structure of the family (Haley, 1980). Symptomatic behavior is viewed as communication in response to a deviant organization. Hence, it becomes relevant to investigate the role of familial relationships in the development of substance use.

Parental and peer relationships have been found to exert significant influence on adolescent identity (Sartor & Youniss, 2002). Through conformity to certain group values and customs, the adolescent eventually develops a self-awareness of his or her own individuality and individual differences. It is within the familial context that the child first selectively adapts and incorporates behaviors, values, and practices (Berry, 1980). Thus, family-systems theorists proposed that the inherent processes of development are key factors in understanding problem behaviors, such as substance abuse (Williamson & Bray, 1988).

The quality of attachment is an important factor in determining an individual’s degree of vulnerability to developmental deviations (Bowlby, 1988). The prolonged period of infant helplessness allows for the functional growth of the complex human brain (Sander, 2000). Consequently, infants are dependent upon the support of others to
meet their biological, psychological, and social needs (Stroufe, 2000). They are unable to modulate their arousal and emotional states and rely on caregivers to read “signals” of their needs. By engaging and organizing the infant’s behavior, caregivers provide training in affective and behavioral regulation. “To be well regulated, they require ample assistance from caregivers” (p. 68).

In a variant of object-relations theory, attachment theorists attempted to explain both the attachment behavior and the interpersonal attachments that individuals make (Bowlby, 1988). Although Bowlby asserted that attachment behavior has strong biological roots, he emphasized the mediating effects of environmental conditions. Behavior is determined by dynamic “developmental pathways” in which both the individual and the environment are interrelated. “The goals of attachment/caregiving (proximity and protection) involve two people, and shared goal-corrected behavior is required if parent and child are to collaborate in gaining and maintaining proximity” (Byng-Hall, 1999, p. 631).

According to Bowlby (1988), “attachment behavior is any behavior that results in a person attaining or maintaining proximity to some other clearly identified individual who is conceived as better able to cope with the world” (p. 26). Whereas attachment behavior is most evident in childhood, it can be seen throughout the life cycle, especially in a crisis situation. Attachment behavior is evident in a variety of species and has the evolutionary function of protection from harm (Bowlby, 1988).

Within the context of a caregiving relationship, the child utilizes the mature functions of the parent’s brain to organize his/her own systems (Siegel, 1999). A coherent state organization assists in the development of the excitatory and inhibitory
systems of the brain (Sroufe, 2000). Stimulation followed by responsive care, characteristic of secure attachment, results in a coherent state organization.

Rather than being viewed as a particular behavior, the behavioral system is assumed to be the organizational structure mediating a variety of behaviors (Bowlby, 1988). In order to maintain homeostasis, behavioral systems are regulated by feedback mechanisms that allow the individual to adjust the ongoing behavior. Each behavior is assumed to maintain certain limits of distance and/or proximity to the caregiver.

Crucial to attachment behavior is however, "...the intensity of emotion that accompanies it, the kind of emotion aroused depending upon how the relationship between the individual attached and the attachment figure is faring" (Bowlby, 1988, p. 4). The outward expression of an emotion has been identified as the primary mode of communication between an infant and a caregiver (Siegel, 1999).

The communication of emotional experience reveals how an individual knows oneself and how he/she connects to one another. Unrestricted, reciprocal communication provides each individual with the necessary feedback to regulate his/her behavior (Siegel, 1999). A positive affective quality reflects compatibility between members' emotional-appraisal systems. In contrast, a disparity may lead to communication difficulties and a subsequent impaired attachment relationship.

Bowlby (1988) asserted that throughout the life cycle, individuals are most well-adjusted when they have confidence in the availability and responsiveness of a trusted other. A secure relationship with an attachment figure promotes active exploration and mastery of the environment. When an individual is feeling secure, he/she is likely to explore his/her surroundings away from the attachment figure. The child feels safe
enough to be able to return to the secure base when necessary. In contrast, when scared or anxious, the individual is likely to seek proximity to the caregiver.

Based on empirical observation, Bowlby (1988) distinguished among three identified patterns of attachment behavior (a) secure attachment, (b) anxious resistant attachment, and (c) anxious avoidant attachment. Bowlby observed that each pattern is influenced by the caregiver’s (primarily the mother’s) behavior toward the developing infant.

According to Bowlby (1988), a secure attachment is facilitated by a sensitive, responsive, and available caregiver. Secure attachment is predictive of healthy development. In this attachment pattern, the child is confident that caregiver will be responsive and competent should he/she encounter a frightening situation.

In an anxious resistant pattern of attachment, the child is uncertain whether or not the caregiver will be available or responsive when called upon (Bowlby, 1988). This pattern is facilitated by an inconsistent caregiver and by separations and threats of abandonment. Due to this inconsistency, the child is prone to separation anxiety and tends to “cling” to others. Anxious resistant children often combine strong contact-seeking and rejection of the caregiver (Sroufe, 2000).

A pattern of anxious avoidant attachment is characterized by the child’s lack of confidence in the caregiver. An anxious avoidant attachment pattern is promoted by a caregiver who rebuffs the infant when he/she approaches him/her for comfort. Instead of responsiveness and assistance, the child anticipates rejection from the caregiver. Anxious avoidant children minimize or cease the expression of attachment behaviors (Sroufe, 2000). Bowlby (1988) observed that extreme forms of this pattern arise from neglect,
abuse, or prolonged institutionalization. The persistence of this pattern is believed to lead to a variety of personality disorders and/or chronic delinquency.

In accordance with patterns of attachment, the individual develops what Bowlby (1988) defined as a “working/representational model” (p. 129). “The working model a child builds of his mother and her ways of communicating and behaving towards him, and a comparable model of his father, together with the complementary models of himself in interaction with each... soon become established as influential cognitive structures” (p. 129). The working model represents the relationship among the self, the attachment figure, and the external world (Rosenstein & Horowitz, 1996).

The representational model operates at an unconscious level and is subject to revision throughout the life cycle. “Later experience is interpreted on the basis of this working model, so that continuity of one’s sense of self is experienced” (Rosenstein & Horowitz, 1996, p. 244). Patterns of attachment in early childhood resemble those found in adulthood. In order to remain adaptive, however, representational models will change with considerable alterations in the caregiving environment (Weinfeld, Whaley, & Egeland, 2004).

Eventually, the secure child will develop a sense of mastery in maintaining regulation and, because of the reciprocal nature of communication, in one’s own self-confidence and self-worth (Stroufe, 2000). Fragmented communication, characteristic of insecure attachment, prevents the signals that activate attachment behavior from reaching the behavioral system. This “defensive exclusion,” aimed at protecting the individual from further harm, prevents the working model and subsequent behavior from being revised. Consequently, the working model remains static at an unconscious level, and
early behavior patterns prevail.

Throughout development, a secure individual becomes confident enough to increase the time and distance away from the caregiver. Beginning in the second 6 months of life, the individual develops "the cognitive capacity to keep his mother in mind when she is not present" (Bowlby, 1988, p. 122). In infancy, the child is able to tolerate only minimal separation from the caregiver. However, during adolescence, the individual is able to tolerate extended absences. Thus, a secure home base remains indispensable to optimal functioning throughout the life cycle (Bowlby, 1988).

For every new developmental phase, individuals must renegotiate attachment strategies (Ammaniti et al., 2000). As the child develops, caregivers must present the child with contexts for mastery, guidelines for expected behavior, and monitor the child's self-regulation attempts (Sroufe, 2000). The transition to adolescence requires an integration and balance between connection with others and autonomy. During this period, the models of attachment developed during childhood have to be revised and readjusted to include the ability to form an independent identity.

Several authors have indicated that the development of autonomy, intimacy, and individuation are critical adolescent developmental processes (Bray, Williamon, & Malone, 1984; Schultheiss & Blustein, 1994). A degree of adolescent-parent connectedness in combination with adolescent individuation is believed to facilitate identity achievement. The adolescent must achieve a balance between the maintenance of a sense of connectedness in the family and autonomous ego functioning (Lansley et al., 1989).

Steinberg and Silverberg (1986) characterized individuation as a process wherein
the adolescent relinquishes child dependencies and conceptualizations of the parents. Rather than detach from parents, the adolescent will internalize and process parental resources. In this view, successful individuation is believed to occur in a context of secure parental introjections (Tettke, 1995).

However, the adolescent must establish a sense of self that is distinct from parental introjections, thereby reducing the dependence on parents for approval, self-esteem, and standards of conduct (Lapsley et al., 1989). By facilitating autonomy, parents place healthy pressure on the adolescent to begin to use peers as attachment figures (Steinberg, 1990). The adolescent separates his/her ego functioning from that demanded by parental identifications and establishes it in the context of mutually satisfying relationships (Lapsley et al., 1989). Thus, it is believed that a secure bond to parents will facilitate successful individuation.

Autonomy encompasses differentiation of self, as demonstrated by the capacity to make independent decisions that one can follow through on competently (Bowlby, 1982). Attachment and autonomy are components of similar developmental processes and are integral to one another. During adolescence, individuals are expected to expand their capacities for peer intimacy (Erikson, 1963) and self-reliance (Bell et al., 2000).

Inherent in the revision of attachment strategies, working models are globalized during adolescence into more generalized relationships, which are often identified as a bonding to conventional instructions (Greenberg, 1999). Social-control theory provides a lens which allows for the examination of the relationship between attachment (to parents and institutions) and deviance. Hirsh (1969) proposed that conformity is based on bonds that develop between individuals in society and prevent them from violating rules.
The social bond is comprised of four elements: (a) attachment, or affectionate ties with parents, school, and friends, (b) commitment, or aspirations and behavior with pursuing an education and occupation, (c) involvement, or participation in conventional activities, such as school work and/or church attendance, and (d) belief, or a conviction in the morality of society.

Although Hirsch (1969) failed to rank these components in causal ordering, Marcos, Baer, and Johnson (1986) contended that parental ties precede and have a direct influence on the other components of the social bond. Caregivers’ responsiveness to the child’s distress and availability facilitate the child’s identification with the parents and orientation to parental values. Likewise, adolescents who perceive their parents as being actively involved in their lives are more influenced by their parents’ opinion and reactions (Crosnoe, Erickson, & Dornbusch, 2002). Research has indicated that adolescents who feel detached from conventional influences are more inclined to form attachments with substance-using peers (Petraitis, Flay, & Miller, 1995).

An increased level of parent/child attachment will compel the adolescent to adhere to conventional standards of behavior and develop self-regulation (Petraitis et al., 1995). Insecure attachment patterns “...may lead to the development of problem behaviors by influencing the way adolescents process negative affect” (Allen & Land, 1999, p. 326). Self-regulatory skills afford adolescents flexibility in responding to the environment (Grolnick, Kurowski, Dunlap, & Hevey, 2000). In accordance, Brody and Os (2001) found that impaired self-regulatory skills put an adolescent at a heightened risk for alcohol use by fostering academic underachievement and conflicted relationships at home. It is postulated that the level of attachment will facilitate or hinder the
development of risk factors associated with alcohol use.

The current study was performed to examine the role of alcohol use during critical transition periods during adolescence. For an adolescent, the transition to a different school presents increased academic and social challenges. According to Dornbusch (2000), "being uprooted from established channels of activity causes the breakdown of habitual patterns of action and forces the conscious development of new modes of behavior that fit the novel set of circumstances" (p. 173). In accordance, Peritz (1994) has identified a "transition proneness," or a heightened psychological and social vulnerability at the beginning of high school. Researchers have indicated that adolescents with poor self-regulatory skills react more strongly to major life events and are more likely to perceive alcohol as a useful coping mechanism (Wills et al., 1999).

During this period, adolescents' consummate reliance on peers may be the first step in utilizing peers as attachment figures (Allen & Land, 1999). Secure attachments to parents may decrease the need for adolescents to depend on peers for approval, subsequently reducing adolescent vulnerability to peer pressure (Brook & Brook, 1990). In contrast, adolescents may experience a heightened vulnerability to peer pressure by reflexively obeying peer initiatives as they had previously done with caregivers' initiatives (Allen & Land, 1999).

The transitions from middle to high school and from high school to college are associated with new peer groups and the expectation that the adolescent will assume increasing academic and social responsibilities. These periods create a context in which many attachment-related issues become salient as the youth negotiates the transition to adolescence (Moore, 1987) and to young adulthood. Research indicates that most
adolescents will turn to their parents under conditions of extreme stress (Steinberg, 1990). Akin to Ainsworth's (1978) strange situation, these transitions were used to assess the quality of the attachment relationship (Kenny, 1987).

The transition into and out of high school also involves a reorganization of the family system. Recent literature has been focused on protective factors that maintain children's self-perceptions and psychological adaptation during transitional periods (Lorå et al., 1994). Evidence indicated that aspects of the familial system influence children's abilities to successfully negotiate a transition into a new school successfully.

During periods of organization, families utilize their resources and manage stress in ways that promote the individual development of members (Bray, 2005). As a secure base (Bowlby, 1988), the family encourages the adolescent's active exploration and mastery of the environment. Thus, adolescents' familial environments may assist in the development of the necessary skills to adjust to these transitions and function as a protective factor in response to the increased stress inherent in the transition (Grotnick & Kurowski, 1999).

In contrast, the family, particularly in a middle class-White family, may exert substantial pressure on the young person to remain dependent while sociocultural forces dictate that he/she establish a developmentally appropriate degree of autonomy. Problem behaviors may be viewed as attempts to alter the pattern of interactions within the parent-adolescent dyad (Ailen & Land, 1999). Unable to reorganize and allow the adolescent to differentiate from the system, alcohol use will reinforce the adolescent's dependency on the family. In addition, the alcohol use will create a crisis that focuses attention on the adolescent and maintains a system homeostasis. Thus, the alcohol serves to engage
parental attention and to express anger and resistance (Allen & Laad, 1999).

Alcohol use in adolescence may “...represent a claim on a more mature status or
to mark a transition in psychosocial development” (Jessor, Chese, & Donovan, 1980, p.
604). In accordance, Stanton and Todd (1982) maintained that substance abuse is a
product of a poorly negotiated individuation process. In their innovative work with adult
opiate abusers, substance use was viewed as an interdependent fear of separation from the
family of origin. The authors proposed that substance abuse serves as an illusory device
to facilitate the developmental needs of parental autonomy and peer affiliation. Stanton
and Todd attested to the secondary influence of the peer group and emphasized the
importance of the homeostatic balance in a family system characterized by substance
abuse. The authors stated, “that the peer group has little or no influence as long as the
family unit remains strong” (p. 8). Although the pharmacological and physical effects
vary across the substances utilized, the authors believed that the function of the substance
in an interpersonal context is more important than substance itself. Although Stanton and
Todd provided extensive empirical support for this notion, their investigations did not
include adolescents. Thus, the present investigation extended Stanton and Todd’s
conceptions to the period of adolescence.

Although numerous biological and social risks have been associated with
difficulties in the psychological adjustment of youths, the magnitude of the effect of any
one risk factor may be relatively small. Therefore, it is important to consider the
cumulative effect of multiple intrapersonal and interpersonal correlates. Thus, the current
inquiry was conducted to explore the level of attachment to the family in the development
of male adolescent alcohol use at critical life-transition periods. Through measures
assessing the level of attachment to parents, this study was designed to investigate the prevalence of problem alcohol use among males making the transition into and out of secondary school.

Significance of the Study

Adolescent alcohol abuse is a disorder that deprives children of their potential as adults. Alcohol abuse during this stage of the life cycle impairs the adolescent's ability to develop an independent identity, consequently leaving the adolescent with a confused sense of self, sexuality, goals, and delayed maturity (Brook & Brook, 1990). The failure to accurately address adolescent alcohol use (AAU) is an expensive option since these youths will continue to place additional demands on educational, social, and legal institutions (Hoffman et al., 1993). These statements alone serve as the impetus for empirical investigation on AAU.

With the declaration of the "War on Drugs," in the 1980s, the past three decades have witnessed an influx of research into alcohol, tobacco, and other drug abuse in United States youth. The impetus for heightened activity in this area stems, in part, from epidemiological research conducted in the 1970s and 80s attesting to alarmingly high levels of alcohol use by children and adolescents (Hoffman et al., 1993). Despite this substantial progress, there has been far less attention paid to this population than their adult counterparts.

Historically, intervention has failed to address the unique characteristics of adolescent substance abusers (Hoffman et al., 1993). Traditional adult intervention was found to be ineffective for the adolescent population, who, in addition to a complex
clinical profix, had difficulties at home. Hence, researchers began to investigate the familial correlates that render certain adolescents vulnerable to substance abuse.

Models identifying external factors, such as parental substance use and supervision, are erroneously based on the homogeneity of adolescent behavior and a linear developmental pathway. Family-systems theorists acknowledged the complementarity and reciprocity among living emotional systems. An individual’s behavior is viewed as being developed and organized through the interplay of environmental factors and affectional bonds.

These affectional bonds reflect one’s level of confidence that significant others will provide support and remain in emotional proximity (Liddle & Schwartz, 2002). The attachment pattern is based on a shared frame of reference (i.e., internal working model) between the infant and caregiver. The child’s behavior is isomorphically influenced by that of the caregiver. The internal working models provide the foundation for beliefs, values, and expectations about relationships and developmental competencies (Bell et al., 2000).

Attachment theorists viewed development as a process of reciprocal change and adaptation based on the reorganization of previous patterns (Rosenstein & Horowitz, 1996). Researchers indicated that parenting processes are an important factor in the development of self-regulatory skills (Brody & Ge, 2001). Within the context of a positive attachment relationship, emotional and behavioral self-regulatory skills emerge as children internalize the features of the environment (Brody, Flor, Hollett-Wright, & McCoy, 1998). Children with poor attachment relationships are more likely to engage in deviant and antisocial behaviors (Rosenstein & Horowitz, 1996), including alcohol use
Limitations of the Present Study

The following study was designed to view adolescent alcohol use (AAU) at a product of an impaired attachment relationship. However, a significant amount of research has identified various genetic, psychological, developmental, and environmental factors as predictors of AAU (Bahr, Maughan, Marcos, & Li, 1998). There are difficulties in differentiating between antecedents and consequences of AAU. In addition, the correlational nature of the study design does not permit causal inferences.

Researchers demonstrated that adolescents at risk for substance abuse constitute a large, highly diversified group in terms of demographics, development, and level of psychopathology (Hoffman et al., 1993). The impact of "...any risk factor will depend on its timing and relation to other risk factors" (Greenberg, 1999, p. 472). Thus, an impaired attachment relationship will not directly lead to the use of alcohol or other substances; however, it may increase the likelihood of use (Greenberg, 1999).

The current investigation was designed to examine the function of parental attachment on adolescent alcohol use (AAU). Researchers have suggested that parental attitudes and behavior are important factors in the development of adolescent substance use (Tittle, 1995). Research into the role of peer influence on AAU is certainly warranted, however, it is beyond the scope of the present investigation.

Methodological constraints include the generalizability of the findings. Due to the convenience nature of the sample, a variety of religious denominations and ethnicities were not equally represented. Additionally, the fact that the sample consists primarily of
14 and 18 year-old-males limits the generalizability of the study. Due to the non-representation of younger age cohorts and females, one cannot assume the data are representative of the general population.

Researchers have indicated that family structure influences the use of alcohol among adolescents (see Jenkins, 1992) and subsequent family relationships (McCallum, 1994). In accordance, the current study was designed to take into account the household compositions of the participants. However, future researchers should more closely examine the causes and antecedents of changes in family structure on AAU.

Estimates of substance abuse also may be slightly lower than they would have been had dropouts and absentees been included in the sample. Researchers have indicated that dropouts tend to have less conventional attitudes than those in school (Jessor et al., 1980). In addition, the self-selection imposed by requiring parental permission may result in lower estimates of actual alcohol use.

It is suggested that the alcohol use cannot be examined conclusively in a context where common religious participation is prevalent. Several studies have indicated an inverse relationship among religious participation and adolescent alcohol use (Carwyn & Benda, 2000). Perhaps sampling from an area with a more even distribution of religious denominations would add to the reliability of the study.

The attachment variables were examined from the adolescent's perspective, which may produce a biased view of the parent-adolescent relationship. Parental perceptions of the attachment relationship would have provided cross-validation of the data. However, evidence indicates a strong correlation between adolescents' and parents' assessments of attachment (Bell et al., 2000). More so, it is believed that the adolescent's perception of
the relationship will influence the actual seeking of caretaking behavior.

It is proposed that responses may have been influenced by the presence of social norms prohibiting the use of substances. One cannot ignore the implications of self-reported illegal behavior in the school context. Perhaps administering a social desirability measure to determine frequency of socially acceptable response patterns would add to the validity of the data.

Researchers have also suggested that alcohol use prevalence rates are greatly influenced by availability (Johnson & Glassman, 1996). Several authors have identified a positive relationship between the availability of alcohol and alcohol consumption rates (see Bahr, Hawks, & Wang, 1993). The current study was not designed to assess the degree of alcohol availability in the sample area. However, in accordance with McArdle et al. (2002), it is believed that the qualitative nature of the family relationship will serve as a protective factor against the availability of alcohol in the sample area.

Summary

In an attempt to establish effective intervention strategies, there has been considerable investigation into the development of adolescent alcohol use (AAU). Although an abundant body of research has indicated various biological, psychological, and social factors in the development of AAU, findings remain inconsistent. Due to the multifactorial etiology of AAU, researchers are, as of yet, unable to isolate each of the variables to produce conclusive findings.

Whether through biological, psychological, and/or social means, the family has
been proven to influence an adolescent’s likelihood to use alcohol. In particular, the quality of the parental relationship appears to be among the strongest predictors (Kenny, 1987). Although a familial link to alcohol use has been firmly established, the exact nature and direction of this relationship has yet to be determined. It appears that there are causal processes operating in both directions.

This investigation was focused on the influence of the attachment relationship on male adolescent alcohol use. The purpose of this study was to examine whether the attachment relationship will impact males’ decisions to utilize alcohol during critical life-transition periods. A relationship with parents characterized by trust, emotional support, communication, and fostering of autonomy is expected to positively influence an adolescent’s self-regulatory skills. Studies have demonstrated the adaptational benefits of a positive attachment relationship (Kobak & Sceery 1988; Mothershead, tvilghan, & Wynkoop, 1998), particularly during periods of stress (Lapsey et al., 1989).

Important to note, however, is that studies attesting to the importance of the attachment relationship during transition periods have primarily focused on females (e.g., Schulteiss & Bluestein, 1994). This trend may be attributed to the work by Gilligan (1982) and other feminist theorists, in which female autonomy is believed to occur within a relational context. This research is not intended to dispute these invaluable contributions. Rather, this researcher contends that the male identity development also occurs within the context of interpersonal relationships. It is believed that a parental relationship characterized by emotional support, trust, communication, and fostering of autonomy will positively influence male development.

This study was designed to examine the association between the quality of the
parent-child relationship and male adolescent adjustment. As a result of a positive attachment relationship, it is believed that the adolescent will develop competencies to assist in the achievement of developmental tasks. Recognition of the crucial role of the family in male development may change the way in which members of society construe and emphasize male independence.
Chapter II: Literature Review

Introduction

An active area of research involves the association between early attachment relationships and individual development. Activated by the inherent stress in the transitional period of adolescence, the attachment system appears to play an integral role in assisting adolescents in meeting developmental challenges (Allen & Land, 1999). The present investigation was conducted to assess dimensions of parental attachment, specifically affective quality, communication, trust, autonomy, emotional support, and alienation on a male adolescent’s decision to use alcohol during normative transition periods. The following will be a review of relevant literature, divided into the following subsections: (a) attachment, (b) adolescent attachment, (c) self-regulation, (d) self-regulation and attachment, (e) adolescent alcohol use, and (f) attachment and adolescent alcohol use.

Attachment

Attachment theorists emphasized that early learning experiences occur in the contexts of caregiver and child interactions. According to Bowlby (1988), “human infants...are preprogrammed to develop in a socially cooperative way, whether they do so or not turns in high degree to how they are treated” (p. 9). Psychopathology is conceptualized as a deviation from the normal developmental pathway in an effort toward adaptation (Rosenstein & Hotovitz, 1996). Attachment relationships formed in infancy provide the foundation for adaptation and developmental competencies throughout the life cycle.
Ainsworth and colleagues (1978) studied infants' exploratory and attachment behavior at home and in a testing environment (i.e., strange situation). The strange situation entailed leaving an infant in laboratory for seven, 3-minute periods to determine how the infant organized his/her behavior around attachment figures when distressed (Lamb, Thompson, Gardner, & Charnov, 1985). In these seven scenarios, the infants encountered a female stranger and were twice separated and reunited with their mothers. The adults were instructed to avoid initiating interaction unless the infant was distressed.

The strange situation procedures were designed to assess the ways in which infants: (a) utilized caretakers as a base for exploration (i.e., secure base), (b) reacted to strangers, and (c) reacted to separation and reunion. Ainsworth and her colleagues (1978) scored the children's behaviors on seven-point scales measuring aspects of the infant-adult interaction: (1) proximity and contact seeking, (2) contact maintaining, (3) resistance, (4) avoidance, (5) search, and (6) distance interaction.

Ainsworth et al. (1978) classified the children into three groups according to two criteria: (a) the child's degree of exploration in the mother's presence and in her absence and (b) the child's behavior towards the mother when she is present, when she departs, and when she returns. Securely attached infants (Group B) sought proximity under stress, but utilized the parent as a resource to facilitate play and exploration (Lamb et al., 1985). These infants displayed secure base behavior, in that they actively explored their environments and returned to the attachment figure for support. They were distressed upon separation with the mother and, upon her return, actively sought contact and soothing.

The other two groups of infants, Ainsworth et al. (1978) identified as "insecurely
attacked. The avoidant infants (Group A) tended to ignore or avoid their mothers and the female stranger, rather than seek interaction. These infants displayed little or no contact maintaining and failed to initiate interaction with the caregiver during play. The other group, ambivalent infants (Group C), vacillated between contact-seeking and rejection of the mother. Ambivalent infants were distressed upon separation from the mothers and angry upon reunion. These infants also displayed resistance towards a stranger.

Ainsworth et al. (1978) cross-validated the laboratory classifications with naturalistic observations in home settings. The comparison across settings allowed her and her colleagues to draw conclusions regarding maternal behavior. Mothers of secure infants (Group B) were responsive to the infants' signals and were capable of perceiving experiences from the infants' point of view. The infants were viewed as separate individuals; mothers demonstrated respect for autonomy and avoided interrupting independent activity. Mothers accepted the alternating proximity-seeking and exploratory behaviors.

Mothers of avoidant infants (Group A) appeared to be uncomfortable with physical contact, less expressive of emotion, and less tolerant of their infant's vulnerabilities (Ainsworth et al., 1978). They were unable to perceive from the infants' point of view. They tended to ignore the infants' signals, responding only to strong and persistent biddings. Because they were not attuned to the infants, they frequently interrupted autonomous activity. They demonstrated rejection of the infant and of the maternal role.

The mothers of ambivalent infants (Group C) were also inaccessible and similar
to Group A mothers (Ainsworth et al., 1978). However, they appeared to be invested in the maternal role and did not display difficulties with emotional contact. They were also less rigid and more emotionally expressive when compared to mothers of avoidant infants. Group C mothers displayed fragmented behavior, vacillating between cooperative and interfering behavior.

These observed distinctions in maternal behavior and subsequent attachment classification led Ainsworth et al. (1978) and others to conclude that the variations derive from the interpersonal transactions between the infant and caregiver. Rather than individual behaviors, the attachment relationship is believed to originate from patterns of interaction between the infant and the caregiver (Weinfield, Sroufe, Egeland, & Carlson, 1999).

Bowlby (1988) stated that a child is genetically predisposed to develop a set of behavioral patterns that will maintain proximity to a caregiver. The quality of the caregiver’s responsiveness and availability is crucial to the attachment relationship and the internal working model that develops. Consequently, a strategy develops that involves freedom from attachment to and integration of information about the attachment figure (Rosenstein & Horowitz, 1996). Attachment representations are believed to guide one’s expectations, affect regulation, and information processing in situations that are attachment related (Bretherton & Munholland, 1999).

Individual differences in attachment strategies are not viewed as pathological per se (Weinfield et al., 1999). However, according to the authors, the insecure patterns provide the foundation that, if continued, will increase the likelihood of pathology. On the other hand, attachment security may serve as a protective factor against the
development of pathology. Arend, Gove, and Sroufe (1979) discovered high levels of ego resiliency and autonomous functioning among securely attached toddlers. In addition, adolescent studies suggest that individuals with a secure attachment style have better developed ego strengths (Armada & Greenberg, 1987).

According to Bowlby (1988), a child in a secure attachment relationship develops a sense of worth and a belief in the helpfulness of others. Just as the child learns that he/she is effective in evoking a parental response, the child learns that relationships provide a context for need gratification (Weinfeld et al., 1999). Bell et al. (2009) maintained that secure attachment influences adaptive views of the self and others, affect regulation, and developmental competencies.

Attachment behavior can be rendered temporarily or permanently incapable of being activated (Bowlby, 1988). Bowlby observed “that adverse childhood experiences make the individual more vulnerable to later adverse experiences” (p. 37). Whereas, early adverse events are likely to be due to external factors, later adverse incidents are likely to be due to internal factors based on the individual’s earlier experience.

The individual without attachment security does not allow him/herself to become attached to anyone for fear of further rejection and the subsequent anger and anxiety. These negative internal working models become an unconscious defense that allows the child to cope with the painful effects elicited by the caregiver’s incompetence (Bowlby, 1988). The models form the foundation for defensive structures that may lead to personality fragmentation and psychopathology (Rosenstein & Horowitz, 1996). In accordance, the authors observed that insecure attachment patterns, along with negative environmental conditions, contribute to the manifestation of a psychiatric disturbance.
The inherent ambiguity of insecure attachment patterns causes anger, anxiety, and mistrust. Insecure attachment, in conjunction with other risk factors, has been discovered to increase the risk for either internalizing (e.g., low self-esteem, sense of hopelessness) or externalizing symptoms (e.g., aggression, antisocial behavior) (Greenberg, 1999). Speltz, Greenberg, and DeKlyen (1990) compared the separation/reunion behaviors of preschool-aged children with externalizing behavioral difficulties and a control group. Eighty-four percent of the clinical sample was classified as insecurely attached as compared to twenty-eight percent of the control group. Children in the clinical sample were more likely to protest and seek out the mother during separation.

In their work with unresolved trauma, Main and Hesse (1990) expounded upon the work of Ainsworth and her colleagues (1978). They proposed that the infants of parents with unresolved trauma were in a paradoxical situation. These infants display attachment to parents who sometimes exhibit frightening parental behavior. Consequently, their attachment becomes disorganized/dysoriented (Group D). Although related to parent psychopathology and child abuse, the disorganized/dysoriented classification has received lesser empirical attention in comparison to the other attachment classifications (Greenberg, 1999).

Familial risk factors have consistently been associated with the development of insecure attachment patterns (Greenberg, 1999). Egeland and Sroufe (1981) compared the attachment outcomes of 31 children who were abused and/or neglected with 33 cases with no history of maltreatment. The maltreatment group was characterized by a low proportion of secure attachment when compared to the control group. Only 38% of the children in the maltreatment group manifested secure attachment patterns at 12 months.
Fifty percent of these children were classified as anxious/resistant. Secure attachment was observed in 75% of the control group.

Observations at 18 months revealed stability in the attachment patterns of the control group (Egeland & Sroufe, 1981). Fifty-two percent of the children with a history of maltreatment changed classifications. Most of these children moved toward an anxious/avoidant attachment pattern, and few moved toward a secure attachment. The authors concluded that changes in the children's classifications were attributable to a change in environmental stressors, familial support, and out-of-home placement.

In their study on Adult Children of Alcoholics (ACOAs), Mothersand et al. (1998) contended that family dysfunction adversely affects internal working models in late adolescents. Decreased levels of parental attachment (characteristic of ACOAs) were found to be associated with increased interpersonal problems. ACOAs were observed to experience problems with intimacy and to exhibit controlling behavior in interpersonal relationships when compared to non-ACOAs.

Cavell, Carson Jones, Runyon, Constantin-Page, and Velasquez (1993) suggested that parental psychopathology disrupts parent abilities to participate in a nurturant and responsive parent-child relationship and affects adolescents' perceptions of the quality of the relationship. The authors discovered that, among late adolescents, those with fathers who were alcoholic rated their attachment to fathers as being significantly more negative than that of those whose fathers were not alcoholics.

Research has indicated that infants adapt their attachment behavioral systems to the interpersonal environments as the environments adapt to their behavior (Weinfield et al., 1999). Through interpersonal transactions, complementary models of the self and
others are developed, and these have implications for psychological and social adjustment. Thus, current circumstances interact with early experience to determine the course of individual development (Weinfield et al., 1999).

**Adolescent Attachment**

Researchers attest to the stability of attachment patterns throughout the life cycle (Ammaniti et al., 2000). Adolescent attachment styles are based on the internal working models developed in infancy. Over time, these models become more structured and resistant to change (Bowlby, 1988). However, the physiological, psychological, and social changes during adolescence necessitate the revision of internal working models and attachment strategies.

Due to hormonal changes during adolescence, individuals are expected to develop intimate connections with age-mate peers and to expand their relationship network (Allen & Land, 1999). Autonomy and individuation become salient developmental tasks. As the adolescent strives for autonomy and individuation, parental relationships are also transformed from hierarchical to more egalitarian (Steinberg, 1990). Despite these normative changes in the parent-adolescent dyad, the quality of attachment relationship continues to shield the adolescent from distress (Quamasa & Greenberg, 1994).

The balancing of the attachment and exploratory systems allows the adolescent to explore the environment independently while remaining cognizant of parental availability (Allen & Land, 1999). It appears that the successful negotiation of development tasks is achieved when the adolescent can develop autonomy in the context of a supportive and close parent-adolescent relationship (Grotevant & Cooper, 1985). Thus, a secure base in
adolescence supports the adolescent’s needs for cognitive and emotional autonomy (Allen & Land, 1999).

Attachment theorists emphasized the intergenerational transmission of relationship quality and individual adaptation (Cowan, Cohn, Cowan, & Pearson, 1996). Secure attachment in adolescence is strongly related to trusting and warm relationships with one’s parents (Tacon & Calders, 2001). Evidence suggests that a strong emotional bond with parents is related to a positive family concept, a positive social self-concept, and emotional well-being in adolescents (Armsden & Greenberg, 1987).

Parents’ current representational models have been discovered to influence their children’s adjustments (Cowan et al., 1996). In an investigation on toddlers and their parents, the researchers discovered associations between parents’ coherence of their own attachment recollections, emotion regulation, and expression and teacher observations of their children’s classroom behaviors. Attachment recollections influenced parenting practices and the subsequent expression of internalizing and externalizing behaviors in the children. Similarly, in their study with psychiatric inpatient adolescents, Rosenstein and Harowitz (1996) discovered analogous attachment classifications among the teens and their mothers.

Children’s characteristics play a role in family attachment relationship quality. Siegel (1999) maintained that parental perceptions and behavior interact with the child’s temperament to determine the nature of the attachment relationship. In infants, temperament affects vulnerability to distress, approach reactions, soothability, and engagement with toys in a strange-situation setting (Lamb et al., 1985). Thus, it appears that individual differences in temperament may influence the cognitive interpretation of
the parent’s behavior during infancy (Lamb et al., 1985).

The quality of the attachment relationship determines the development of interpersonal distress in adolescence. Differences in attachment strategies are indicative of the individual’s ability to utilize the attachment relationship for security and autonomous functioning (Vivona, 2000). Research has demonstrated that adolescents with secure attachment reported fewer feelings of distress (Kobak & Seery, 1988), stability of self-esteem, life satisfaction, and affective status (Armsden & Greenberg, 1987). In contrast, adolescents reporting a poor attachment relationship with parents reported having intimacy problems and being overly controlling (Motherseal et al., 1998). It is believed that parental attachment serves a mediational role in the development of interpersonal difficulties.

Insecure adolescent attachment is associated with ambivalence and distance between the adolescent and one or both parents. Rosenstein and Horowitz (1996) found an association among attachment classifications, affect regulation, and patterns of behavior. Dismissing adolescents were found to actively minimize distressing cognitions and emotions and to have a higher incidence of conduct disorders. Adolescents using a preoccupied attachment strategy acknowledged and exaggerated negative affects and fit the DSM-III-R (American Psychiatric Association, 1987) diagnostic criteria for affective disorders. Together, both of the groups with insecure attachment patterns reported clinically significant levels of psychic distress.

According to Ainsworth et al. (1978) stressful, threatening or fear-eliciting situations reveal qualitative differences in attachment classifications. Attachment behavior is activated by and best observed in situations where these states are evoked or
that evoke these states in the individual's memory (Solomon & George, 1999). Important
to note however, is that attachment behavior and its activation are specific to the
individual and to the particular stage of development (Ainsworth et al., 1978). As a result
of these observations, researchers have begun to explore the influences of an attachment
relationship on normative transitions during adolescence.

School transitions have been found to be a source of stress for children,
adolescents, and young adults (Akos & Galassi, 2004; Kenay & Donaldson, 1991;
Mataarab, Hancock, & Brand, 2004). In a review of relevant research, Akos and Galassi
identified three categories of school transition concerns: academic, procedural, and
social. Some individuals successfully manage these transitional stressors. However,
others may experience a decreased self-esteem and increased psychological distress
(Isakson & Jarvis, 1999). The ability to negotiate these school-related stressors appears
to vary as a function of individual, interpersonal, and contextual aspects of the transition
(Akos & Galassi, 2004). Consequently, researchers have begun to investigate the
predictors of emotional adjustment to a new school environment.

Beginning the transition to college in the fourth year of high school, first-year
college students have been found to report more psychological dependencies on their
parents than students in their junior and senior years (Lapsley et al., 1989). Women
reported more functional, attitudinal, and emotional dependencies on mother and
emotional dependency on father when compared to males. Overall, first-year college
students reported more social and personal-emotional adjustment difficulties than
students in the junior and senior years. The authors concluded that "appropriate
intrapsychic representations of parents provide the basis for mastery of adaptational
adolescents with a secure attachment relationship to parents are believed to better negotiate the individuation process and adjust to new situations, such as the college environment (Grotevant & Cooper, 1985). College women with strong emotional attachments to their parents were more likely to have progressed in developing purpose and academic autonomy (Schultheiss & Blustein, 1994). More so, the authors found an association among young women who shared similar values and beliefs with their parents and successful adaptation to college (Schultheiss & Blustein, 1994).

According to Kerzy and Donaldson (1991), characteristics of secure attachment, including support for independence, positive affect, and emotional support were associated with adaptive functioning. In a study on first-year college students, the authors found that women viewed their parents as having a greater role in providing emotional support than men. Women who identified themselves as securely attached to their parents reported higher levels of social competence and psychological well-being.

Studies designed to assess the importance of the parental attachment relationship on male school adjustment are rare. However, the few empirical investigations examining male adjustment to college have produced inconsistent findings. Schultheiss and Blustein (1994) discovered limited support for the association between parental attachment and adjustment to college among males. Moore (1987) found that among college-aged males, those who reported greater emotional detachment from their parents also reported greater loneliness, lower self-esteem, and lower ego-identity achievement.

In addition, few studies have focused on the transition into high school. In one study, Isackson and Jarvis (1999) observed that among high-school freshman, parental
support was related to adjustment to the high-school setting. Specifically, perceived support from parents was positively related to a sense of school belongingness, which, in turn, influenced positive school adjustment.

Peers often lend support to adolescents and serve as role models during developmental transitions (Isaksen & Jarvis, 1999). Secure parental attachment leads to the growth of self-esteem and the subsequent enhancement of peer relations (Brook & Brook, 1990). A secure attachment relationship is believed to facilitate the development of social skills as the working models developed in childhood are modified to form the basis of peer relationships (Greenberg, 1999). Studies show that adolescent attachment to parents is related to higher scores on personal and social identity questionnaires (Lapsley, Rice, & Fitzgerald, 1996) and dating competence (Kenny, 1987).

In addition, secure attachment has been found to be associated with affect regulation in social interactions (Kobak & Soeery, 1988). Late adolescents with insecure attachment classifications reported greater hostility toward peers in comparison to adolescents with secure attachments. Kobak and Soeery hypothesized that the outward expression of hostility toward an unresponsive parent could potentially threaten the attachment relationship. Therefore, the displacement of hostility toward peers may avoid further conflict in the home yet lead to distant peer relationships.

The distorted communication characteristic of insecure attachment patterns may preclude accurate production and perception of social cues (Allen et al., 2002). This impairment would lead to difficulties in interactions with parents and peers and subsequently increase the likelihood of problem behavior. In a longitudinal study, Allen and colleagues (2002) found a relationship among the quality of parental attachment,
autonomy, social skills, and problem behavior. Among at-risk adolescents, attachment insecurity predicted decreases in social skills and subsequent increases in delinquency. Teens with an insecure classification experienced decreases in social skills in the presence of parental displays of autonomy. These findings led the researchers to conclude that insecurely attached adolescents may utilize problem behaviors to express their anger over parental displays of autonomy or lack thereof and to communicate their need for parental attention.

During adolescence, individuals undergo a reactivation of emotions associated with parental attachment due to the physical and psychological changes associated with the onset of puberty (Brook & Brook, 1990). The normative transitions and subsequent stress of this developmental period activate the attachment system. Individuals with attachment security will seek out their parents as sources of emotional support as they independently negotiate the challenges of adolescence. In contrast, independent functioning and normative development is hindered in those who do not have secure base in which to return.

Self-regulation

Self-regulation is defined as the internal capacity to regulate affect, attention, and behavior and to respond effectively to both internal and external demands (Raffaelli, Creeckett, & Shen, 2005). The capacity to regulate internal states is fundamental to self-organization (Siegell, 1999) and attitudes toward the environment (van der Kolk & Fisler, 1994). In contrast, the inability to self-regulate leads to a variety of problem behaviors (e.g., substance use, low academic achievement) that are best understood as
attempts at self-regulation (van der Kolk & Fischler, 1994).

In theoretical literature, self-regulation is conceptualized in various ways. In their literature review, Raffaelli et al. (2005) identified three distinct models of self-regulation and its dimensions. In the first model, components of self-regulation are depicted in isolation from each other. The regulation of emotion, attention, and behavior are viewed as distinct processes. Tripartite model studies have focused on specific aspects of self-regulation, such as impulse control (e.g., Wulffert, Block, Santa Ana, Rodriguez, & Coisman, 2002).

According to Raffaelli et al. (2005), the second model was designed to conceptualize the constructs of emotionality and regulation as separate processes. This two-factor model extracts the process of self-regulation from specific dimensions of temperament. A review of the literature suggests, however, that dimensions of self-regulation covary and, thus, may be interrelated.

The third model included the integration of the multiple dimensions of self-regulatory process (Raffaelli et al., 2005). In this globalized model, physiological, emotional, and behavioral regulation are viewed as interrelated and dependent upon each other. Several studies have found high intercorrelations among these different aspects of self-regulation and indicate that self-regulation is an interrelated set of capacities.

In a longitudinal investigation, Mischel, Shoda, and Rodriguez (1989) examined preschoolers’ behavioral regulation abilities. More popularly known as “the marshmallow test,” 4-year-old children were instructed that they would receive two marshmallows if they waited for the experimenter’s return, or one marshmallow if they summoned the examiner independently. Delay of gratification was measured by the time
elapsed before the child rang the bell. Children who delayed gratification longer were found to be more cognitively and socially competent as adolescents. They demonstrated more effective coping strategies in response to stress and frustration.

In the "marshmallow test," Mischel et al. (1989) examined the children's attentional strategies. They discovered that children who received abstract cues (e.g., to consider the marshmallows as clouds) or children that were able to successfully divert their attention (e.g., to think about Mommy) were able to delay gratification. In contrast, those children who were cued to think about the concrete aspects of the rewards (e.g., the sweet taste of the marshmallows) had a decreased delay ability. The majority of the children in the sample were Caucasian and middle-class.

Wolffert et al. (2002) extended Mischel and colleagues' (1989) delay of gratification procedure to older children. High-school students were offered a monetary incentive to participate in a research study on academic achievement and substance abuse. Participants were given a choice to accept a smaller fee immediately or a larger fee one week later. Those who chose immediate reward were more likely to report lower self-esteem, earn lower grades, and lack self control in the use of substances when compared to students who delayed gratification.

Findings from these studies have demonstrated that self-regulation is a function of two processing systems: an emotional system and a cognitive system (Mischel & Ayduk, 2002). Located in the amygdala, the emotional system is responsible for the flight-or-flight responses. In contrast, the cognitive system in the hippocampus, generates thoughtful, reflective reactions. "Although at relatively low levels of stress, the two systems work in concert, emotional processing begins to dominate cognitive..."
processing) as stress levels and negative arousal increase” (Mischel & Ayduk, 2002, p. 115). Self-regulation is contingent upon an individual’s ability to access cognitions to suppress negative emotional arousal when necessary.

The brain has an innate capacity to regulate emotion and subsequently organize its state of activation (Siegel, 1999). As the individual matures, the capacity for self-regulation increases. Many of the physiological brain developments related to self-regulation do not fully mature until late childhood or early adolescence. Studies conducted to examine normative developmental changes in self-regulatory processes have demonstrated a significant increase in levels of self-regulation between early childhood and middle childhood (Raffaelli et al., 2005).

In a longitudinal study on the stability of self-regulation in preschool children, Raffaelli et al. (2005) found significant main effects of time. Mothers reported increases in affect, behavior, and attention regulation when the children were assessed 5 years later at the ages of 8 and 9 years respectively. At the final data-collection point, the results failed to indicate an increase in self-regulatory ability from middle childhood to adolescence (12 and 13 years of age).

As self-regulatory capacity varies as a function of development, global self-regulation varies from individual to individual and may be influenced by biological features and adaptations to experience (Siegel, 1999). Early traumatic experiences, such as child abuse and neglect, have been found to affect the biologically based capacity to regulate emotions and behavior (van der Kolk & Fisler, 1994). Early trauma can affect the neural circuitry responsible for emotional appraisal through the secretion of stress hormones (Siegel, 1999). This neurological response leads to a constant state of
hyperarousal, which may be evoked in response to actual trauma or to reminders of the trauma. Therefore, the individual is unable to respond to affective cues to attend to the stimulus and immediately reacts to the stimulus without the benefit of cognitive appraisal (van der Kolk & Duquey, 1989).

According to Siegel (1999), a child’s temperament and early relationships with caregivers also contribute to the individual variations in self-regulation. Important to note, however, is the fact that studies have indicated that parenting behaviors interact with changes in temperamental reactivity (Eisenberg, Cumberland, & Spinrad, 1998). Thus, research on the association between temperament and parent-child interactions has been complicated by the bidirectional nature of the relationship (Kochanska, Friesenborg, Lange, & Martel, 2004).

Kochanska et al. (2004) observed infant temperament by assessing the degree of joy, anger, fear, and attention. Results indicated that the infant’s temperament was a significant factor in all three components of the mother-infant relationship: shared positive ambience, responsiveness, and consistent tracking of the infant. In addition, maternal personality had a significant effect on shared affective ambience and maternal responsiveness, and a moderate effect on maternal consistent tracking of the child.

In contrast, Stifter and Spinrad (2001) failed to find an association between maternal behaviors and infants who were labeled as excessive criers. Levels of maternal sensitivity and intrusiveness were not distinguishable across the treatment and control groups. Important to note, however, is the fact that excessive criers were found to have lower levels of affective self-regulation, even when controlling for negative reactivity.

Related studies have demonstrated an association between parental
psychopathology and impaired self-regulatory skills in children. In a study on early adolescent males, Dawes, Clark, Moss, Kirtaci, and Tarter (1999) observed lower rates of behavioral self-regulation in sons of substance-abusing fathers. When compared to a control group, sons of substance-abusing fathers scored higher on aggregates of lifetime inattention, impulsivity/hyperactivity, and aggressivity.

In accordance, Brody and Cie (2001) discovered an association among parenting processes and the development of self-regulatory skills. In a longitudinal study with preadolescents and their parents, mothers and fathers with harsh-conflicted parenting practices had children with difficulties controlling their cognitions, emotions, and behavior (as per teacher report). In contrast, children with nurturant-responsive parents were observed by teachers to have good self-regulatory skills.

Patock-Packham, Chong, Balhorn, and Nagoshi (2001) utilized Baumrind's (1971) parenting classifications to examine the effects of parenting styles on self-regulatory skills and subsequent alcohol use. According to Baumrind, a permissive parent allows children to regulate their own behaviors. In contrast, an authoritarian parent serves as the primary modulator of child behavior. Transgressions are met with strict punishment. An authoritative parent combines the most adaptive practices of both permissive and authoritative styles and acts as a behavioral guide. Results demonstrated a positive relationship between authoritative parenting and self-regulatory skills in females. Permissive parenting was found to have an inverse relationship with self-regulation across genders. Analyses on the relationship between authoritarian parenting styles and self-regulation failed to produce significant findings. Mediation analyses revealed that self-regulation mediated the pathway from permissive parenting to
perceived drinking control, which in turn, mediated the pathway from self-regulation to alcohol use. These results led the authors to conclude that self-regulation appeared to be the linking mechanism between parenting styles and alcohol use.

In a related study, Wills, DuHamel, and Vacekro (1995) found that general self-regulation ability in adolescence is an important predictor in psychological functioning and alcohol use. On a sample of urban adolescents, results indicated that generalized self-control and behavioral competence were influential in the early onset of tobacco and alcohol use. Other dimensions of impaired self-regulation that have also been observed to be associated with an increased risk of substance use, include sensation-seeking, impulsivity, and attentional deficits (Tarter, Sambrano, & Dunn, 2002).

The ability to exert volitional control over affect may enhance the ability to form and maintain intimate relationships (Allen & Land, 1999). Emotional competence involves an understanding of, appropriate display of, and a modulation of emotions in a socially appropriate manner (Eisenberg et al., 1998). Thus, the authors concluded that emotional competence is related to social competence. Impaired social competence precludes acceptance by prosocial peers, which, in turn, promotes affiliation with deviant peers (Tarter et al., 2002). In the aforementioned study, Wills et al. (1995) found that self-regulation was inversely related to affiliation with normative peers.

To regulate cognitive-affective processes assists the individual in achieving valued goals (Mischel & Ayduk, 2002). Research has consistently demonstrated the importance of self-regulatory skills in academic and school adjustment (Steinberg, 1998). For instance, Walls and Little (2005) found that intrinsic self-regulation was positively related to school adjustment among middle-school students. The authors discovered a
positive correlation among academic grades, school well-being, and positive affect. The students for whom the goals of academia were readily adopted and personally important demonstrated better adjustment to the middle-school setting.

Self-regulatory processes have been shown to be associated with temperament, parenting practices, development, and social competence. Similarly, familial processes (Smart & Chibucos, 1990), affiliation with nonnormative peers (Kandel, 1985), and lower academic achievement (Sutherland & Shepard, 2001) have been indicated in the development of adolescent alcohol use. According to van der Kolk and Filer (1994), dysregulation interferes with flexible response strategies and promotes maladaptive behavior. Unable to effectively regulate physiological, emotional, and behavioral states, the individual is inclined to experiment with a variety of behaviors in an attempt to modulate arousal. Thus, it appears that self-regulatory processes may be the linking causal mechanism in understanding the family's role in adolescent problem behavior, such as adolescent alcohol use.

*Self-regulation and Attachment*

Attachment theory maintains that infant attachment is organized at both the representational and behavioral levels (Bowlby, 1988). Due to the reciprocal connection of the working model among the self, the attachment figure, and the environment, secure attachments are believed to lead to perceptions of mastery and self-worth (Greenberg, 1999). Consequently, several studies have investigated the role of attachment in the development of behavioral and affective regulation. Evidence from these studies suggests that self-regulatory processes are influenced by early relationships with
caregivers (Dawson, Hessl, & Frey, 1994).

Research suggests that beginning early in life, caregivers provide a context for the acquisition of self-regulatory skills (Bell & Calkins, 2000). “From a developmental perspective, the infant’s first challenge is to achieve internal homeostasis via the activity of the deep structures of the brainstem, which mediate sleep-wake cycles and other basic bodily functions (such as heart rate, respiration, and digestion)” (Siegel, 1999, p. 240). During this period, the caregiver functions as an external regulator of these physiological states. Arousal or tension is modulated through interpersonal transactions with the caregiver.

According to Bowlby (1982), proximity-seeking (a primary attachment strategy) is an innate regulation device designed to protect an individual from physical and psychological danger. Attachment figures alleviate distress and function as a source of support and comfort. In order to satisfy physiological needs, the infant and caregiver engage in reciprocal communication of proximity-seeking and soothing. This reciprocal communication results in attunement of states of mind (Siegel, 1999).

Over time, subjective meaning is assigned to the infant-caregiver interactions. The need for security influences proximity-seeking while proximity influences the perceived sense of security (Sloman, Atkinson, Mölligan, & Liotti, 2002). Sensitivity to the child’s emotional states intensifies the child’s positive states and regulates negative states (Siegel, 1999).

Secure attachments are characterized by open and flexible emotional communication by both the infant and the caretaker (Sloman et al., 2002). From longitudinal observation of infant behavior during free play, parental separation, and an
instructional session, Velling, McElwain, Hotaro, and Herrers (2002) found that emotionally available (i.e., displays of affection and enthusiasm, nonverbal gestures) fathers had infants with secure attachment strategies and greater emotional competence. In addition, overt expressions of infant positive affect were related to parental emotional availability during free play.

In contrast, anxious or anxious avoidant attachment patterns are characterized by restricted and fragmented communication (Bowlby, 1988). This restricted type of communication prevents the signals that activate attachment behavior from reaching the behaviorial system. Bowlby identified this as a form of “defensive exclusion” (p. 35). Inhibited and ambiguous communication prevents the child from modulating his/her behavior.

Active control over behavior, through covert communication, facilitates satisfactory interpersonal transactions (Tanner, 2002). It is believed that children with impaired self-regulatory skills are unable to participate in reciprocal interaction (Bell & Calkins, 2008). The individual is unable to effectively communicate his/her developmental needs and is unable to seek out support during periods of stress. In accordance, Hirschi (1969) found that a lack of intimacy in parental communication increased the probability of adolescent delinquent behavior.

Self-regulation follows a trajectory throughout development. The child progresses from caregiver directed regulation in infancy toward independent self-regulation in preschool (Egeland et al., 2002). When distressed, an infant evokes caregiving responses aimed at reducing the discomfort (Stifter & Spinrad, 2001). As the child matures, the caregiver may introduce alternate behaviors that encourage self-
soothing. The child eventually learns that these self-induced behaviors can reduce negative arousal. Studies have indicated that by the third year of life, important developments in the management of emotional, behavioral, and physiological reactivity have occurred (Bell & Calkins, 2000).

According to Field and Reite (1984), following a separation from their caregivers, children experience a period of physiological and behavioral agitation, followed by depression. The authors monitored preschool children's behavioral and physiological responses before, during, and after their mothers' hospitalization for the birth of a sibling. Increases in negative affect, activity level, crying, and sleep disturbances were noted during the separation period. Upon reunion, decreases in positive affect, activity level, and heart rate were observed. The authors maintained that during situations in which the individual perceives control, active coping and elevated heart rate were observed. In contrast, when the individual perceives helplessness, observations indicate depressed activity and heart rate. From these findings, Field and Reite concluded that the caregiver's response influences the long-term effects of separation. By actively interacting with and restoring a semblance of control, the caregiver maintains optimal levels of physiological arousal (van der Kolk & Fisler, 1994).

The attachment behavioral system operates in a goal-directed manner, allowing the individual flexibility in response to environmental changes (Bowlby, 1972). Eventually, children learn whether or not their distress-related emotions are worthy of parental attention (van, Salisch, 2001). With responsive caregiving, the infant learns to regulate the current state and to develop self-regulatory skills to be used in the future. Quality of the parental attachment relationship is associated with self-reported tendencies

Characteristic of secure attachment, positive expectations about other’s availability result in perceptions of the self as competent and valued (Bowlby, 1982). In their study on late adolescents, Armsden and Greenberg (1987) found that both the quality of parent and peer attachments were associated with self-esteem and life satisfaction. Quality of parental attachment was related to general well-being after quality of peer attachment had been controlled. Adolescents with secure attachment relationships with their parents reported higher self-esteem, less alienation, and less symptomatic responses to stressful events when compared to adolescents with low security attachements.

In an anxious or avoidant attachment pattern, the child learns that the experience of distress is associated with negative outcomes, and that distressing emotions cannot be effectively regulated (Cooper, Silber, & Collins, 1998). As a result of the failure of proximity-seeking to reduce distress, these children develop secondary attachment strategies (Bowlby, 1982), which limit their access to appraisals and subjective experiences of distress (von Salisch, 2001). These strategies persist through development and are generalized to experiences that elicit negative emotions (Cooper et al., 1998).

In a multiclinic sample of adolescents, Cooper et al. (1998) found consistency among distinct clinical profiles and differences in attachment styles. Overall, anxiously attached adolescents exhibited more depression and hostility when compared to adolescents with either avoidant or secure attachment classifications. When compared to securely attached adolescents, avoidant adolescents demonstrated more negative
affectivity and impaired social skills.

Bowlby (1982) contended that attachment insecurity inhibits activation of other behavioral systems, such as exploration and affiliation. These individuals are focused on relieving the immediate distress and have fewer faculties available for environmental interaction (Misulincer, Shaver, & Pereg, 2003). In accordance, Crolnick et al. (2000) maintained that a supportive home environment assists in the development of self-regulation skills and autonomous functioning. In addition, Bell and Calkins (2000) suggested that parental lack of support for adolescent autonomy was associated with difficulties in emotion regulation.

The attachment relationship is determined by the temperament and personality of both the child and the caretaker. Evidence suggests that the goodness-of-fit among the parent and child is influenced by a reciprocal socialization process: the parent’s behavior may elicit a similar response in the child and the like (Brook et al., 1998). For instance, Brody and Ge (2001) found that youth with low levels of self-regulation are more likely to elicit parental negativity, which, in turn, intensifies the characteristic lack of behavioral and emotional control. Brook et al. (1998) observed that childhood aggression interfered with the development of parent-child attachment, which was then related to unconventional behavior in adolescence.

The child may develop traditional behavior from the parents through the internalizations of morals that develop into autonomous value systems or through the experience of negative emotions imposed for moral transgressions (Brook & Brook, 1990). Brody and Ge (2001) surmised that affectively positive parent-child relationships assist in the development of self-regulatory skills as children internalize and integrate the
values of their home environments. In contrast, aspects of behavioral dysregulation are manifested in noncompliance with societal expectations (Tarter, 2002).

Children adopt a range of behaviors to modulate intense affective states (van der Kolk & Fisler, 1994). Research indicates that emotion-based coping strategies are associated with maladaptive behavior, including drug and alcohol use (Patterson & McCubbin, 1987). In their study on middle adolescents, Windle and Windle (1996) discovered an inverse relationship between task-oriented coping and emotional/behavioral adjustment. In contrast, adolescents who utilized avoidance coping strategies were found to have higher levels of alcohol use and alcohol-related problems.

In a related study, Brody and Ge (2001) suggested that frequent exposure to stressors in the home fosters feelings of helplessness and inefficacy, consequently leading adolescents to utilize coping mechanisms to reduce negative affect. In a longitudinal investigation of parenting practices, self-regulatory skills, and alcohol use, the authors observed a conflictual relationship with parents increased adolescents' vulnerability to alcohol use. Data indicated that nurturant-responsive parenting practices fostered the development of youth self-regulatory skills. Harsh-conflicted parenting was related to depressive symptoms, hostility, and low self-esteem. Youth exposed to harsh-conflicted parenting were more likely to consume higher quantities of alcohol, consume alcohol more frequently, experience negative consequences associated with alcohol use, and display symptomatic drinking.

According to Mikulincer et al. (2003):

Each attachment strategy has a specific regulatory goal, and cognitive and affective processes are shaped to facilitate goal attainment. Whereas the goals of
security-based strategies are to alleviate distress, build a person’s resources and broaden his/her perspectives, the goals of secondary attachment strategies are to manage attachment system activation and reduce or eliminate the pain caused by frustrated proximity seeking attempts (p. 86).

Thus, there appears to be a connection between past helplessness and current adjustment (van der Kolk & Fisler, 1994).

Individuals who fail to develop attachment security employ a variety of coping strategies, including alcohol use, aimed at reducing immediate distress. Important to note however, is that prolonged alcohol use decreases serotonin levels which intensifies behavioral and affective dysregulation (van der Kolk & Fisler, 1994). Thus, there appears to be a bidirectional relationship between impaired self-regulatory skills and alcohol use that affects normative development. Dysregulation influences the use of alcohol, and sustained alcohol use prevents subsequent regulation.

Adolescent Alcohol Use

In an effort to establish effective intervention strategies, empirical research has been directed towards the identification of risk and protective factors associated with the development of adolescent alcohol use. Based on a public-health model, the objective is to implement empirically based community/school programs to decrease risk factors and to increase protective factors. From a developmental perspective, protective factors are believed to decrease the likelihood of engaging in risk behavior through personal or social controls against its occurrence, through involvement in activities that tend to be incompatible with or serve as alternatives to risk behavior, and through commitments to
conventional institutions (Jessar, Van Den Bos, Vanderryn, Costa, & Turbin, 1995). In contrast, risk factors are believed to increase the likelihood of engaging in problem behavior through direct encouragement, through increased vulnerability to distress, and through increased opportunity to engage in problem behavior. Variation in exposure to risk and protective factors may provide an explanation for the heterogeneity found among adolescent alcohol users (Jessar et al., 1995).

Research (see Mezzich et al., 1993) has consistently identified a genetic component in the development of alcoholism. However, due to the inherent conflict in the nature-versus-nurture debate, researchers were inclined to incorporate biological and sociocultural perspectives in studying the etiology of alcohol use. Consequently, a review of the research on adolescent alcohol use confirms the developmental concept of equifinality—in that multiple pathways may lead to the same disorder (Brook et al., 1998; Greenberg, 1999).

Researchers exploring the development of substance abuse have indicated that drug use occurs in clearly defined stages (Free, 1993). Several studies have demonstrated that licit drug use precedes the use of illicit substances (see Hawkins, Catalano, & Miller, 1992). There is a growing body of research identifying tobacco and/or alcohol as "gateway drugs"; they tend to precede the use of marijuana, amphetamines, and other illegal substances. Increases in level of use are predictive of eventual substance abuse. According to Pentz (1994), experimental gateway drug use increases during the 9th and 12th grades.

Adolescent alcohol use has been found to be associated with numerous economic and societal problems (Voekl & Frone, 2000). Higher rates of juvenile delinquency and
accidental injury or death have been found among adolescents who use alcohol (Buechel & Robins, 1989). In a 1997 study by the NJ Department of Corrections, it was estimated that 70-90% of juvenile offenders in custody are substance abusers (Commissioner Jack Terhune, personal communication, March 31, 1998).

Adolescent alcohol use is related to educational difficulties, such as cognitive impairments, academic failure, and school dropout (Pentz, 1994). Low expectations for academic achievement were found to be predictors of problem behavior, including alcohol use (Jessor & Jessor, 1977). In a study on English secondary school students, Sutherland and Shepard (2001) found that adolescents with perceived low academic achievement were 1.3 times more likely to drink alcohol than those with high achievement. However, the relationship between academic achievement and alcohol use may be reciprocal in nature. As Voekl and Frone (2000) contended, alcohol use at school may lead to poor performance which encourages further alcohol use.

Individual characteristics are observed to be important predictors of adolescent alcohol use. Researchers have suggested that adolescents with a low sense of self-esteem, a poor self-image, and a sense of alienation from peers have a heightened risk for developing drug and/or alcohol problems (Vega, Zimmerman, Waisheit, Apostori, & Gil, 1993). High levels of substance abuse have been observed among adolescents showing personality traits such as rebelliousness, impulsivity, anger, immaturity, insecurity, egocentricity, and an external locus of control (see Hawkins et al., 1992). Brody et al. (1998) demonstrated that children with temperaments that featured high activity, high sensation-seeking, and high sociability had increased levels of alcohol use.

In an effort to determine which particular aspects of temperament contribute to
the development of alcohol use, researchers have begun to examine the influence of behavioral self-regulation (BSR), the degree to which one can control one’s own activity and modulate reactivity. The propensity to experience negative mood states, or negative affectivity, has been found to increase the likelihood of substance use (Department of Health and Human Services, 1997). For example, Mezzich, Giancola, and Tarter (1997) established that behavioral dysregulation and negative affectivity were positively associated with alcohol abuse.

Studies on BSR indicate that adolescents will utilize substances as a mechanism to cope with psychological distress. Colder and Chassin (1997) discovered a positive association between the experience of negative affectivity and alcohol use. The authors proposed two possible explanations for the observed relationship. In the first, the authors hypothesized that the pharmacological effects of the alcohol may soothe the physical and psychological experience of distress. In the second hypothesis, based on arousal theory, Colder and Chassin posited that underaroused individuals may seek to increase cortical arousal through risky behavior. Adolescents may be inclined to modulate low positive affect by engaging in risky behavior to induce higher levels of positive affect (e.g., drinking alcohol may induce excitement).

Physiological brain maturation, responsible for formal operational thinking, does not occur until mid- to late adolescence (Tarter, 2002). An aspect of immature brain function is an impaired decision-making ability. Consequently, adolescents have an increased vulnerability to the poor behavioral choices inherent in problem behavior. Thus, studies have shown that cognitions, such as adolescents’ perceptions of costs and benefits, influence their health-compromising behavior (Virgili, Owen, & Severson,
Related research into cognitive processes has involved expectancies about the effects of the substances. Studies have demonstrated that positive attitudes toward substance use prior to onset appear to facilitate use (Van Hasselt, DePiane, & Tarter, 1994). Individuals' beliefs about the anticipated outcomes of alcohol use can develop in the absence of actual experience with alcohol. Data suggests that adolescent expectancies appear to be related to parental and peer substance use (DHHS, 1993).

Several demographic trends associated with youth alcohol use have been identified. African American students are at a lower risk of past-year substance use and dependence than either White or Hispanic students (SAMHSA, 1996). Male adolescents are more likely to use substances, including alcohol, than females (Johnston, O'Malley, & Bachman, 1991). In addition, White males from higher socioeconomic groups were found to drink more frequently and consume larger quantities of alcohol when compared to those from lower socioeconomic groups (Martin & Pritchard, 1994).

In addition to prevalence rates, data (Tory & Coughlin, 1991) reveal distinct gender differences in the clinical histories/presentations of adolescent substance abusers. The authors discovered that male and female substance abusers differ on the following variables: (a) referral into treatment, (b) psychological profile, (c) experience of physical and/or sexual abuse, and (d) family history of substance abuse. In addition, findings suggest that males in treatment consistently outnumber females by 2.5 to 1. Males were more likely to be referred by traditional medical and/or legal institutions whereas females were more likely to be referred by informal sources, such as family members and friends. Female substance abusers suffered from more affective disorders and physical/sexual
abuse and higher rates of a familial substance abuse history than their male counterparts.

The changing demographics in the U.S. have led to research investigating the influence of family structure on adolescent development (SAMHSA, 1996). The composition of the family has been found to have a significant relationship with adolescent substance use. In particular, several studies have shown that youth from disrupted families have higher levels of substance use than their counterparts from intact families (Jenkins, 1998). It appears that parental absence attributable to separations, divorce, and death increases the likelihood that adolescents will use substances. More so, Hetherington, Cox, and Cox (1985) suggested that psychological and behavioral problems typically remerge with the introduction of a stepparent into the family.

Significant events may create stress for adolescents, leading to an increased vulnerability to alcohol use. Studies have shown that a greater incidence of negative life events and daily stress lead to greater maladjustment (Windle & Windle, 1990). The academic and social challenges of entering a new school tax adolescent coping resources and self-esteem, and the opportunities for alcohol use significantly increase upon transition into high school (Tarter, 2002).

Contemporary research has demonstrated that parental attitudes and behavior play a role in the development of adolescent alcohol use (Wills & Yeager, 2003). As a group, adolescent substance users were more likely to describe familial interactions as hostile, void of understanding, and lacking cohesiveness (Adler & Loteca, 1973). In addition, these youth reported feelings of alienation and estrangement. Other contributing factors include a family history of child abuse, criminality, a low degree of parental monitoring, and supervision (Van Hasselt et al., 1994).
Families with an adolescent alcohol user also appear to be characterized by communication difficulties. Jurich (1985) discovered that adolescent substance users described their communication with parents as closed and unclear. Anderson and Henry (1994) observed that these families were characterized by rigid and restricted communication. Emotional support, the perception that parents will understand when the teen has a problem, is also related to a lower likelihood of substance abuse (Wills & Cleary, 1996).

Researchers have expanded the study of the association among levels of alcohol use and adolescents’ perceptions of family functioning. Based on Olsen’s (1986) circumplex model of family functioning, Smart and Chibucos (1998) examined the relationship of family cohesion and adaptability on a non-clinical sample of high school freshmen. For both concepts, it was hypothesized that the more “balanced” families are conducive to optimum family functioning while those on the “extreme” ends would be more problematic. Consistent with expectations, results indicated that adolescents who perceive their families to be extremely high or low on cohesion and adaptability are more vulnerable to alcohol use.

Stanton and Todd (1982) suggested a relationship between substance use and the process of individuation. Substance use is viewed as a result of difficulties with the individuation process. The perception of emotional isolation and lack of differentiation from the family of origin are believed to interfere with an adolescent’s individuation process. Baer and Bray (1999) determined that intergenerational individuation operated as a protective effect to predict lower alcohol use. Bray, Adams, Getz, and Stovall (2001) expanded upon these findings and discovered that adolescents who drink less over
time have more individualized relationships.

However, as Buss and Plomin (1986) have observed, family processes alone are unable to account for the marked variations in the onset and progression of alcohol use among adolescents. Although the relationship is not yet clear, it appears that certain familial practices and behavior "...encourage the adolescent to reject the family and turn to other resources to meet their needs" (Denton & Kampfe, 1994, p. 489). Thus, contemporary research also suggests that peer influence is an important predictor (Pentz, 1994).

Family practices are believed to influence peer selection and the subsequent initiation of alcohol use. Several studies (Hawkins, Lishner, & Catalano, 1985; Kendal, 1985; Marshall & Chassin, 2000) were devoted to examining the direct effects of the familial variables on peer associations and the indirect effects on substance use through peers. Related research has emphasized the mediating influence of prosocial peer relationships on adolescent substance use (Kandel, 1985).

Affiliation with substance-using peers has been found to be a considerable risk factor for the development of adolescent substance use (Hawkins et al., 1985). According to Marshall and Chassin (2000), the average adolescent is more likely to report having more peers who use drugs than those who do not. Jessor and colleagues (1980) discovered an association between peer influence and individual drinking behavior. In their study on high-school students, the authors found that friends' approval for drinking and friends as models for drinking were positively correlated with the number of times respondents were intoxicated in the past year.

Peer influence is believed to promote the initiation of alcohol use through peer
modeling, peer pressure, or selection of alcohol-using peers (Bray et al., 2003). For instance, Oxford (2001) observed that involvement with antisocial peers had a strong effect on substance use initiation across all substances. Kandel (1985) determined that peer modeling was an important component in adolescent alcohol use. Similarly, Bray and colleagues (2003) found a bidirectional influence among peer alcohol use and youth drinking.

Results from studies examining the relative influence of parent versus peer influence vary across race, gender, and the substances studied. Guo (2002) observed that family factors were more influential than peer factors in predicting the initiation of illicit drug use other than marijuana. Sutherland and Shepard (2001) discovered that peer influence was a stronger predictor over parental influence among adolescents who use tobacco. Marshall and Chassin (2000) established that the quality of the parent-child relationship can buffer the effects of peer affiliation on female adolescent substance use, but not for males.

Researchers have found racial differences in the relative influence of peers on adolescent alcohol use. Barnes, Farrell, and Banejoie (1994) observed different patterns in the relationship between close friends' alcohol use and frequent heavy drinking among Black and White adolescents. A peer's drinking was found to have a stronger effect on White adolescents than for Black adolescents. The quality of the parental relationship, however, was determined to have a significant influence on the drinking behavior of both racial groups.

Brook, Whitman, and Gordon (1982) established that individual, family, and peer factors had a direct influence on stage of drug use whereas family and personality
variables had an indirect influence on frequency of drug use by operating through the peer group. Thus, it appears that family and individual characteristics influence substance initiation and peers influence the level of drug use. Based upon these and similar findings, Brook and Brook (1990) concluded that family patterns may protect against, or increase the risk of, an adolescent’s initial decision to use drugs.

The parent versus peer debate in adolescent alcohol use has become nearly as controversial as the nature-versus-nurture debate (McCallum, 1994). Families can affect not only the actual use of alcohol, “...but also the development of behaviors and associations conducive to [alcohol use]” (Hoffmann, 1993, p. 543). McCallum asserted that the family serves as the foundation for socialization with peers, and positive attachment to parents will facilitate positive peer relations.

Therefore, there is no particular point in adolescent development in which substance use is influenced by parents or peers exclusively (McCallum, 1994). It appears that there is a confluence of familial and peer variables in the development of adolescent alcohol use (AAU). As researchers have failed to reach a consensus regarding the relative predictive power of parent versus peer variables, the mechanisms by which these factors influence the development of AAU are also subject to empirical debate.

*Attachment and Adolescent Alcohol Use*

Developmental theorists emphasized the importance of interpersonal relationships in the development of psychopathology. “Attachment theory can provide a critical developmental frame for understanding how early and continued close relationships affect the cognitive-affective structures that children use to construct their expectancies.
views of the world, and coping strategies” (Greenberg, 1999, p. 470). Attachment relationships with caregivers are believed to contribute to the development of psychopathology by increasing or buffering the effects of risk factors (Greenberg, 1999).

Brook and Brook (1999) maintained that secure parent-child attachment is a critical component of healthy development and the subsequent prevention of drug use. Bahr, Marcus, and Maughan (1995) determined that, among adolescents, strong family attachments were inversely related to substance use. In a study of European adolescents, McArdle et al. (2002) found that attachment to mothers was a strong inhibitor of adolescent drug use, across substances. Rosenstein and Horowitz (1996) discovered that adolescents with insecure attachment strategies were more likely to abuse substances.

With regard to alcohol use, findings are inconsistent. For example, among late adolescents, Bell et al. (2000) observed a negative relationship between attachment and marijuana use. However, time of first use and current use of alcohol was unrelated to attachment. In contrast, Brey and colleagues (2003) noticed higher levels of alcohol use among adolescents who reported detachment from their parents.

Arj, Tidesley, Hops, and Andrews (1993) established that youths who develop normative standards that define alcohol use during adolescence as unacceptable begin drinking at older ages and are less likely to yield to peer pressure to use. However, little is known about the factors that contribute to the development of these norms. Despite the paucity of research in this area, some researchers posit that the norms are dictated by family processes (e.g., sibling modeling, parent-child interaction) (Brook, Whiteman, Gordon, & Brendan, 1983).

Jessor and Jessor (1977) proposed that children are more likely to develop
unconventional norms when their relationships with their primary caregivers are compromised. This may be attributable to the fact that parents who are traditional are more likely to take their parenting roles more seriously (Greenberg, 1999). Research indicates that parents' introjection of traditional values was related to a strong mutual parent-child attachment relationship and a subsequent identification of the child with the parent (Brook & Brook, 1996).

Dornbusch (2000) hypothesized that the failure to engage in deviant behavior is attributable to the maintenance of conventional social bonds. In this social-process model, the author contended that individuals suppress the impulse to engage in deviant behavior in order to avoid disappointing a significant other and subsequently disrupt a social relationship. Therefore, with a strong bond to parents, an adolescent would be less likely to associate with and be influenced by deviant peers. In a longitudinal investigation, the author discovered that strong bonds indirectly influence alcohol use by decreasing interactions with deviant peers and by decreasing susceptibility to the deviant influences of peers.

Active parent-child communication leads children to believe that they have input into the norms that govern their behaviors, consequently decreasing the likelihood that the children will view the norms as externally imposed. This increases actual conformity to those norms. In a cross-cultural comparison, Barnes et al. (1994) determined that positive parent-child communication was inversely related to alcohol abuse and other deviant behaviors. Among Black and White adolescents, parenting practices (e.g., level of communication, support, monitoring) were found to have more relative predictive power on the use of alcohol regardless of other sociodemographic variables (e.g., family
structure, socioeconomic status).

Throughout the life-cycle, relational bonds are transformed into bonds with social institutions and the figures that represent them (Greenberg, 1999). According to social-control theory, the strength of an individual's social-bond determines the extent to which one deviates from social norms (Hirschi, 1969). In a study on high-school students, Bahr, Maughan, Marcos, and Li (1998) maintained that involvement in religion serves as an important protective factor against adolescent substance use. The authors discovered that students who were religious were unlikely to associate with drug-using peers.

Attachments in the school environment have also been discovered to be inversely related to alcohol use. Crostoe et al. (2002) explored the relationship among bonds to teachers, academic achievement, and school orientation and the use of alcohol in adolescents. Among male and female adolescents, these characteristics of the school environment were discovered to serve as an important protective factor against the use of alcohol. The authors concluded that adolescents with strong bonds to school may be unwilling to jeopardize their academic and social standings by engaging in deviant behavior. In a related study, Dornbusch, Erickson, Laird, and Wong (2001) found that, among adolescents, attachments to family and school reduced the prevalence of deviation, intensity of deviation among those who deviated, and overall frequency of deviant behavior.

Greater feelings of self-worth and confidence have been observed among adolescents with strong conventional bonds (Erickson, Crostoe, & Dornbusch, 2000). According to the authors, "these inner resources provide the strength to resist pressures toward nonconformity" (p. 401). Rosenstein and Horowitz (1996) observed that
adolescents who were detached from the family and other social institutions were more likely to exhibit antisocial behavior and join socially detached peer groups. Thus, association with nondeviant peers is also believed to be an important insulator against alcohol use in adolescents.

Secure attachment results in parents having greater influence on their children, leading the adolescent to select friends with similar values of their parents (Brook & Brook, 1990). In contrast, in an insecure attachment relationship, the adolescent may fail to identify with his/her parents and/or rebel against their values, affecting the choice of peer group. High levels of parent-child attachment have been found to reduce affiliation with substance-abusing peers (Hoffmann, 1993). Similarly, Hawkins and colleagues (1992) identified poor attachment to parents and an inappropriate reliance on peers for social support as risk factors for adolescent substance use and misuse.

Behavioral difficulties, such as alcohol use, may also be viewed as the child’s attempt to regulate caregiving patterns. The child yields considerable power over the caregiver in negative forms of attention-seeking particularly when other adaptive strategies have been ineffective or unavailable (Greenberg, 1999). Baer and Brey (1999) determined that among middle schoolers, poor maternal communication was related to an increase in self-reported alcohol use. Thus, the child may utilize alcohol as a device to facilitate parental communication and attention.

During adolescence, the attachment system is activated by the striving for and simultaneous fear of independence (Brook & Brook, 1990). The ability to function independently of parents and to relate intimately with peers has been associated with the quality of the parent-child attachment relationship (Armsden & Greenberg, 1987). Thus,
researchers have begun to investigate the influence of attachment relationship on the negotiation of developmental tasks.

Empirical literature is designed to help conceptualize autonomy as either a psychological attribute of the individual or a characteristic of interpersonal relationships (Steinberg & Silverberg, 1986). Autonomy develops within the context of a close, yet changing, relationship with one's parents (Liddle & Schwartz, 2002). The direction autonomy takes is dependent upon the level of familial support and "...how individuation serves the adolescent in coping with family relationships and changes" (Bray, Adams, Getz, & Baer, 2001, p. 303). Researchers have suggested that substance use serves several functions in response to the developmental striving for autonomy.

Emotional isolation and a lack of differentiation interfere with the adolescent's separation-individuation process (Bray et al., 1984). Substance use is the result of an interdependent process between the user and the family in which separation produces anxiety (Starzon & Todd, 1982). The use of substances creates a crisis that focuses attention on the user and draws the family closer, thereby avoiding individuation. Thus, substance use is viewed as a result of difficulties the adolescent experiences when attempting to independently explore the environment.

In a study examining the association among familial variables and adolescent substance/alcohol use, Tuttle (1995) utilized a two-factor structure of autonomy that included individuation and emotional support. Detached adolescents who were high in autonomy and low in family support were found to have the highest levels of substance use. Autonomous students, who perceived support from their families, had lower involvement with substance use and higher consequences of substance use (Tuttle, 1995).
Bray and colleagues (2003) offered additional support for the contention that substance use occurs in response to difficulties with separation from the family of origin. In a cross-cultural study of Black and White adolescents, the researchers found that individuation was related to lower levels of adolescent alcohol use (AAU). In contrast, higher levels of AAU were found among adolescents who reported high levels of detachment from family. The influences of individuation and separation were comparable across both ethnic groups.

Normative transitions are a source of stress for an individual and the family system due to the inherent role changes and task realignments (Lavee, McCubbin, & Olson, 1987). Factors, such as the stress involved in entering a new school, can redirect the developmental course from a "normal" outcome to one of alcohol abuse (Tarter, 2002).

Cognitive processes have been found to serve as mediators between the effects of stressful events (Lavee et al., 1997). Research indicates that alcohol may be utilized for affect regulation (Wills et al., 1995). For instance, Martin, Lynch, Pollock, and Clark (2000) found that high levels of negative affect and behavioral undercontrol were related to greater alcohol involvement among male and female adolescents. However, when an individual at any age is highly distressed, the parent may continue to be directly involved in the reduction of negative affect (Stifter & Spinrad, 2001).

Howard and Medvany (2004) explored adolescent coping as a function of attachment styles. Consistent with hypotheses, adolescents with secure attachments employed active coping strategies and positive avoidance. Insecurely attached adolescents were discovered to utilize anger-based coping strategies and negative
avoidance (e.g., alcohol and drug use). Securely attached adolescents reported lower levels of stress as compared to their insecurely attached counterparts. From this study, Howard and Medway demonstrated that stress appears to facilitate increases in family communication and decreases in negative avoidance techniques. In accordance with other studies (Armsden & Greenberg, 1987), data indicated that secure individuals seek and accept support within a relational context.

Brock and Brook (1990) determined that, in response to stress, parental detachment had a greater adverse effect on males. Conventionality (e.g., goal-oriented and responsible) is believed to be a protective factor against drug use. Females were observed to be more conventional, which was found to increase their resilience in coping with stress. In contrast, male conventionality was not observed to offset the risks associated with a poor attachment relationship between fathers and sons.

Researchers have suggested that individuation appears to buffer the effects of stress on alcohol use. Bray, Adams, Getz, and Sowall (2001) posited that intergenerational individuation interacted with stress and family conflict to determine the prevalence of adolescent alcohol use. Adolescents who reported more alcohol use were more likely to report higher levels of separation, detachment, stress, and family conflict. Adolescents who were less likely to use alcohol reported positive autonomy, continued relationships with parents, lower levels of stress, and family conflict.

According to Williamson and Bray (1988), highly individuated individuals require considerable stress to develop symptomatic behavior. A more individuated person will demonstrate resilience in response to stress. Individuation occurs within the context of a mutually reinforcing autonomous parent-child relationship (Bray, Adams,
Geit, & Stevall, 2001). Reactivated by the stressors of adolescence, it appears that the attachment relationship can minimize the frequency of drug use (Brook & Brook, 1999).

Summary

Prominent theorists (Ainsworth et al., 1978; Bowlby, 1982) have attested to the importance of responsive caregiving on infant behavior. In comparison, there is a paucity of empirical attention devoted to attachment during adolescence (Allen et al., 2002). Research has demonstrated continuities of attachment patterns throughout the life cycle (Amrami et al., 2000). Given the fact that adolescence is a critical period of psychological adjustment, the scarcity of studies on adolescent attachment is surprising (Scott Brown & Wright, 2001).

Through satisfying interpersonal transactions in infancy, the individual develops the capacity to regulate affect and behavior. These regulatory abilities provide the foundation for the individual's emotional and social competence (Eisenberg et al., 1998). In contrast, a variety of problem behaviors are viewed as maladaptive attempts at self-regulation (van der Kolk & Fisler, 1994). Thus, researchers who have explored the etiology of adolescent alcohol use have extrapolated the importance of the attachment relationship on individual behavior (Cowan et al., 1996).

Attachment during adolescence may be expressed as parental affection and involvement, the adolescent's ties to and identification with his/her parents, and the nature of the parent-adolescent relationship (Brook & Brook, 1990). Attachment-related research differs in the operationalizing of constructs, the selected measures, and analyses. Therefore, it is difficult to determine which components of the parent-child relationship
serve as a protective factor against the development of adolescent alcohol use.

Further adding to the empirical complexity is the fact that there appears to be a bidirectional relationship among individual and interpersonal factors in examining attachment. The nature of the parent-child relationship has been discovered to be influenced by the infant's temperament (Lamb et al., 1985), the parent's attachment history (Cowan et al., 1996), clinical (Main & Hesse, 1990), and environmental (Egeland & Sroufe, 1981) variables. Although a review of the literature fails to present a consensus regarding the relative predictive power, individual and familial factors appear to synergistically affect the attachment relationship and the subsequent development of adolescent alcohol use.

Adolescent alcohol use (AAU) serves as both an outcome to be moderated as well as a response to stressors in the family. Several authors have indicated that the AAU may be in response to the adolescent's strivings for autonomy, intimacy, and individuation (Baer & Bray, 1999; Stanton & Todd, 1982; Turtle, 1995). Family/systems theorists viewed these developmental tasks as interdependent processes among an adolescent and family (Haley, 1980). Thus, it becomes necessary to examine the nature of the parent-child relationship on the achievement of developmental tasks.

Attachment behavior is activated by situations in which stressful, threatening, or fear-eliciting emotions are evoked (Solomon & George, 1999). The inherent stress in the changes in the family and school environment during adolescence will activate the attachment system. Although many authors have investigated the transition to college, few have focused on the transitions into and out of high school, where critical developmental tasks first become salient (Isakson & Jarvis, 1999). In addition, few
studies have been conducted to examine the role of the attachment relationship on male development.

In an effort to gain a comprehensive understanding of the association among the attachment relationship and adolescent alcohol use, this researcher has utilized two measures of attachment. The independent variables of affective quality, communication, trust, fostering of autonomy, emotional support, and alienation were studied to determine their association with male problem alcohol use during normative transitions.

Hypotheses

Based on a review of the literature, the following hypotheses are proposed:

Hypothesis I. Male adolescents reporting high degrees of affectional bonds, respect for autonomy, emotional support, trust, communication, and lower levels of alienation in the parent-child relationship will score lower on a measure of symptoms and consequences of problem alcohol use (Rutgers Alcohol Problem Index, RAPI; White & Labouvie, 1989).

Hypothesis II. Autonomy is more strongly related to male adolescent problem alcohol use as measured by the RAPI, than are the other components of attachment—affectional bonds, emotional support, trust, communication, and alienation.
Chapter II: Methodology

Introduction

This chapter includes the design of the study, selection, recruitment method, and demographics of the participant population. The independent and dependent variables will be defined and the plan for the statistical analysis will be identified. In addition, normative data on the Parental Attachment Questionnaire (PAQ; Kenny, 1987), the Inventory of Parent and Peer Attachment (IPPA; Armaslan & Greenberg, 1987), and the Rutgers Alcohol Problem Index (RAPI; White & Labovitz, 1989) will be discussed.

The Design of the Study

In this cross-sectional study, the independent variables are affective quality, communication, trust, fostering of autonomy, emotional support, and alienation. The dependent variable is the level of self-reported problem alcohol use.

Participants

The convenience sample involved in this study is one of males enrolled in the freshman and senior years from the same private Catholic high school for boys (N = 402). The high school is a four-year college-preparatory high school located in a small suburban community in the Northeastern U.S. Since the school itself serves a specific region, this study will be limited to residents of that covered area.

The demographics of the high school represent the diversity and income of the area it serves. The socioeconomic backgrounds of the individuals vary from middle class to upper class. The cultural composition of the country is strongly influenced by
people of European descent, 72.3% of the population being Caucasian. The remaining percentage of the population consists of 10.7% of Asian descent, 10.3% of Hispanic descent, 5.3% of the population are of Black or African descent, and .2% are of Native American descent. The student population of the school is 814 students. Eighty-two percent of the students identify themselves as “Catholic” while 18% identify themselves as “other.” Socioeconomic status ranges from middle-to upper-middle-class.

Written permission was obtained from the high school principal prior to data collection. The number of participants in this study was determined by conducting a power analysis utilizing GPOWER software (Erdfelder, Faul, & Buchner, 1996). The alpha level was set at .05 and power was set at .80. Results indicated that 98 participants would be an adequate sample size for the present study. Incomplete questionnaires and those in which the participants did not fall within the identified chronological age ranges were excluded from data analysis.

For each respective grade level, chronological ages were presented with means and standard deviations. Demographic information included the household composition, maternal culture/ethnicity, paternal culture/ethnicity, and religious affiliation of the participants. The demographic information assisted in determining the generalizability of the findings and formulating decisions about possible covariates.

**Procedure**

A verbal request for permission to solicit interested participants was made to the
principal of the high school. The principal subsequently responded with an Approval to Conduct Research Letter (Appendix H). Upon written approval from the IRB of Seton Hall University (Appendix A), eligible participants in the first and fourth years of high school were given an overview via classroom presentation. The overview emphasized the confidential, voluntary nature of participation and the fact that withdrawal may occur at any time without consequence.

In the presentation, potential participants were informed that they would soon be receiving recruitment packets via regular mail explicitly delineating the importance of the study and outlining the exact procedure(s) in which the study would be conducted. Potential participants under the age of 18 years and their parents/guardians received a recruitment packet that included written letters of solicitation (Appendices B and C), consent forms (Appendix E), and assent forms (Appendix F).

Consent forms were sent to the parents/guardians of the selected students to request their permission to allow the minors to participate in the anonymous, voluntary survey. Assent forms included in the packet were addressed to the potential participants. Information outlined the purpose, procedure, anticipated risks/benefits, measures to maintain confidentiality, and research contacts. Participation by those under the age of 18 years was contingent upon receipt of written parental/guardian and adolescent permission.

Potential participants who were identified through school records to be the chronological age of 18 years and above were sent an age-appropriate letter of solicitation (Appendix D) and an informed consent form (Appendix G). Participation by those of 18 years of age was reliant upon receipt of a signed, dated informed consent
The students were chosen at random, provided they fit the criteria based on their enrollment in either the freshman or senior years, and their anonymity was protected. Any publication of the results of this study will in no way identify the individual participants; the school and all personal information will remain anonymous. Participation was voluntary, and participants were informed that they were able to discontinue involvement should they feel uncomfortable at any time during the study. There were no unforeseen risks or discomforts in the completion of this study. Participants did not receive any compensation for their participation.

Packets were distributed during a regularly scheduled English class during the course of a normal school day. This period was selected due to the fact that graduation is contingent upon the successful completion of four years of classroom instruction in English.

All students received packets that were identical in appearance. Since identifying information was omitted from survey materials, referral information was included in all of the packets. Should a student have felt that he required additional attention for an alcohol-related problem, contact information for a treatment facility and resource/referral agencies was provided.

Students who had submitted signed informed consent and assent forms received opaque packets with the research materials. Students for whom permission was not granted, received opaque packets containing a letter (Appendix N), referral information (Appendix J), and benign tasks (Appendix O). Both categories of packets contained an equal amount of materials to avoid visual distinction. Measures were
coded to protect anonymity.

Class rosters were marked with chronological numbers. The assigned numbers corresponded with packets to insure that students received the appropriate materials. The selected faculty matched the numbers on the class rosters with the corresponding packets and distributed the packets accordingly.

There was not any identifying information on the packets and no school personnel was aware of the participants’ or non-participants’ identities. As an additional safeguard of anonymity, the numbered class rosters were destroyed upon completion of packet distribution. Throughout data collection, students were supervised and the strict implementation of confidentiality was enforced. No incidents occurred which might have raised questions about the validity of the data.

Prior to data collection, standardized instructions and referral information were read aloud to the students. Students were instructed to avoid including identifying information on the measures. An opportunity for student questions was also offered. Students were reminded to return all materials in the sealed, opaque manila envelopes.

The research packet contained a set of instructions, the Parental Attachment Questionnaire (PAQ; Kenny, 1987) (Appendix K), Inventory of Parent and Peer Attachment, Parent Scales (IPPA; Arnas and Greenberg, 1987) (Appendix L), Rutgers Alcohol Problem Index (RAPI; White and Labovitz, 1989) (Appendix M), demographic (Appendix I), and referral information (Appendix J). The research packets took approximately 40 minutes to complete.

Summary results will be provided to the administration of the high school to serve as a needs assessment. Findings will be presented in aggregate form to insure
the anonymity of individual participants. Should results reveal patterns or areas of concern, I will work in conjunction with the administration to implement relevant alcohol-related services and programs for the students.

Instruments

Demographic form. Participants were asked to identify their ages, grades, ethnic/cultural backgrounds of their mothers and fathers, religious affiliations, and household compositions. These questions were used to identify their respective academic grades and to determine whether or not they reside with either a parent or a long-term guardian. This information assisted in determining the generalizability of the findings and in identifying possible covariates.

The Parental Attachment Questionnaire (PAQ; Kenny, 1987) and the Inventory of Parent and Peer Attachment, Parent Subscales (IPPA; Armsden & Greenberg, 1987) were selected for this study in an effort to obtain a comprehensive understanding of the attachment relationship. Each of the scales assesses empirically identified components of attachment—affective quality, communication, trust, fostering of autonomy, emotional support and alienation—proposed to measure differences in attachment. Because attachment is a multidimensional construct, the use of multiple measures has been suggested (see Giaburino, 1996).

The Rutgers Alcohol Problem Index (RAPI; White & Labouvie, 1989) has been normed for use with a variety of populations. The RAPI has been subject to extensive psychometric analyses and has been found to serve as an effective screening instrument for adolescent alcohol use and related problems.
Collectively, the instruments were selected for this study as matching the conceptual framework for the hypotheses and due to the ease of comprehension and administration. These measures require limited instruction and can be self-administered to large groups. In addition, the anonymity afforded by the self-report format may reduce the likelihood of a social desirability bias.

**Parental Attachment Questionnaire (PAQ; Kenny, 1987).** The Parental Attachment Questionnaire (PAQ) is a 55-item self-report questionnaire designed to assess perceived parental availability, understanding, acceptance, respect for autonomy, facilitation of autonomy, interest in interaction with parents and affect towards parents during visits, student help-seeking behavior in situations of stress, and satisfaction with help obtained from parents (Kenny, 1987). The measure adapts Ainsworth et al.’s (1978) attachment theory for use with adolescents and young adults. In accordance with Ainsworth et al., attachment is conceptualized as an enduring affective bond, which functions as a secure base in providing emotional support, fostering of autonomy, and environmental maturity (Kenny, 1987). The PAQ contains three scales: Affective Quality of Attachment, Parental Fostering of Autonomy, and Parental Role in Providing Emotional Support.

Respondents were asked to answer each of the 55 items on a 5-point Likert scale (1, not at all; 2, somewhat; 3, a moderate amount; 4, quite a bit; 5, very much). Participants were directed to base their responses on their relationships with their parents and their feelings and experiences. Items assessing the affective quality of the relationship include “In general, my parents are persons I can count on to provide emotional support when I feel troubled.” Questions such as “My parents restrict my
freedom or independence* measure the degree in which parents act as facilitators of independence. The extent to which parents serve as sources of support are appraised by items such as “My parents are available to give me advice or guidance when I want it.”

Upon completion of the measure, the ratings were summed for each subscale. Distinct scores were obtained for each of the three subscales. The measure does not allow for locating an attachment classification as identified by Ainsworth et al. (1978).

Preliminary analyses failed to reveal significant differences between ratings given for mothers and fathers (Kenny, 1987). Therefore, a single overall rating was provided for both parents. The PAQ assesses for globalized feelings of parental attachment and not specific attachment to each parent. In cases of separation, divorce, death, or remarriage, respondents were instructed to base their responses on their relationships with the living parents or the parents with whom they feel the closest.

Reliability was assessed through test-retest and internal consistency methods (Kenny, 1987). Over a 2-week interval, test-retest reliability for the measure was .92 and ranged from .82 to .91 for the three scales (Kenny, 1990). Cronbach’s alpha coefficients for each of the scales were .96, .88, and .88 respectively.

According to Kenny (1990), construct validity was determined by correlating each of the subscales with the subscales of the Family Environment Scale (FES; Moos, 1985). Significant correlations were obtained between the Affective Quality subscale and Cohesion ($r = .51, p < .001$) and Moral-Religious Orientation ($r = .36, p < .01$) scales of the FES. Parental Fostering of Autonomy was found to be significantly correlated with the Expressiveness ($r = .33, p < .01$), Independence ($r = .35, p < .01$) and Control ($r = -.40, p < .01$) on the FES. Correlations were also found among the Parental Role in
Providing Emotional Support and Cohesion (r = .45, p < .001) and Expressiveness (r = .33, p < .01) on the FES. Consistent with expectations, analysis failed to reveal significant correlations among the remaining six FES scales and the scales of the PAQ (Kenny & Donaldson, 1991).

Kenny and Donaldson (1991) discovered intercorrelations among the three subscales (ranging from .43 to .79). The intercorrelations between the subscales were stronger than the correlations found between the PAQ and the FES, indicating that the instruments assess distinct constructs of family functioning.

Social desirability was evaluated by Kenny (1990) on a sample of college students. Correlations between scores obtained on the Marlowe Crowne Social Desirability Scale (Crowne & Marlowe, 1960) and scores on the Affective Quality and Parental Role in Providing Emotional Support subscales of the PAQ were not significant. A significant correlation (r = .22, p < .04) was found between scores on the Marlowe Crowne Social Desirability Scale and the Parental Fostering of Autonomy subscale of the PAQ.

The PAQ has been used extensively in attachment research with college students and adolescents (Lopez & Geyer, 1993). Kenny and Donaldson (1991) discovered significant correlations among the scales of the PAQ and measures of social competence and psychological functioning during the transition to college. A negative correlation was found among Parental Fostering of Autonomy and scores on a measure of parent-adolescent overinvolvement.

Inventory of Parent and Peer Attachment (IPPA, Aronson & Greenberg, 1987). The Inventory of Parent and Peer Attachment (IPPA) is a self-report questionnaire.
designed to measure affective and cognitive components in adolescents' relationships to parents and peers that impact on psychological security (Armsden & Greenberg, 1987). The measure is based on Bowlby's theory which emphasized the accessibility and responsiveness of attachment figures. The questionnaire consists of a section for mother and father, with each section containing 25 similarly worded items. The revised version also allows for separate scores for mother and father; however, the present study utilized an overall parent score. As the Parent and Peer scales are scored independently (Armsden & Greenberg, 1987), the third 25-item section that measures attachment to peers was discarded due to the present study's focus on parental attachment.

Factor analysis and Varimax rotation on an earlier version of the instrument indicated the extraction of three factors: trust, communication, and alienation (Lopez & Gover, 1993). Participants were asked to respond to each of the items on a 5-point Likert scale (ranging from almost never to never to almost always to always). Items on Trust subscale assess the degree of understanding and respect, and include questions such as “My mother respects my feelings.” Items such as “I feel its no use letting my feelings show around my father” measure the extent of verbal communication. Feelings of anger and isolation are assessed by items on the Alienation subscale, which include “My mother expects too much from me.”

When respondents completed the measure, the items were added to produce three individual scores. Previous research utilized a general “psychological security” score, representing the sum total of the three subscales. However, the authors recognized the difficulties with the general score and recommended use of the individual subscale scores (Lopez & Gover, 1993).
Test-retest reliability (over a 3-week period) for a sample of 27 late adolescents was .93 for parent attachment (Armsden & Greenberg, 1987). Internal reliabilities of the revised version were .87 for mother attachment and .89 for attachment to father. Cronbach's alpha coefficients for scores on the parent scale ranged from .86 to .91 (Garbarino, 1996).

Convergent validity was assessed through comparisons with the FFS (Moor, 1985) and the Tennessee Self-Concept Scale (TSCS; Fitts, 1965). Parent attachment scores were determined to be significantly correlated with five of six measures of the family environment (Armsden & Greenberg, 1987). High significant correlations were found among the FFS Cohesion (r = .56) and Expressiveness (r = .52) scales. The family self-concept construct of the TSCS was found to be strongly correlated with parent attachment (r = .78).

Significant intercorrelations were found among the subscales of the IPPA (Garbarino, 1996). A positive intercorrelation was found between parent trust and communication (r = .68). Negative correlations were found between parent trust and alienation (r = -.55) and parent communication and alienation (r = -.59).

Subsequent researchers utilizing the IPPA demonstrated that secure attachment on the IPPA is positively correlated with self-esteem and lower levels of problem behavior in adolescents (Armsden & Greenberg, 1987). In addition, Mattanah et al. (2004) determined that a secure parental attachment relationship (as measured by the IPPA) was predictive of positive academic, social, and psychological adjustment to college.

*Rutgers Alcohol Problem Index* (RAPI; White & Labovitch, 1989). The Rutgers
Alcohol Problem Index (RAPI) is a 23-item, self-administered questionnaire for assessing adolescent problem drinking. It was developed to provide a conceptually sound, unidimensional, brief and easily administered measure of adolescent alcohol use (White & Labouvie, 1989). The RAPI assesses for problematic patterns of alcohol use since scales assessing for alcohol dependence are more appropriate for older populations because of the chronic nature of symptoms and consequences (Ruben, 1999).

The instrument is based solely on the negative consequences of alcohol use and does not assess for additional components of alcohol use such as motivation and consequences (White & Labouvie, 1989). The RAPI has been used in both clinical and non-clinical settings to assess for adolescent problem drinking and adheres to the criteria for a DSM-III-R (American Psychiatric Association, 1987) diagnosis for alcohol abuse (White & Labouvie, 1989).

Initial test construction was based on surveying questionnaires utilized in various studies of adolescent alcohol use (White & Labouvie, 1989). Factor analyses of 52 indicators and/or consequences yielded the extraction of three problem factors. Correlations between the RAPI and alcohol use intensity ranged from .20 to .57 across all age groups.

Although the responses to the original RAPI are based on drinking behavior within the past 3 years, the measure may be modified to evaluate smaller time frames (White & Labouvie, 1989). For the purposes of the present investigation, the measure was used to assess for adolescent drinking behavior within the past 6 months. All of the items are focused on the negative consequences that are attributed to alcohol consumption, such as truancy or personality changes (Orenstein, Davis, & Wolfe, 1995).
Nine items refer directly to alcohol such as whether the adolescent "felt that you had a problem with alcohol."

Respondents were asked to circle the number that corresponded to the number of times they have experienced each problem (White & Labouvie, 1989). Items were rated on a 5-point Likert-type scale (0, never; 1, 1-2 times; 2, 3-5 times; 3, 6-10 times; 4, more than 10 times). Items that assess for behavioral consequences of alcohol use include the number of times the adolescent was "not able to do your homework or study for a test." Psychological changes associated with alcohol use are assessed by items such as whether or not the adolescent "felt you were going crazy." Items such as whether or not the adolescent "had withdrawal symptoms, that is, felt sick because you stopped or cut down on drinking" measure the physical consequences of alcohol use.

Upon completion, the coded numbers were added together to form a scale ranging from 0 to 69. White and Labouvie (1989) maintained that the measure can be normed on any sample. The total score was used as an interval-level dependent variable in the investigation of adolescent alcohol use.

Split-half and test-retest reliability coefficients support the use of the RAPI for clinical and research purposes (Miller et al., 2002). Split-half reliability was found to be .92 with a 3-year stability coefficient of .40 (White & Labouvie, 1989). At 6 months, test-retest reliability was demonstrated on a non-clinical sample of adolescents ($r = .86, p < .05$) (Miller et al., 2002). In the same study, high correlations were discovered for the measure at 1 month ($r = .83, p < .05$) and 1 year ($r = .88, p < .05$).

Comparisons with the Adolescent Alcohol Involvement Scale (Mayer & Fils estad, 1979) and the Alcohol Dependence Scale (Skinner & Allen, 1982) has provided evidence
of convergent validity ($r < .7$). Orenstein and colleagues (1995) discovered higher significant correlations between the RAPI and other adolescent problem behaviors when compared to other alcohol-use assessment tools. For example, a correlation coefficient of .35 was found among the RAPI and a juvenile arrest. Overall, the RAPI was favored for use over the other instruments (e.g., The Personal Experience Questionnaire; Winters, 1992) in the detection of adolescent problem drinking.

Subsequent research demonstrates the utility of the RAPI for use with a variety of populations. For instance, in a four-wave study with a non-clinical sample, White and Labouvie (2000) established the reliability of the RAPI for use with adults. The correlation between the RAPI and alcohol-related consequences was found to be .95 among 25, 28, and 31-year-olds.

**Statistical Analysis**

The present study was a cross-sectional, quasi-experimental design. The predictive nature of the study is correlational, and no attempts to infer causality were made. Due to the fact that several proposed relationships were investigated, multiple statistical procedures were performed. Means and standard deviations were computed for the demographic variables, PAQ, IPPA, and the RAPI. Several MANOVAs and univariate ANOVAs were conducted in order to determine if there were significant relationships among the demographic variables and the study variables. Findings were utilized to make predictions and to provide implications for future research.

**Hypothesis I.** Male adolescents reporting high degrees of affectional bonds, respect for autonomy, emotional support, trust, communication, and lower levels of
alienation in the parent-child relationship will score lower on a measure of symptoms and consequences of problem alcohol use (Rutgers Alcohol Problem Index, RAPI; White & Labouvie, 1989).

In order to test the first hypothesized relationship, a simultaneous multiple regression procedure was performed to clarify the relationship between the combination of predictor variables and problem alcohol use. Multivariate analyses were utilized to determine whether affectional bonds, respect for autonomy, emotional support, trust, communication, and alienation in the parent-child relationship are significantly related to symptoms and consequences of problem alcohol use.

**Hypothesis II.** Autonomy is more strongly related to male adolescent problem alcohol use as measured by the RAPI, than are the other components of attachment—affectional bonds, emotional support, trust, communication, and alienation.

A hierarchical regression was conducted to assess differential prediction. The variables were measured on an interval scale. As recommended by Wampold and Freund (1987), the order of entry was chosen prior to final data analysis. Due to the fact that studies attest to the importance of autonomy in adolescence, (Bell et al., 2000; Kenny, 1987), parental fostering of autonomy was entered first to reflect the theorized level of importance (Wampold & Freund, 1987). Based on results from the initial analyses, significant predictors of other attachment components (parental alienation, affective quality, trust, and emotional support) were added in order to determine their abilities to predict alcohol use.

Secondary analyses were conducted to determine the presence of significant differences in the use of alcohol among first and fourth-year students. First-year and
fourth-year students' scores on the RAVI were subject to an independent samples t-test. Since analyses revealed significant differences between the grade levels, separate multiple regression analyses were conducted to elucidate the relationships between the combination of predictor variables and problem alcohol use for the different age groups.

Summary

In conclusion, this study explored the association between levels of adolescent alcohol use and characteristics of the attachment relation, such as parental affection, autonomy, emotional support, trust, communication, and alienation. It was predicted that male adolescents who report higher degrees of affectional bonds, respect for autonomy, emotional support, trust, communication, and lower levels of alienation in the parent-child relationship will score lower on a measure of symptoms and consequences of problem alcohol use. It was also expected that a high level of parental fostering of autonomy would predict lower levels of problem alcohol use among male adolescents when controlling for other attachment variables.
CHAPTER IV

Results

This chapter provides an overview of the descriptive statistics for the demographic and variables explored, hypotheses testing, and supplemental analyses. Exploratory analyses will also be presented.

Overview of the Data

Sample. The following results are based on the responses from 100 returned and completed research packets. One hundred and twenty-one research packets were distributed and returned. Twenty packets were excluded from data analyses because the participants failed to complete the measures in their entirety, and one was excluded due to age limitations.

The participants ranged in age from 14 to 18 years with a mean age of 16.42 and a standard deviation of 1.63. The participants shared a similar demographic profile with the entire student population of the high school. Table 1 contains the frequencies and percentages associated with parental and paternal cultural/ethnic backgrounds and participants' religions. The most frequently occurring maternal cultural/ethnic background was Irish (34%) and the least common were Dominican (1%) and Peruvian (1%). Thirty-three percent of the adolescents identified the cultural/ethnic backgrounds of their fathers as Irish, and the least common were evenly distributed across Cubans (1%), and Dominicans (1%). Eighty-one percent of the participants were Catholic, and the remaining participants were Presbyterian (11%), Lutheran (4%), Hindu (3%), and
Table 1

Demographic Characteristics of the Participants (n = 100)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal cultural/ethnic backgrounds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irish</td>
<td>34</td>
<td>34</td>
<td>34.0</td>
</tr>
<tr>
<td>Italian</td>
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</tr>
<tr>
<td>German</td>
<td>9</td>
<td>9</td>
<td>69.0</td>
</tr>
<tr>
<td>Polish</td>
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<td>5</td>
<td>74.0</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>5</td>
<td>5</td>
<td>79.0</td>
</tr>
<tr>
<td>Asian</td>
<td>5</td>
<td>5</td>
<td>84.0</td>
</tr>
<tr>
<td>Filipino</td>
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<td>4</td>
<td>88.0</td>
</tr>
<tr>
<td>Greek</td>
<td>3</td>
<td>3</td>
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</tr>
<tr>
<td>Indian</td>
<td>3</td>
<td>3</td>
<td>94.0</td>
</tr>
<tr>
<td>Arabic</td>
<td>2</td>
<td>2</td>
<td>96.0</td>
</tr>
<tr>
<td>Cuban</td>
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<td>2</td>
<td>98.0</td>
</tr>
<tr>
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<td>1</td>
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</tr>
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<td>Peruvian</td>
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<td>1</td>
<td>100.0</td>
</tr>
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<td></td>
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<tr>
<td>Italian</td>
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</table>

(Table 1 continues)
(Table 1 continued)

<table>
<thead>
<tr>
<th>Characteristic</th>
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<th>%</th>
<th>Cumulative Percent</th>
</tr>
</thead>
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<td>8</td>
<td>70.0</td>
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<tr>
<td>Polish</td>
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<tr>
<td>Asian</td>
<td>6</td>
<td>6</td>
<td>83.0</td>
</tr>
<tr>
<td>Filipino</td>
<td>4</td>
<td>4</td>
<td>87.0</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>3</td>
<td>3</td>
<td>90.0</td>
</tr>
<tr>
<td>Indian</td>
<td>3</td>
<td>3</td>
<td>93.0</td>
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<tr>
<td>Arabic</td>
<td>2</td>
<td>2</td>
<td>95.0</td>
</tr>
<tr>
<td>French</td>
<td>2</td>
<td>2</td>
<td>97.0</td>
</tr>
<tr>
<td>Dominican</td>
<td>1</td>
<td>1</td>
<td>98.0</td>
</tr>
<tr>
<td>Greek</td>
<td>1</td>
<td>1</td>
<td>99.0</td>
</tr>
<tr>
<td>Cuban</td>
<td>1</td>
<td>1</td>
<td>100.0</td>
</tr>
<tr>
<td>Participants’ religions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>81</td>
<td>81</td>
<td>81.0</td>
</tr>
<tr>
<td>Presbyterian</td>
<td>11</td>
<td>11</td>
<td>92.0</td>
</tr>
<tr>
<td>Lutheran</td>
<td>4</td>
<td>4</td>
<td>96.0</td>
</tr>
<tr>
<td>Hindu</td>
<td>3</td>
<td>3</td>
<td>99.0</td>
</tr>
<tr>
<td>Jewish</td>
<td>1</td>
<td>1</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Jewish (1%). Eighty-five percent reported living with two biological parents, 11% with one biological parent, 2% with one biological parent and stepparent, and 2% with a legal guardian.

Scales. Means and standard deviations for the entire sample were computed for the six predictor variables and one criterion variable. The predictor variables of affective quality, autonomy, and support were measured by the participant's scores on the Parental Attachment Questionnaire (PAQ; Kenny, 1987). Trust, communication, and alienation were measured using the scores from the Inventory of Parent and Peer Attachment-Parent Subscales (IPPA; Arandos & Greenberg, 1987). Table 2 provides descriptive statistics for the predictor variables. Problem alcohol use was the criterion variable for this study, as measured by the Rutgers Alcohol Problem Index (RAPI; White & Labouvie, 1989) and is summarized in Table 2.

Internal consistency estimates of reliability were computed for the PAQ, IPPA, and RAPI and are also included in Table 2. According to the guidelines set forth by Cicchetti (1994), "when the size of the coefficient alpha...is below .70, the level of clinical significance is unacceptable; when it is between .70 and .79, the level of clinical significance is fair; when it is between .80 and .89, the level of clinical significance is good; and when it is .90 and above, the level of clinical significance is excellent" (p. 286). Scores on support (.77), autonomy (.86), and affective quality (.93) as measured by the PAQ ranged from moderate to robust. As measured by the IPPA, trust (.91), communication (.90), and alienation (.83) were all robust scores. In addition, the RAPI obtained a very robust reliability (see Table 2). Thus, analyses revealed that the measures had sufficient reliability for current research purposes.
Correlation coefficients were computed across the attachment indices. The results of the correlational analyses are presented in Table 3. All of the correlations were statistically significant at the .01 level, with values ranging from -.79 to .89, suggesting that there may be multicollinearity among the predictors.

Four MANOVA procedures were conducted to determine the impact of the demographic variables on the attachment scores. No significant differences were found among maternal cultural/ethnic background, \( F(72, 451) = .87, p = .76 \); paternal cultural/ethnic background, \( F(72, 451) = 1.11, p = .26 \); and household composition, \( F(18, 257) = .82, p = .68 \) on the attachment measures. The final MANOVA also failed to indicate any significant differences between participant religion on the attachment indices, \( F(24, 315) = .82, p = .71 \).

Results from the separate ANOVAs failed to demonstrate significant differences between the demographic variables and problem alcohol use. The univariate ANOVAs for maternal cultural/ethnic background, \( F(12, 87) = .75, p = .70 \); paternal cultural/ethnic background, \( F(12, 87) = .77, p = .68 \); household composition, \( F(5, 94) = .08, p = .97 \); participant religion, \( F(4, 95) = .62, p = .65 \) and problem alcohol use were not significant. Since none of the demographic variables had a significant impact on the attachment variables, they were not examined separately or analyzed further.

**Hypothesis Testing**

The first hypothesis was: Male adolescents reporting high degrees of affectional
Table 2

Descriptive Statistics of the Participants' Scores on the Six Predictor and One Criterion Variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affective quality</td>
<td>100</td>
<td>193.25</td>
<td>16.87</td>
<td>.95</td>
</tr>
<tr>
<td>Autonomy</td>
<td>100</td>
<td>51.58</td>
<td>9.49</td>
<td>.86</td>
</tr>
<tr>
<td>Support</td>
<td>100</td>
<td>44.25</td>
<td>7.63</td>
<td>.77</td>
</tr>
<tr>
<td>Trust</td>
<td>180</td>
<td>81.50</td>
<td>13.64</td>
<td>.91</td>
</tr>
<tr>
<td>Communication</td>
<td>100</td>
<td>61.90</td>
<td>13.37</td>
<td>.90</td>
</tr>
<tr>
<td>Parent alienation</td>
<td>100</td>
<td>26.87</td>
<td>8.27</td>
<td>.83</td>
</tr>
<tr>
<td>Problem alcohol use</td>
<td>100</td>
<td>5.87</td>
<td>8.07</td>
<td>.90</td>
</tr>
<tr>
<td>Subscale</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>--------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>1. Affective quality</td>
<td></td>
<td>.84</td>
<td>.68</td>
<td>.89</td>
</tr>
<tr>
<td>2. Autonomy</td>
<td></td>
<td></td>
<td>.58</td>
<td>.85</td>
</tr>
<tr>
<td>3. Support</td>
<td></td>
<td></td>
<td></td>
<td>.70</td>
</tr>
<tr>
<td>4. Trust</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Alienation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* All coefficients are significant at $p < .01$. 
bonds, respect for autonomy, emotional support, trust, communication, and lower levels of alienation in the parent-child relationship will score lower on a measure of symptoms and consequences of problem alcohol use (Rutgers Alcohol Problem Index, RAPI; White & Labouvie, 1989).

In order to test the first hypothesized relationship, multivariate analyses were performed to determine whether male adolescents reporting higher degrees of affectional bonds, respect for autonomy, emotional support, trust, communication, and lower levels of alienation in the parent-child relationship would score lower on a measure of symptoms and consequences of problem alcohol use.

A simultaneous multiple regression analysis was conducted to determine how well the attachment measures predicted problem alcohol use. The unordered predictors were the six attachment indices while the criterion variable was problem alcohol use. The linear combination of attachment measures was not found to be significantly related to problem alcohol use, $R^2 = .115$, adjusted $R^2 = .058$, $F(6,93) = 2.01, p = .072$. The results of the multiple regression are presented in Table 4.

Alienation was found to have a significant direct relationship to problem alcohol use ($\beta = .40, p < .05$). These findings offer partial support for the first hypothesis and indicate that the participants who reported higher levels of alienation in the parent-child relationship experienced more symptoms and consequences of problem alcohol use.

Table 5 presents both bivariate and partial correlations to indicate the relative strength of the individual predictors. Three of the six bivariate correlations were negative and statistically significant at the .05 level. In addition, a positive bivariate correlation was found among parent alienation and problem alcohol use ($r = .31, p < .01$). Contrary
Table 4

Regression Analysis Summary for Attachment Variables Predicting Problem Alcohol Use (N=100)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>( \beta )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affective quality</td>
<td>7.21</td>
<td>0.12</td>
<td>0.15</td>
</tr>
<tr>
<td>Autonomy</td>
<td>-6.22</td>
<td>0.17</td>
<td>-0.07</td>
</tr>
<tr>
<td>Support</td>
<td>-0.19</td>
<td>0.17</td>
<td>-0.18</td>
</tr>
<tr>
<td>Trust</td>
<td>-3.13</td>
<td>0.16</td>
<td>-0.00</td>
</tr>
<tr>
<td>Communication</td>
<td>0.11</td>
<td>0.12</td>
<td>0.19</td>
</tr>
<tr>
<td>Parent alienation</td>
<td>0.39</td>
<td>0.16</td>
<td>0.40*</td>
</tr>
</tbody>
</table>

*\( p < .05 \).
<table>
<thead>
<tr>
<th>Predictors</th>
<th>Correlation between each predictor and problem alcohol use</th>
<th>Correlation between each predictor and problem alcohol use controlling for all other predictors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affective quality</td>
<td>- .21*</td>
<td>.06</td>
</tr>
<tr>
<td>Autonomy</td>
<td>- .23*</td>
<td>- .04</td>
</tr>
<tr>
<td>Support</td>
<td>- .19</td>
<td>- .12</td>
</tr>
<tr>
<td>Trust</td>
<td>- .21*</td>
<td>- .00</td>
</tr>
<tr>
<td>Communication</td>
<td>- .16</td>
<td>.09</td>
</tr>
<tr>
<td>Alienation</td>
<td>.3* **</td>
<td>.24*</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01.
to initial expectations, only the partial correlation between the attachment measure for parent alienation and problem alcohol use was statistically significant (\(r = .24, p < .05\)). Findings indicate that 5.6% of the variance in alcohol use can be explained by parent alienation and is not influenced by the other predictors.

Based on these data, one may conclude that parental alienation may be the only useful predictor for problem alcohol use in this study. However, predictions about the relative importance of each attachment measure are difficult because there is evidence of multicollinearity. Assessment of the collinearity diagnostics and the significant intercorrelations among the attachment measures suggest that the predictors are similar constructs.

In attempt to develop a model to more precisely examine the extent to which problem alcohol use can be predicted by affectional bonds, respect for autonomy, emotional support, trust, communication, and alienation in the parent-child relationship, data were subject to a hierarchical regression. Order of entry was determined by the results of the bivariate correlations and the simultaneous regression, entering the strongest predictors first. Evaluation of the bivariate correlation matrix suggested that parental alienation (\(r = .31, p < .05\)) be entered first and communication (\(r = -.16, p = .06\)) be excluded from subsequent predictive analyses.

Findings from the hierarchical regression indicated that the first predictor, parental alienation, accounted for a significant amount of problem alcohol use variability, \(R^2 = .09, \text{adjusted } R^2 = .09, F(1, 98) = 10.30, p < .05\), (see Table 6). The multiple correlation coefficient for the sample was .308, suggesting that approximately 9.5% of the variability in the sample's problem use of alcohol is due to parental alienation. None
Table 6

Hierarchical Regression Analysis Summary for Attachment Variables Predicting Problem Alcohol Use Controlling for the Effects of Parental Alienation (N = 100)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>p</th>
<th>R²</th>
<th>ΔR²</th>
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<td>Step 1</td>
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<td></td>
<td></td>
<td>.99*</td>
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<tr>
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<td>.09</td>
<td>.31*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
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<td>.00</td>
<td></td>
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<td>-.00</td>
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<td>15</td>
<td>-.11</td>
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</tbody>
</table>

* p < .05.
of the four attachment variables accounted for a significant proportion of the variance in problem alcohol use after controlling for the effects of parental alienation.

The second hypothesis was: Autonomy is more strongly related to male adolescent problem alcohol use as measured by the RAI, than are the other components of attachment--affectional bonds, emotional support, trust, communication, and alienation. In order to test the second hypothesis, a hierarchical regression was performed to determine the effects of autonomy over and above the other attachment indices. Parental fostering of autonomy was entered first to reflect the theorized level of importance. Based on results from the initial analyses, the other significant predictors in order of entry were: parental alienation, affective quality, trust, and emotional support.

As illustrated in Table 7, results suggest that autonomy accounted for a significant amount of variability in problem alcohol use, $R^2 = .05$, adjusted $R^2 = .04$, $F(1, 98) = 5.4, p < .05$. The sample multiple correlation coefficient for the first step was .228, indicating that approximately 5.2% of problem alcohol use variance can be accounted for by autonomy. While autonomy ($\beta = -.23, p < .05$) served as a significant predictor of problem alcohol use when entered first into the hierarchical regression analysis, parental alienation ($\beta = .31, p < .05$) showed a more robust relationship with problem alcohol use. Therefore, autonomy did predict problem alcohol use, but not most strongly.

None of the four attachment measures accounted for a significant proportion of problem alcohol use variance after controlling for the effects of autonomy. These findings do not support the second hypothesized relationship. Data indicated that parental alienation, high affectional bonds, trust, and emotional support do not explain any variability in alcohol use beyond what is already accounted for by autonomy. The
<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$SE_B$</th>
<th>$\beta$</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
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</thead>
<tbody>
<tr>
<td>Step 1</td>
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<td></td>
<td></td>
<td></td>
<td>.05*</td>
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<tr>
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<td>.08</td>
<td>-.23*</td>
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<td></td>
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<td>Step 2</td>
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<td></td>
<td></td>
<td></td>
<td>.09* .84</td>
</tr>
<tr>
<td>Parent alienation</td>
<td>.29</td>
<td>.14</td>
<td>.31*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 3</td>
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<td></td>
<td></td>
<td>.10</td>
<td>.00</td>
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<tr>
<td>Affective quality</td>
<td>7.09</td>
<td>.09</td>
<td>.15</td>
<td>.10</td>
<td>.00</td>
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<tr>
<td>Step 4</td>
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</tr>
<tr>
<td>Trust</td>
<td>1.79</td>
<td>.14</td>
<td>.03</td>
<td>.11</td>
<td>.01</td>
</tr>
<tr>
<td>Step 5</td>
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<td></td>
</tr>
<tr>
<td>Support</td>
<td>-.11</td>
<td>.15</td>
<td>.11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.
nonsignificant findings may be due to the observed multicollinearity of the attachment variables or the statistically significant association between parent alienation and problem alcohol use.

Based on the results from previous analyses, an independent samples *t*-test was performed to evaluate the prediction that senior participants would score higher on the autonomy subscale of the PAQ when compared to freshmen participants. Contrary to expectations, results from the *t*-test were not significant, *t*(98) = -1.1, *p* = .22. Analyses failed to reveal significant differences in autonomy among senior participants (*M* = 52.21, *SD* = 8.49) and freshmen participants (*M* = 50.64, *SD* = 10.86).

**Supplemental Analyses**

Secondary analyses were conducted to determine the presence of significant differences in the problematic use of alcohol among first- and fourth-year students (see Table 8 for descriptive information on subsample RAPI scores). First-year and fourth-year students’ scores on the RAPI were subject to an independent samples *t*-test. Since the Levene’s Test for Equality of Variances yielded an *F* ratio that exceeded the alpha level of .05, the assumption of homogeneity was maintained (Shannon & Davenport, 2001). The *t*-test was significant, *t*(98) = -2.48, *p* < .05. Students in the fourth year of high school (*M* = 7.47, *SD* = 8.15) were more likely to report symptoms and consequences of problem alcohol use than participants in the freshman year of high school (*M* = 3.47, *SD* = 7.42).

In an attempt to clarify the association between the combination of predictor variables and problem alcohol use for the different grades, separate regression procedures
Table 8

*Descriptive Statistics of Each Individual Subsample’s Scores on the RAPI*

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman problem alcohol use</td>
<td>$3.47_a$</td>
<td>7.42</td>
<td>40</td>
</tr>
<tr>
<td>Senior problem alcohol use</td>
<td>$7.47_b$</td>
<td>8.15</td>
<td>60</td>
</tr>
</tbody>
</table>

*Note.* Means with different subscripts differ significantly at $p < .05$ in the independent samples *t* test.
were performed. As for the full sample, parental alienation accounted for significant unique variance in the senior subsample.

The freshmen subsample (n = 40) ranged in age from 14 to 15 years with a mean age of 14.52 and a standard deviation of .51. For participants in the first year of high school, the attachment measures were not found to be significantly related to problem alcohol use, \( R^2 = .141 \), \( \text{adjusted } R^2 = .015 \), \( F(6, 33) = 9.04, p = .004 \). Table 9 summarizes the findings. The failure to find statistically significant associations among problem alcohol use and affective quality, autonomy, support, trust, and communication at this grade level may be due to restriction of range in the reporting of problem alcohol use. The criterion measure was positively skewed with a large number of participants (65%) reporting that they had never experienced any symptoms or consequences of problem alcohol use.

The senior subsample (n = 60) ranged in age from 17 to 18 years with a mean age of 17.68 and a standard deviation of .47. Over 73% of participants in the fourth year of high school reported experiencing symptoms and consequences of problem alcohol use. As described in Table 10, analysis failed to indicate that the attachment measures were significantly related to problem alcohol use for participants in the senior year of high school, \( R^2 = .170 \), \( \text{adjusted } R^2 = .076 \), \( F(6, 53) = 1.18, p = .15 \). Important to note, however, is that analysis of the standardized coefficients indicated a significant moderate contribution of parental alienation in the senior sample (\( \beta = .44, p < .05 \)).

Since several analyses yielded an association among alienation and problem alcohol use and because of the significant bivariate correlation between grade and alcohol use, a hierarchical regression analysis was conducted to evaluate whether grade in school
Table 9

Regression Analysis Summary for Attachment Variables Predicting Problem Alcohol Use in Freshmen Participants (n=40)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affective quality</td>
<td>-0.22</td>
<td>0.21</td>
<td>-0.56</td>
</tr>
<tr>
<td>Autonomy</td>
<td>-0.18</td>
<td>0.38</td>
<td>-0.26</td>
</tr>
<tr>
<td>Support</td>
<td>1.40</td>
<td>0.24</td>
<td>0.02</td>
</tr>
<tr>
<td>Trust</td>
<td>0.11</td>
<td>0.25</td>
<td>0.24</td>
</tr>
<tr>
<td>Communication</td>
<td>0.34</td>
<td>0.24</td>
<td>0.28</td>
</tr>
<tr>
<td>Parent alienation</td>
<td>-1.35</td>
<td>0.29</td>
<td>-0.02</td>
</tr>
</tbody>
</table>

*p < .05.
### Table 10

*Regression analysis Summary for Attachment Variables Predicting Problem Alcohol Use in Senior Participants (n = 60)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affective quality</td>
<td>.15</td>
<td>.15</td>
<td>.28</td>
</tr>
<tr>
<td>Autonomy</td>
<td>-3.03</td>
<td>.21</td>
<td>-.03</td>
</tr>
<tr>
<td>Support</td>
<td>-.27</td>
<td>.23</td>
<td>-.24</td>
</tr>
<tr>
<td>Trust</td>
<td>-.17</td>
<td>.21</td>
<td>-.24</td>
</tr>
<tr>
<td>Communication</td>
<td>.21</td>
<td>.16</td>
<td>.37</td>
</tr>
<tr>
<td>Parent alienation</td>
<td>.47</td>
<td>.20</td>
<td>.44*</td>
</tr>
</tbody>
</table>

*p < .05.*
predicted problem alcohol use over and above perceptions of parental alienation. Order of entry was determined by analysis of the bivariate correlation matrix, which indicated that parental alienation ($r = .31, p < .01$) may be a somewhat stronger predictor than grade in school ($r = .24, p < .05$). As summarized in Table 11, grade accounted for a significant proportion of the variance in problem alcohol use after controlling for the effects of parental alienation, $F_{\text{change}} = .05, F(1, 97) = .64, p < .05$. These findings indicate that participants who perceive parental alienation are more likely to experience problem alcohol use if they are in an advanced grade at school.

Summary

This chapter consists the results of several statistical analyses used to explore the relationships among attachment indices and male adolescent problem alcohol use during critical transition periods. Descriptive information indicated that the average age of participants was 16. The all-race sample was comprised mainly of participants of Irish descent (53.5%). Eighty-one percent categorized themselves as Catholic, and the majority (85%) reported living with two biological parents. The results of the exploratory analyses of the demographic variables failed to indicate any significant effects on the attachment indices or problem alcohol use.

Several multivariate analyses were conducted to establish if affectional bonds, respect for autonomy, emotional support, trust, communication, and parental alienation were significantly associated with symptoms and consequences of problem alcohol use.
Table 11

Hierarchical Regression Analysis Summary Predicting Problem Alcohol Use by Grade Level Controlling for the Effects of Parental Alienation (N = 100)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>R²</th>
<th>ΔR²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent alienation</td>
<td>.29</td>
<td>.99</td>
<td>.30*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td>.15*</td>
<td>.06</td>
</tr>
<tr>
<td>Grade</td>
<td>3.88</td>
<td>1.5</td>
<td>.24*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.
Findings offered partial support for Hypothesis 1 and no support was provided for the predictions set forth in Hypothesis 2. In general, findings suggested that high levels of alienation in the parent-child relationship are significantly associated with high degrees of problem alcohol use.

Although the second hypothesis was not confirmed as stated (that autonomy would be the primary predictor of alcohol use), autonomy was found to have a significant negative association with problem alcohol use when entered first in the model. Participants who perceived low parental fostering of autonomy were found to have higher levels of problem alcohol use. Additional analyses failed to reveal any significant differences in parental fostering of autonomy among first- and fourth-year student participants.

Significant differences were discovered in problematic use of alcohol among first-year and fourth-year student participants. Students in the senior year on the average experienced more symptoms and consequences of problem alcohol use than those in the freshman year of high school. In addition, the observed effect among parental alienation and problem alcohol use appears to increase as the participants advance in grade level at school.

The practical implications of these findings and recommendations for future research are discussed in Chapter 5.
CHAPTER V
Summary and Conclusions

This chapter is designed to provide an overview and discussion of the findings of
the study. A restatement of the problem, description of the sample, and correlational
findings are presented. This is followed by a discussion of the results and how they relate
to previous research and clinical practice, limitations of the study, and recommendations
for future research.

Problem Restatement

In the U.S., adolescent alcohol use (AAU) is rampant and has the potential for
considerable individual and social consequences. Transitional stages in children’s lives
have been identified as critical risk periods for alcohol and drug use. Research has
demonstrated that a secure attachment to parents will function as a protective factor
against the increased stress inherent in these transitions. Therefore, the focus of the
current inquiry was to explore the influence of the attachment relationship in male
adolescents on alcohol use during the transition into and out of high school. The purpose
of the study was to determine whether components of parental attachment–specifically
affective quality, fostering of autonomy, emotional support, trust, communication, and
alienation–influence the symptoms and consequences of problem alcohol use in male
adolescents.

This research was designed to answer the following questions: Are higher levels
of communication, trust, emotional support, fostering of autonomy, affective quality, and
lower levels of alienation significantly related to lower levels of problem alcohol use in
males during critical transition periods? Are higher levels of fostering of autonomy significantly related to lower levels of problem alcohol use among males during critical transition periods when controlling for other components of the attachment relationship? Are there any significant differences in the problematic use of alcohol among first- and fourth-year student participants?

It was hypothesized that male adolescents reporting high degrees of affectional bonds, respect for autonomy, emotional support, trust, communication, and lower levels of alienation in the parent-child relationship will score lower on a measure of symptoms and consequences of problem alcohol use. It was also predicted that autonomy is more strongly related to male adolescent problem alcohol use than are the other components of attachment—affectional bonds, emotional support, trust, communication, and alienation. Findings offered partial support for the first of the two hypotheses. The present study contributes to a growing body of research regarding the influence of attachment on adolescent alcohol use.

This study’s concentrated focus was intended to specifically determine the impact of the attachment relationship on problem alcohol use among male adolescents rather than provide a broad overview of substance abuse in general as is often done in contemporary literature. By highlighting the adolescent male experiences of problem alcohol use, the study was intended to address a gap in the existing literature. This research is unique in that it was the first to investigate the importance of the attachment relationship on male psychological adaptation during the transition into and out of high school.
Sample

The sample was comprised of 100 participants in the first and fourth years at an all male parochial high school in the Northeastern United States. Forty participants were enrolled in the freshman year and 60 were enrolled in the senior year. The majority of participants were of the Catholic religion. Although a wide variety of cultures and ethnicities were represented, the most frequently occurring categories were Irish, Italian, and German. A large number of participants reported living with two biological parents. The mean age of the participants was 16.42 years. No significant relationships were obtained between the sociodemographic and study variables.

After written parental consent from participants under the age of 18 years was obtained, the adolescents were given four questionnaires during a regularly scheduled class period: (1) a demographic form, (2) the Parental Attachment Questionnaire (PAQ; Kenny, 1987), (3) the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987), and (4) the Rutgers Alcohol Problem Index (RAPI; White & Labouvie, 1989). Participant responses to the measures were used to evaluate the theoretical predictions.

The selected measures were unique in that they were normed on diverse adolescent samples, ranging from the middle-school to college years. The PAQ (Kenny, 1987) was initially validated on a sample of suburban high-school students and was designed to assess perceived parental availability, understanding, acceptance, facilitation of autonomy, interest in interaction with parents, help-seeking behavior in situations of stress, and satisfaction with parental assistance among adolescents. The IPPA (Armsden & Greenberg, 1987) was developed to measure adolescents' perceptions of the
affective/cognitive dimensions of their relationships with parents and was normed on a sample of 16- to 20-year-olds. As a brief, multidimensional assessment of problem alcohol use in adolescence, the RAPI (White & Labouvie, 1989) was validated on a non-clinical sample of adolescents aged 12 to 21 years.

Discussion of Hypotheses

Hypothesis 1 Male adolescents reporting high degrees of affectional bonds, respect for autonomy, emotional support, trust, communication, and lower levels of alienation in the parent-child relationship will score lower on a measure of symptoms and consequences of problem alcohol use (RAPI; White & Labouvie, 1989). This prediction was derived from an abundance of empirical literature (Bahr et al., 1995; Brook & Brook, 1990; Rosenstein & Horowitz, 1996) attesting to an inverse association among parental attachment and substance use among adolescents. Findings from the current study offered partial support for this hypothesis. Adolescents who reported higher levels of alienation in the parent-child relationship were discovered to have significantly higher problem alcohol use than adolescents indicating lower levels of alienation in the parent-child relationship. The other attachment indices, affectional bonds, respect for autonomy, emotional support, trust, and communication did not significantly account for any variance in problem alcohol use.

Most of the shared variance was accounted for by parental alienation. The set of regression analyses indicated that alienation from parents functioned as a risk factor, increasing the probability of problem alcohol use among male adolescents. More explicitly, these findings suggest that adolescents who perceive anger towards or
emotional detachment from their parents are more likely to experience the sequelae of problem alcohol use. A plausible interpretation of current results is that, although the parent-child attachment relationship is related to adolescent adaptation, a low degree of perceived parental alienation is essential.

The finding that there is no direct association among affectional bonds, autonomy, support, trust, communication, and problem alcohol use should not be taken as a statement about the lack of a relationship between parent-child attachment and problem alcohol use in adolescence. A substantial amount of evidence exists attesting to the protective effects of the attachment relationship on alcohol use among adolescents (Barnes et al., 1994; Bray et al., 2003; Mc Ardle et al., 2002). It is possible that alienation from parents, specifically the extent of anger and emotional detachment, has more of an impact on adolescent problem alcohol use in the current sample.

The non-significant findings may be best accounted for by the evidence of multicollinearity among the attachment variables. Analysis revealed significant moderately strong to very strong intercorrelations among the attachment indices. Values ranged from -.79 to .89, possibly suggesting a unitary construct of the parent-child attachment relationship. Although one of the goals of the present study was to understand the unique effects of fundamental parent-child attachment components, the observed multicollinearity may preclude such conclusions.

In addition, each of the attachment variables under scrutiny in this study: affectional bonds, respect for autonomy, emotional support, trust, communication, and alienation have been acknowledged as multidimensional constructs with considerable overlap in definition. For instance, Allen and Land (1999) viewed attachment as an
organizational construct, reflected in both the intrapsychic and relational domains. The six alienation items of the IPPA may have encompassed several related constructs. Further refinement of the distinctions among the attachment constructs is suggested.

Another possible explanation for the failure to find significant relationships may be attributed to the attachment measures employed in this investigation. The standardized measures of attachment did not allow for classifications of attachment organizations (secure, avoidant, ambivalent, disorganized) as identified by Ainsworth et al. (1978) and Main and Hesse (1990). Studies have indicated that insecurely attached adolescents are likely to hold idealized views of their parents (Allen et al., 2002). In contrast, securely attached adolescents have the ability to realistically assess and report on parental strengths and weaknesses. The current findings may be the result of the participants' inability to accurately scrutinize parental resources. Perhaps the inclusion of a measure that would have distinguished among the four attachment organizations would offer additional support for the findings of the PAQ and the IPPA.

Although analyses indicated that affectional bonds, respect for autonomy, emotional support, trust, and communication did not account for unique variance in problem alcohol use, present findings concur with the evidence in the literature attesting to an inverse association among alienation and adolescent adaptation. Pavidis and McCauley (2001) discovered that in a clinical sample, depressed youth were more likely to report higher scores on the alienation subscale of the IPPA. More specifically in accordance with present results, Winefield, Winefield, Tiggemann, and Goldney (1989) found that heavy drinking in older adolescent males was related to feelings of alienation. Additionally, Marcelski, Welte, Marshall, and Ferby (1999) observed that, among late
adolescents, alienation was a predictor of alcohol-related problems.

Current results are compatible with previous research implying an association among alcohol use and self-regulatory processes. Research results indicated that alienation causes stress, tension, and anxiety (Alatas, Alhas, & McCluskey, 1978). In an effort to cope with and subsequently reduce negative affective states, the individual may consumes alcohol. Among high school seniors, the researchers found a positive association between alienation and alcohol consumption. Participants who reported higher degrees of alienation were discovered to have a greater amount of alcohol consumption.

The observed association among alienation and problem alcohol use also has implications for future substance use and abuse. Jesser and Jessor (1977) posited that the number of negative consequences of alcohol use has important predictive qualities for problematic patterns of alcohol abuse. More so, Marczynski et al. (1999) asserted that the social and physical problems related to alcohol use are not a direct function of the amount consumed. The authors observed that the psychological processes involved in alcohol use, rather than the demographic profile of the user, are the determining factors in predicting alcohol-related problems. In a related study, Carmen, Fitzgerald, and Holmgren (1983) noted a linear association among alienation, psychological drinking motivations, consumption rates, and problem outcomes in female high school students. Consequently, it appears that an alienated adolescent who uses alcohol in an attempt to regulate psychological arousal is more likely to develop a chronic pattern of problematic alcohol use.

Present findings are also consistent with the notions set forth by Stanton and Todd
(1982), who emphasized the function of the symptom in the familial context. From a family-systems standpoint, normative transitions are associated with developmental role changes and task realignments (Lavee et al., 1987). Unable to meet these demands, alcohol use may be viewed as an expression of anxiety and/or frustration in response to alienation from parents. In an attempt to alter the pattern of interactions within the family, the alcohol use serves to elicit parental attention and/or heightens the intensity and frequency of parent-child interactions (Allen et al., 2002).

Expounding upon this family-systems perspective, several authors have proposed a direct association between parental alienation and alcohol use. For instance, Mosher (1999) concluded that alcohol use may be viewed as an expression of rebellion in response to a sense of alienation. Adolescent delinquency may result from the rejection of the norms of attachment figures (Allen et al., 2002) from whom the adolescent feels alienated. Thus, in stark opposition to parental values, the alienated adolescent will use alcohol.

The current study supports previous research that has identified self-regulatory processes as the linking causal mechanism in understanding the family’s role in adolescent alcohol use. For instance, Mijuskovic (1983) noted that adolescent substance use may be viewed as a coping mechanism in response to a growing sense of estrangement from the family. This study and others (Brook et al., 1998) have shown that positive attachment experiences enable the child to cope with interpersonal stressors in a positive, responsible way.

In addition to the direct influence of alienation from parents on adolescent alcohol use, current results highlight the importance of the indirect effects of parental alienation
on peer relationships. While not directly studied in this research, the quality of peer relationships is a function of the familial environment. Researchers have suggested that adolescents bring to their peer relationships many qualities that develop early in life as a result of socialization experiences in a family (Steinberg & Sheffield Morris, 2001).

Since attachment behaviors are directed towards proximity-seeking to supportive attachment figures (Bowlby, 1988) adolescents who perceive alienation from parents may turn to peers as a source of support, particularly during periods of increased stress. “Peers often provide support for adolescents as they face new challenges, and serve as models in how to meet new responsibilities” (Isakson & Jarvis, 1999, p. 6).

While some studies have shown the positive effects of peer support during transition (Isakson & Jarvis, 1999), others attest to the negative influence of the peer group (Kobus, 2003). Whether an adolescent associates with prosocial or deviant peers is contingent upon the parental attachment relationship. Strong bonds to the family have been found to protect adolescents by affecting their levels of vulnerability and their choices of friends (Erickson et al., 2006).

Erickson and colleagues (2000) stressed the connections among parental attachment, self-regulation, and peer relationships. The authors posited that adolescents who are bonded to a family experience greater feelings of self-worth and confidence. These inner resources provide the strength to resist the pressures toward nonconformity. As a consequence of parental alienation, the adolescent is unable to regulate negative affective states and utilizes alcohol as a coping mechanism.

Brook et al. (1998) hypothesized that a poor parent-child attachment relationship interferes with the internalization of parental norms, values, and attitudes subsequently
leading to problem behavior. In a similar vein, Erickson and colleagues (2003) proposed that with adequate parental attachment, adolescents have less freedom to associate and learn from deviant peers. Having failed to internalize parental values, an alienated adolescent may use alcohol as an expression of rebellion or as a device to facilitate peer relationships. Accordingly, a high degree of parental alienation may also result in an increased vulnerability to peer influence on alcohol use.

**Hypothesis II.** Autonomy is more strongly related to male adolescent problem alcohol use as measured by the RAPI than are the other components of attachment—affectional bonds, emotional support, trust, communication, and alienation. The order of entry among the variables in the model was guided by theories attesting to the importance of autonomy in the developmental stage of adolescence (Bray et al., 1984; Grotevant & Cooper, 1985; Schultheiss & Blasein, 1994). Results from the hierarchical regression did not support this hypothesis. Therefore, no predictive statements may be made in regard to the effect of autonomy over and above the other attachment variables.

However, when entered first in the model, autonomy was found to contribute unique variance to problem alcohol use. Data suggest that participants who reported lower degrees of parental fostering of autonomy reported significantly higher levels of problem alcohol use than adolescents reporting higher degrees of parental fostering of autonomy. Although results did not permit the assessment of differential prediction among the attachment measures, it appears that a high degree of autonomy is positively associated with adolescent adaptation.

Current findings correspond with family-systems theories implying that substance use patterns develop as a result of difficulties with autonomy (Baer & Bray, 1999). In
this context, the parallel processes of autonomy, identity formation, and intimacy are related to family relationships (Bray et al., 2003), and alcohol use is viewed as a consequence of emotional fusion and/or detachment between adolescents and their parents (Bell et al., 2000). In order to test this relationship, Bray and colleagues (2003) found that higher levels of individuation were related to smaller increases in adolescent alcohol use across ethnic groups. Similar findings were reported by Tuttle (1995), who discovered a negative correlation among autonomy and substance involvement and consequences in high school students.

Within the family-systems framework, alcohol use is proposed as a means to fulfill developmental tasks and establish independent and autonomous functioning (Baer & Bray, 1999). Stinson and Todd (1982) identified substance use as a form of pseudo-individuation in which the pharmacological and familial effects of the substances are believed to prevent the adolescent alcohol abuser from exploring the environment. Substance use creates the illusion of independence while concurrently reinforcing the adolescent’s dependency on the family (Bray et al., 2003).

There are a number of possible explanations as to the reasons why none of the five attachment measures accounted for a significant proportion of problem alcohol use variance after controlling for the effects of autonomy. Based on the statistically significant associations among alienation and problem alcohol use, one might argue that, although parental fostering of autonomy affects problem alcohol use, perceived anger and emotional detachment from parents is a somewhat stronger predictor.

Another plausible interpretation for the obtained findings may be the observed multicollinearity among the attachment measures. As previously stated, significant
moderately strong to very strong intercorrelations were found among the attachment indices. In particular, analysis revealed a moderately strong inverse correlation between autonomy and alienation \((r = -.74)\).

Based on this, data from this study add support to previous research attesting to complementary nature of alienation and autonomy. During adolescence, individuals are expected to transform their relationships with parents into more autonomous ones while maintaining intimacy and closeness (Grotevant & Cooper, 1985, Kenny, 1987). Research has consistently shown that emotional detachment and a lack of differentiation from the family interfere with the development of autonomy (Baer & Bray, 1999; Steinberg & Silverberg, 1986).

From a family-systems perspective, "...differentiation is viewed as the psychological and emotional distance between family members which determine patterns of cohesion, adaptability, and emotional fusion" (Bray, Adams, Getz, & Stovall, 2001, p. 437). According to theory, autonomy is not synonymous with emotional detachment rather it represents an adolescent's ability to maintain intimate connections while preserving boundaries to the self. Subsequently, optimal adolescent adaptation is believed to occur through the integration of autonomy, differentiation, and intimacy (Bray, Adams, Getz, & Stovall, 2001).

According to Bowlby (1982), disruption in attachment security inhibits activation of other behavioral systems, such as exploration and affiliation. Corresponding to current results, several studies have demonstrated a linear association among autonomy and alienation. For instance, Scharf, Maysel, and Kivenson-Baron (2004) demonstrated that autonomous individuals perceived their parents as more responsive to them during a
stressful transition. This connection to parenthood allowed the late adolescents to effectively adapt to a new environment.

Findings such as those reported here also support the association between autonomy, self-regulation, and substance use. Several studies have indicated that parental support for autonomy is positively associated with the development of self-regulation (Strage, 1998) and task-oriented coping methods (Scharf et al., 2004). Autonomous individuals were found to utilize flexible problem-solving strategies, including seeking support from others. Available data suggest that for autonomous individuals, separation may pose less of a threat, allowing them to utilize a vast array of coping strategies in response to stressful situations (Scharf et al., 2004). Conversely, individuals low in autonomy may utilize alcohol or other substances to cope with the emotional dysregulation associated with the considerable threat of separation.

Consideration of several additional possibilities may help explain why autonomy was not found to be the strongest predictor of problem alcohol use. A review of the literature indicates that autonomy is frequently conceptualized along the behavioral, emotional, and cognitive domains (Spear & Kalbok, 2004) and is recognized as a multidimensional, interrelated set of constructs (Steinberg & Silverberg, 1986). Due to the multifaceted nature of autonomy, researchers have commented on the difficulties in "develop[ing] clear hypotheses about the interrelations among various aspects of autonomy" (Steinberg & Silverberg, 1986, p. 841).

Conceivably, age-related differences in parental fostering of autonomy may have also impacted the results. An unexpected finding in light of previous research was that no significant differences were found in first- and fourth-year students' autonomy scores.
The developmental need for autonomy is believed to increase throughout adolescence (Smetana, Crean, & Campione-Barr, 2005). Studies have indicated that, when compared to a younger cohort, a higher degree of autonomy among late adolescents is associated with improved adjustment (Smetana et al., 2005) and problem behavior (Silk, Morris, & Kanaya, 2003).

Nonetheless, the failure to find age-related differences in autonomy may be due to cohort effects. Parental fostering of autonomy depends upon the parents' assessment of environmental risk (Smetana et al., 2005). Perhaps within the current sample of fourth-year students, the risks associated with graduation from high school (e.g., college, employment, launching) pose substantial threats to the family system and the parents may fail to grant the developmentally appropriate degree of autonomy. Consequently, problem alcohol use may be utilized as a means to facilitate autonomy and identity among the late adolescents who are seeking independence.

The sociodemographic composition of the sample may be of additional consequence to the obtained results. Due to the homogeneity of the sample in terms of cultural/ethnic background, religion, and household composition, findings may have been impacted by the restriction of range in the quality of the attachment relationship. In addition, research indicates that parental fostering of autonomy is influenced by gender, age, family structure, culture, and the environment (Spear & Kulbok, 2004). In particular, Sator and Youniss (2002) observed that parental involvement is likely to be high among suburban, middle-class Catholic schools. This may influence autonomy differently than in a population in which parents are relatively disengaged from their children's educations. Important to note, however, is that very little information exists
about the conditions under which parents foster autonomy in their adolescents (Silverberg & Gondoli, 1996). Therefore, in order to gain a more comprehensive understanding of the vicissitudes of adolescent autonomy, future researchers should offer distinctions regarding the parental goals for restricting or granting autonomy among diverse populations (Silk et al., 2003).

Results from the present study challenge the notions set forth by feminist theories of development. For instance, Gilligan (1982) proposed that gender role socialization produces distinct differences in identity achievement. From this stance, successful identity development for males is achieved through separation from others and the establishment of autonomy. Alternatively, for females, identity achievement is the result of interpersonal connections with others. It is believed that the societal emphasis on male disconnection impels males to separate from their parents before they are emotionally prepared to do so (DeFranc & Mahalik, 2002). Results from the present inquiry demonstrate the perils of perceived alienation from parents or male adolescent adaptation.

A persuasive explanation for current results is offered by Steinberg and Silverberg (1986) who stated, "previous notions about the prominence of autonomy as an issue among adolescent boys may be more correct about the salience of autonomy as a psychological concern than about the manifestation of autonomous behavior" (p. 449). The authors posited that, due to gender role socialization, adolescent males experience difficulties in establishing genuine autonomy. Consequently, the psychological interest in autonomy among adolescent males may be expressed in "quasi-independent" behavior such as alcohol use.
Secondary Analyses

Additional analyses were conducted to establish the presence of significant differences in the problematic use of alcohol among first- and fourth-year students. Based on previous findings that adolescent alcohol use increases linearly over time (Bailey & Hubbard, 1991; Bray et al., 2003), fourth-year students were expected to have significantly higher levels of symptoms and consequences of problem alcohol use. Grade was used as an indicator of developmental stage rather than age because participants in the same grade are likely to have similar experiences regarding the transition into and out of high school (Bailey & Hubbard, 1998). An independent samples t-test determined that participants in the fourth year of high school were significantly more likely to report symptoms and consequences of problem alcohol use than were participants in the first year of high school.

Current data are consistent with developmental theories of adolescent alcohol use. Developmental research seeks to elucidate the relationship of behavior in the context of maturational and environmental changes (National Institute on Alcohol Abuse and Alcoholism, 2004). From this perspective, the higher prevalence of alcohol use among older participants may be attributed to the normative changes in the parent-adolescent dyad during adolescence. According to Bailey and Hubbard (1990), as adolescents develop, there is a shift in influence from parents to peers. Complementary findings of heightened peer influence on substance use among late adolescents have been reported by Jenkins, Brezina, and Scolar (1994).

Prior to dismissing the impact of parents on late adolescent drug use, it is important to restate that there is a substantial amount of evidence indicating that the
parental attachment relationship forms the basis for peer relationships (Kenny, 1987; Kenny & Donaldson, 1991; McCallum, 1994). The stage of adolescence is characterized by more of a trading of dependency on parents for dependency on peers (Steinberg & Silverberg, 1986). According to the authors, however, the ability to resist negative peer influence "...may be as much as a testimony to their connection to (and emotional dependency on) their parents..." (p. 848).

In the current investigation, 35% of participants enrolled in the first-year of high school reported experiencing symptoms and consequences of problem alcohol use. This pattern of early alcohol use has been reported elsewhere. Data from the most recent Youth Risk Behavior Survey (YRBS; Centers for Disease Control and Prevention, 2004) reveal that 33.9% of male ninth graders surveyed reported current use of alcohol.

Although comparable to national trends, these results warrant concern. Studies have indicated that the earlier the alcohol use begins, the more prevalent are the serious consequences (Schwartz, Hayden, Getson, & DiPaola, 1986). Grant and Dawson (1998) have observed that the frequency of alcohol abuse is four times greater among those who begin drinking at the age of 14. According to the authors, approximately 40% of those who begin to use alcohol before the age of 15 become alcohol dependent.

Over 75% of participants enrolled in the fourth year of high school were discovered to experience problematic alcohol use. In comparison, results from the Centers for Disease Control and Prevention’s 2003 YRBS indicate that 56% of 12th grade males reported current alcohol use. The larger percentage of problem alcohol use among the current study’s 12th grade participants when compared to the national sample may be due to the differences in sampling size, methods, and participant characteristics. The
YRBS utilized a nationally representative sample of 15,124 male and female participants enrolled in both private and public high schools (CDC, 2004) while the current study was based on a sample of 100 male participants in a private high school in the Northeast.

For the senior participants, alcohol use may be viewed as a rite of passage or marker of entry into adulthood (Wolff & Wolff, 2002). However, the manner in which one confronts and resolves issues in adolescence influences the way that one will cope with stressors later in life (see Austin & Martin, 1992). Given the increased potential to experience the chronic consequences associated with alcohol use (Grant & Dawson, 1998), researchers also identified 12th grade males as the population most likely to engage in high-risk drinking practices (i.e., public drinking settings that are associated with driving and violence) and to suffer serious, acute alcohol problems (Mosher, 1999).

The extent to which experimentation with alcohol is part of the normal developmental trajectory for adolescents remains under investigation (Clark, 2004). Some authors observed that experimentation with substances is an element of adolescent exploration (see Clark, 2004) while others note that not all adolescents initiate substance use (Petrakis et al., 1995). These empirical inconsistencies have led to the conclusion that adolescent alcohol use ensues as a result of a confluence of individual and environmental factors.

From this stance, a burgeoning amount of research indicates that alcohol use is influenced by two types of factors—internal and external. Empirically identified internal factors in adolescent alcohol use (AAU) include the biological (i.e., genotype) (Clark, 2004) and the psychological (i.e., behavioral and affective dysregulation) (Mezzich et al., 1997). Physical availability and money have been implicated as external factors in AAU.
(NIDA, 2003). Consequently, the higher reported levels of problem alcohol use among senior participants cannot be solely attributed to a single characteristic. As a result, there are a number of plausible explanations for the obtained results.

The higher frequency of problem alcohol use among the fourth-year student participants may be attributed to contextual changes in late adolescents' environments. For instance, Bailey and Hubbard (1990) have demonstrated that the number of behavioral models for drug use increase as adolescents age. Important to note, however, is that there is a bidirectional relationship among individual and contextual variables. As the authors have noted, adolescent alcohol use "...changes in relation to contextual changes, and which, in turn, influences the context in which it is found" (p. 59).

The observed relationship between age and problem alcohol use lends further credence to developmental-stage theories of adolescent alcohol use (AAU). According to this framework, "development is characterized by stages and the resulting phenotypes may be qualitatively distinct from one stage to the next" (Clark, 2004, p. 6).

Subsequently, certain biopsychosocial characteristics may be expressed as AAU when the context provides opportunities for alcohol use.

Accordingly, research indicates that drinking opportunities vary as a function of age (Bailey & Hubbard, 1990), parental, peer, and environmental characteristics (Clark, 2004). More so, the number of contexts in which an adolescent interacts drastically increases throughout high school (Tarter, 2002). Therefore, one may infer from the data that contextual influences on AAU are particularly salient during the period of late adolescence. Analogous results have been reported by Jenkins et al. (1994).

Contextual variables, such as income, opportunity, and availability impact an
adolescent’s abilities to determine their own alcohol consumption habits (Winefield et al., 1989). For instance, evidence indicates an inverse association among adolescent employment and substance use (Dunn, 2005). Although unverified in the current study, late adolescents are more likely to engage in part-time employment. While adolescent employment has been associated with an increase in self-esteem, responsibility, and autonomy, research demonstrates a positive correlation between employment and substance use.

In a study on high school seniors, participants who worked more than 10 hours a week were found to be 1.61 times more likely to use substances (Dunn, 2005). The researcher surmised that this relationship may be attributed to the influence of older co-workers. Older co-workers may influence substance use through modeling or by providing opportunities (e.g., purchasing, social events) to use substances. At this point, only speculative explanations can be offered as to the influence of employment on problem alcohol use, since no measure of employment was administered to the current participants.

In addition to providing heightened access to behavioral models, employment also results in an increase in the adolescent’s financial resources. As a 2003 study by the National Institute on Drug Abuse demonstrated, income is associated with frequency of alcohol use. Available evidence suggests that as financial resources increase, adolescent alcohol consumption increases (Holder, 1993). Related to this, alcohol pricing has also been found to inversely influence adolescent alcohol consumption (Holder, 1993).

An additional effect of fiscal patterns is the adolescent’s increased likelihood to suffer adverse consequences of adolescent alcohol use. Epidemiologic studies have
found an inverse relationship among the price of alcohol, alcohol consumption patterns, and alcohol-related injuries among adolescents (NIAAA, 2000). Additional support for this contention is provided by Mosher (1999), who observed that an increase in beer taxes will significantly reduce alcohol-related motor vehicle crashes among 18- to 20-year-old males.

Extant literature has indicated that alcohol consumption is also influenced by the number and concentration of alcohol outlets (Holder, 1993). Areas characterized by a high concentration of liquor stores and extensive media campaigns support the development of social norms encouraging alcohol use (Wallace, 1999). Correspondingly, studies have shown that, when there is a decrease in retail alcohol availability, there is a decrease in alcohol consumption (Williams & Lillis, 1988). In a national study, over 90% of 12th graders reported that alcohol is readily available (Johnston, O'Malley, Bachman, & Schulenberg, 2006).

From a review of the literature, it has become apparent that commercial businesses allow youth to purchase alcohol without requiring age identification. Foster and colleagues (1994) found that adolescents below the minimum legal drinking age of 21 were able to purchase alcohol at almost 10% of the businesses at least once in three attempts. In a related study, Foster, Vaughan, Foster, and Cali\ñano (2006) noted that underage drinkers accounted for nearly $22.5 billion of consumer spending on alcohol. This figure represents approximately 8.2% of national expenditures on alcohol.

Although inferences may be made regarding the contribution of alcohol availability on the obtained results, the current study was not designed to assess the density and/or policies of alcohol outlets in the sample area. Despite this, one cannot
ignore the implications of social policy on individual behavior. Researchers have demonstrated that delinquent behavior, vandalism, school-related problems, and injuries may all be positively affected by a decrease in alcohol availability (Williams & Lillis, 1988)

The regression results predicting problem alcohol use across the two grades demonstrates that grade level influences problem alcohol use after controlling for the effects of alienation. The observed relationship between alienation and alcohol use was found most clearly for participants in the fourth year of high school. Coupled with the failure to find significant differences in autonomy among freshmen and senior participants, this finding may indicate that perceived emotional detachment and anger towards parents is more influential among the late adolescent participants.

Confronted with the demands of independent functioning and departure from the family, late adolescents may experience considerable stress (Kenny, 1987). There is substantial agreement among researchers that successful launching involves the maintenance of a sense of connectedness to the family and autonomous functioning (Lapsley et al., 1989; Moore, 1987). The results presented here concur with the literature with an emphasis on the importance of the increased developmental need for autonomy at this late stage of adolescence. Perhaps as external pressures for autonomy increase, late adolescents experiencing a sense of alienation from their parents are unable to individuate. As espoused by Turtle (1995), a sense of alienation may interfere with individual and familial efforts to achieve a balance of separateness and connectedness, thus increasing the risk of alcohol use and related consequences.
Clinical Implications

Results from the current investigation reveal the importance of maintaining the balance of distance and proximity in families during transitional periods in adolescence. To varying degrees, parental fostering of autonomy and alienation from parents were significantly related to problem alcohol use. These findings suggest that the successful negotiation of developmental tasks is contingent upon the family’s ability to remain connected while fostering independence in the adolescent. The results of the present study lead to a search for a developmental model focused on the qualities of familial relationships and male adolescent adjustment. More explicitly, findings underscore the value of individual and familial intervention in clinical practice.

Family-systems theorists postulated bidirectional process in which the distance between family members is affected by both the attachment needs of the individuals and the systemic organization of the family (Hill, Fonagy, Safer, & Sargent, 2003). Within this framework, the developmental tasks of adolescence—identity formation, individuation, and autonomy—may present opposing demands on the individual and family system. Techniques to strengthen family support and trust, as well as conflict resolution skills, offer optimal resources. Perhaps most importantly, clinicians should facilitate positive communication in safe environments that will not lead to alienation among the family members (Schwartz & Buboltz, 2004).

Interventions focused on positive communication strategies would also assist families in maintaining the balance between attachment and separation. Initial assessment should determine whether families are so close that they avoid conflict or so distanced that they cannot engage in positive communication (Schwartz & Buboltz,
2004). According to Hill and colleagues (2003), issues of distance and proximity are conceptualized not only in terms of physical space, but also in terms of family members' capacities to respond affectively to one another in ways that validate developmental realities.

The transitions into and out of high school involve increased academic and social responsibilities. In this regard, clinicians should assist families in developing and maintaining clear and appropriate boundaries. According to Minuchin (1974), "the boundaries of a subsystem are who participates, and how" (p. 53). Interventions that include training on parental monitoring, supervision, and consistent enforcement of familial rules would be beneficial. Minuchin observed that as the adolescent matures, the parental subsystem must be modified to meet the demands for autonomy and guidance. Therefore, guidelines for acceptable behavior should reflect a developmentally appropriate degree of autonomy, yet conform to the conventional norms and values of the parents. As part of the process of identity exploration, clinicians should actively support the adolescent's challenges of parental values.

Present results may have practical implications on self-regulatory processes in adolescent alcohol use interventions, because data enhance the connection between coping skills and the attachment relationship. Since problem alcohol use may be utilized as a device to cope with a perceived sense of alienation from the family, interventions may be targeted towards enhancing task-oriented coping strategies. While not only decreasing the likelihood of alcohol use involvement, assisting the adolescent to cope with interpersonal stressors in a positive way may serve as evidence of increased ability to handle responsibility.
The findings of this study also provide direction for interventions designed to prevent adolescent alcohol use (AAU). As reflected in previous research, this study suggests that focusing on the attachment relationship may be an effective way to prevent AAU. Given the importance of the role that the parent-child attachment relationship plays in environmental exploration and mastery, factors that contribute to the attachment relationship should be given priority in prevention planning (DeFranc & Mahalik, 2002).

Transitions may be the critical periods during which context most strongly influences the biology and behavior of the individual (NIDA, 2003). It appears that timing prevention and intervention programs in terms of critical transitions and situation-specific stressors would be most beneficial. Present findings underscore the importance of programming that specifies periods when parental alienation may be particularly important for male adolescent adjustment. Skills training that enhance family supportiveness and parental involvement (Kosterman, Hawkins, Haggerty, Spoth, & Redmond, 2001) can be implemented on an individual, school, and community basis.

During transitional periods, participation in a peer mentoring program would also serve to encourage prosocial peer influence. Matching first-year students with fourth-year students would promote positive attachment to the school community. Peer mentoring programs have been found to reduce the likelihood of involvement in substance use by nurturing supportive social relationships, instilling a sense of common purpose, and promoting the internalization of and commitment to the community’s norms and values (SAMHSA, 1998).

The fact that the attachment relationship was found to be associated with adolescent problem alcohol use raises several issues regarding social policy. The impact
of alcohol-related social policies on families has been recognized since the beginning of Prohibition in 1920 (Holder, 1993). According to the author, the decision to end U.S. Prohibition was not based on the legislation’s inability to reduce alcohol consumption, but rather to encourage the moderate use of alcohol and to protect the family.

Contemporary alcohol policies influence alcohol availability, the enforcement of alcohol control, and the social acceptance of alcohol (Wagenaar, Teomey, & Lenk, 2004). Researchers have consistently demonstrated the effectiveness of alcohol-control policies on reducing alcohol use behaviors, particularly among adolescents. For instance, the raising of the minimum legal drinking age to 21 has been found to reduce alcohol consumption and alcohol-related traffic incidents among 18- to 20-year-olds (Wagenaar et al., 2004). In addition, drivers aged 15- to 17-years-old in states with more restrictive driver-licensing laws were discovered to have lower rates of driving under the influence of alcohol when compared to those in states with less restrictive laws (SAMHSA, 2004).

In addition to limiting opportunity and availability, policies aimed at restricting adolescent’s exposure to alcohol advertisements may be an effective way to address adolescent alcohol use. Historically, the media have been recognized as influential determinants in individual behavior. For adolescents, the external pressures for autonomy are stimulated by the media’s shaping of social norms (NIDA, 2003). In particular, the alcohol industry utilizes media tactics that target adolescents by emphasizing the individuality and independence associated with consuming their products (Mosher, 1999). By developing initiatives for restricting images and messages that promote the use of alcohol, intervention at this level can alter the social context of adolescent alcohol use.
However, the effectiveness of any of these alcohol-control strategies is contingent upon public support (Mosher, 1999). Therefore, it is suggested that prevention efforts also be directed toward individual family units. In compliance with The National Institute on Drug Abuse's (1998) guidelines, it is recommended that family-based prevention programs be directed toward parenting skills, offer practice in developing, discussing, and enforcing family policies on substance abuse, and provide training in substance-use education.

Family-level prevention strategies occupy a critical role in reducing alcohol-related problems and have been shown to effectively complement environmental tactics (Mosher, 1999). It is important, however, that family-based programs be implemented in conjunction with community initiatives because, as Mosher cautioned, individual strategies will not be successful in settings that promote or condone alcohol use. Consequently, research has demonstrated the efficacy of prevention programs that combine family-based and school-based programs over a single program in isolation (NIDA, 2003).

"Multiple causal influences, from molecules to the media, interact in complicated ways over time to influence underage drinking behavior and outcomes" (NIAAA, 2004, p. 123). Due to the multifactorial etiology of substance use, prevention and intervention must occur at multiple levels—individual, familial, and social. In sum, system-level changes must be accomplished (Holder, 2001) in order to effectively address adolescent alcohol use.
Limitations

There are limitations inherent in the design of the current investigation. Due to the fact that the majority of the sample identified themselves as being of European descent, other ethnic groups were not equally represented. The ethnic/cultural composition of the sample precludes any investigation into ethnic/cultural differences in attachment and adolescent problem alcohol use. Therefore, caution should be exercised in generalizing the findings.

In addition, the majority of the participants reported living with two biological parents. Although the ANOVA failed to reveal any significant relationships among the household compositions and problem alcohol use, research indicates that adolescents from single-parent homes are at a greater risk for substance use (Jenkins, 1998). Therefore, it would be important to determine whether the observed patterns in the current study generalize to populations with different family constellations.

Further consideration should also be given to the influence of religion on problem alcohol use in the present study. Results may have been influenced by the fact that 81% of the participants identified themselves as Catholic. A study by Fos and Mullen (1999) indicated that presence of distinct substance use patterns along religious denominations. In particular, Roman Catholic participants were observed to have higher rates of substance use across all substances.

The sample included in this study is also unique in that many of the participants were enrolled in the senior year of high school and subsequently are of an older chronological age. This may have borne implications for the findings. A possible explanation for the larger percentage of older participants could be related to the fact that
adolescents 18 years and older did not require parental consent. Interested students under
the age of 18 years may have been prohibited from participating due to parental
restrictions on discussion about familial relationships and/or alcohol use. This self-
selection may speak directly to the quality of the attachment relationship and/or attitudes
towards and patterns of alcohol use.

The timing of data collection is acknowledged as a possible limitation of the
present study. Perhaps if data had been collected at the beginning of the school year,
results might have been different. However, for current purposes, the long-term effects
of the transition were of interest as opposed to the temporary effects of the transition
(Grolnick et al., 2000).

The measures utilized in this study may have influenced the findings. The PAQ
and the IPPA do not allow for categorizations of attachment organizations. Both the
PAQ and the IPPA present dichotomous views of attachment rather than comprehensive
views of the attachment classifications as provided by Ainsworth and colleagues (1978)
and Main and Hesse (1990). Researchers have been able to make predictions regarding
adolescent attachment classifications, affect regulation strategies, and symptomatology
(see Rosenstein & Horowitz, 1996). Perhaps the inclusion of such a measure would have
allowed for conjecture regarding the drinking motivations and behaviors of the
adolescent sample.

Including both adolescent and parent reports of autonomy may have impacted the
obtained results. The current research utilized a measure of adolescents' perceptions of
parental displays of autonomy. The use of multiple informants may have added other
dimensions of the attachment relationship to the data. It would be valuable to replicate
these findings.

Regarding the attachment measures, a final implication to consider is the use of a global parent score. Although the IPPA (Armsden & Greenberg, 1987) allows for separate scores for mother and father, overall parent scores on both of the attachment measures were analyzed in the current study. Delineating among attachment to mother and attachment to father would have added valuable qualitative information about the parent-child dyad to the results.

Although response distortion has been identified as a considerable risk in surveys assessing for alcohol and other drug use such as the one utilized in the present inquiry, researchers have found that underreporting has been found to vary by substance (Harrell, 1997). Researchers have discovered a positive association between underreporting and the social stigma associated with the drug. Thus, significant levels of underreporting have been found to be associated mostly with heroin.

However, results of the current study may have been influenced by the participants' unwillingness to report problem alcohol use in order to avoid adverse consequences or to present themselves more favorably (Harrell, 1997). Alternately, results of studies highlighted that respondents with positive views of substance use may exaggerate their drug use to gain favor or to "...live up to a self-image that perceives drug use as positive" (Harrell, 1997, p. 39). Since a social desirability measure was not administered, the aforementioned may present threats to the internal validity of the current study. However in general, research demonstrates the reliability and validity of self-reported alcohol use, particularly when measures are taken to insure anonymity as were implemented in this study (see Tuttle, 1995).
The frequency of problem alcohol use (58%) in the current sample (N = 100) may be slightly lower had dropouts and absentees been included. Studies have indicated that adolescents who are not in school, either as a result of dropping out or having a high absentee rate, tend to have higher rates of alcohol use (Jessor et al., 1980).

Since the present investigation involved examining problem alcohol use within the past 6 months, the demands of recall may have also contributed to measurement error. Respondents may not be able to accurately report the circumstances of use, particularly when survey items call for reports of substance use in the past (Harrell, 1997). However, all of the selected measures (PAQ, IPPA, and RAPI) showed sufficient internal consistency reliability with the current sample.

Recommendations for Future Research

In the current investigation, significant relationships were noted between certain attachment conditions and male adolescent problem alcohol use during critical transition periods. In this study, perceived alienation from parents and autonomy were associated with problem alcohol use, and adolescent alcohol use increased linearly over time. Further investigation is needed to determine the possible reasons for these results.

As previously discussed in this chapter, sociodemographic factors such as race, ethnicity, and religion have been found to be associated with adolescent alcohol use. In the current investigation, several multivariate and univariate analyses failed to reveal any significant relationships among the demographic and study variables. It is important to reiterate, however, that the majority of the sample identified themselves as being of European, Catholic descent. Due to the homogeneity of the sample, it is not
recommended to generalize beyond these parameters. Replicating this study with
recruitment focused on increased racial, ethnic, and religious diversity is suggested.

The purpose of this study was to evaluate the relationship of attachment to
problem alcohol use in a relatively high-functioning population. Although no measure
was utilized in the current study, it is estimated that nearly 99% of graduates attend
college. As suggested by this estimate, it appears that the present sample is particularly
academically motivated. While this factor allows for the assessment of the effects that
attending college has on the variables, it limits the generalizability. From a social-control
theory standpoint, it can be assumed that the participants have developed positive social
bonds and, as a result, are less likely to engage in deviant behavior. Future research
should replicate this study with adolescents at varying levels of functioning.

Results were based entirely on self-report measures. For future inquiries, it would
be advantageous to obtain multiple markers of the parent-child attachment relationship.
In-depth interviews could be used to obtain qualitative data about the unique effects of
individual parent-child attachment components. Observational data would assist in cross-
validating information about the quality of attachment relationships.

Present findings underscore the magnitude of attachment to parents in male
adolescent development. The inclusion of additional data sources would allow for further
inference about gender socialization. There is a paucity of research on the distinction
between maternal and paternal roles in male adolescent development. In one study,
Schwartz and Rubolz (2004) found that fathers played the vital role in balancing
attachment and separation from the family. To further illustrate the relations among
same- and cross-gender dyads, future research should incorporate individual attachment
ratings from mothers and fathers.

The hypothesized gender distinctions in parenting roles raise issues regarding the effects of single-parent households. Although the majority of the participants reported living with two biological parents, it would be valuable to explore the relationships of adolescent males and their single parents in the future.

School transitions have been conceptualized as a period in which individuals experience separation anxiety and exhibit attachment behaviors (Kenny, 1987; Moore, 1987). Based on the obtained results, it appears that the periods of the transition into and out of high school allow for an assessment of parent-child attachment. However, in order to ascertain the influence of transitional-specific stressors, a beneficial research direction may be to utilize a cross-section of the entire high school enrollment.

Conclusion

Drawing on survey data from freshmen and senior high school students, the goal of this study was to test several hypotheses about the relationships between the parent-child relationship and individual development. The primary analyses examined whether attachment would influence problem alcohol use among males during normative transitions in adolescence. It was predicted that male adolescents reporting high degrees of affectional bonds, respect for autonomy, emotional support, trust, communication, and lower levels of alienation in the parent-child relationship would score lower on a measure of symptoms and consequences of problem alcohol use. It was also expected that autonomy would be more strongly related to male adolescent problem alcohol use, than were other components of attachment—affectional bonds, emotional support, trust,
communication, and alienation. A series of multiple regressions produced partial support for one of the two hypotheses. Supplemental analyses indicated significant differences in the problematic use of alcohol among first-year and fourth-year student participants.

Despite some limitations, current results support the relationship between certain attachment conditions and adolescent alcohol use. Data are in accordance with empirical literature illustrating the importance of autonomy and alienation on adolescent adaptation. In addition, results supported the linear increase of alcohol use over time reported elsewhere. The similarities with previous research increase the confidence in the obtained results.

In general, findings from the current investigation challenge theories that have minimized the importance of the attachment relationship on male adolescent development. This study highlights the importance of maintaining interconnectedness while achieving some level of independence among male adolescents. Although analyses illustrated the significance of autonomy for male adolescents, when entered into the regression simultaneously, alienation appeared to have a stronger effect on problem alcohol use. The consistency of the findings that alienation is inversely associated with problem alcohol use leads to speculation about the importance of anger and emotional detachment from parents on male adolescent adaptation.

Taken together, results underscore the importance of further investigation into the association among family relationships and individual development. Due to the correlational nature of the study, inferences of causality cannot be made. Investigations into the causal nature of the relationship among attachment and adolescent alcohol use require longitudinal and experimental designs. Therefore, the current findings should not
be viewed as definitive but as providing a basis for future inquiry.

Overall, results indicate that the attachment relationship has both direct and indirect links to adolescent adaptation. Information gained from this study can offer directions for adolescent alcohol use prevention and intervention. Due to the inherent complexities of interactions among the individual and sociocultural factors, a single etiological factor for adolescent alcohol use has not been identified (Jenkins et al., 1994). However, current findings reinforce parental attachment as an important predictor of male adjustment at developmental transitions.


APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL.
November 15, 2005

Alicia L. Poleshuk
9 Springfield Ave.
Hasbrouck Heights, NJ 07604

Dear Ms. Poleshuk:

The Seton Hall University Institutional Review Board has reviewed the information you have submitted addressing the concerns for your proposal entitled "The Developmental Trajectory of Male Adolescent Alcohol Use". Your research protocol is hereby finally approved as revised under full review.

Enclosed for your records are the signed Request for Approval form and the stamped original Informed Consent Form, Consent Form and Assent Form. Make copies only of these stamped forms.

The Institutional Review Board approval of your research is valid for a one-year period from the date of this letter. During this time, any changes to the research protocol must be reviewed and approved by the IRB prior to their implementation.

According to federal regulations, continuing review of already approved research is mandated to take place at least 12 months after this initial approval. You will receive communication from the IRB Office for this several months before the anniversary date of your initial approval.

Thank you for your cooperation.

Sincerely,

Mary J. Rozek, Ph.D.
Professor
Director, Institutional Review Board

cc  Dr. Wesley Matsui

Office of Institutional Review Board
President's Hall
Tel: 973.313.5554 • Fax: 973.275.9778
400 South Orange Avenue • South Orange, New Jersey 07079-5641
APPENDIX B: PARENT LETTER OF SOLICITATION
Letter of Solicitation

Dear Parent/Guardian,

My name is Alicia Poleshuk and I am a doctoral student in the Marriage and Family Program in the Department of Professional Psychology and Family Therapy at Seton Hall University in South Orange, NJ. I am conducting research for my doctoral dissertation entitled "The Developmental Trajectory of Male Adolescent Alcohol Use."

Purpose
I appreciate your time and willingness to consider allowing your son to participate. I hope to learn about the family factors contributing to male adolescent alcohol use. The changes involved in going to a new school are acknowledged as a stressful time for adolescents. Therefore, I will be examining the effects of the parent-child attachment relationship on alcohol use during freshman and senior years.

This research is valuable because investigation into the protective factors for alcohol use is incomplete and this study can assist in understanding more about the role of the family in adolescent alcohol use. Upon completion of the study, I will provide the school administration with a brief group summary. Findings may assist in identifying student needs and will provide additional information to supplement current services and/or inform future service development.

Duration of Research
It is estimated that your son's participation will take approximately forty minutes during a regularly scheduled class period.

Procedure
If you allow your son to participate and your son is interested in participating, your son will receive a research packet with three questionnaires and a short form. The research packet consists of the Parental Attachment Questionnaire (PAQ), which asks questions about parental availability, understanding and acceptance. The second questionnaire is the Inventory of Parent and Peer Attachment (IPPA), which measures parental accessibility and responsiveness. The Rutgers Alcohol Problem Index is the third questionnaire and asks about alcohol use in the past

College of Education and Human Services
Department of Professional Psychology and Family Therapy
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400 South Orange Avenue • South Orange, New Jersey 07079-2685

ENRICHING THE MIND, THE HEART AND THE SPIRIT
six months. Demographic forms requesting information about age, grade level, culture/ethnicity and household composition will also be included in the packet. In addition, referral information will be provided should your son wish to discuss these issues any further.

Voluntary Participation
Participation in this study is completely voluntary. You and your son may withdraw participation from the study at any time without consequence. Discontinued participation will not involve any penalties and/or loss of benefits for your son.

Anonymity Preservation
Your son's anonymity will be preserved at all times. He will be instructed to avoid including his name or any identifying information on the research materials. Random numbers will be assigned solely for the purpose of calculating the number of participants involved in the study. Publication of the data from this study will in no way identify your son or the school. Results will be presented in group form only.

Confidentiality Maintenance
All materials will be collected with confidence. Upon completion of the questionnaires, materials will be returned to me in an unmarked, sealed envelope. Returned questionnaires will be stored in a locked cabinet in a secured location and will be accessible only to my research advisor, Dr. Wesley Matsui and myself. Data will be stored without any identifying information.

I would like to thank you in advance for considering allowing your son to participate. If you are interested in having your son participate, please read, sign, and date the enclosed Consent Form. If you have any questions regarding this study or what to expect from your son's voluntary participation, please call me at (973) 761-9451. I appreciate your invaluable support.

Sincerely,

[Signature]

Alcira L. Poleshuk, M.S., LCSW
Doctoral Student: Marriage and Family Program
Department of Professional Psychology
and Family Therapy
Seton Hall University
400 South Orange Avenue
South Orange, NJ 07079
(973) 761-9451
poleshu@shu.edu
APPENDIX C: STUDENT LETTER OF SOLICITATION
FOR THOSE UNDER THE AGE OF 18 YEARS
Letter of Solicitation

Dear Possible Participant:

My name is Alicia Poleshuk and I am a doctoral student in the Marriage and Family Program in the Department of Professional Psychology and Family Therapy at Seton Hall University in South Orange, NJ. I am studying how relationships with parents affect teenage alcohol use.

Purpose

Thank you for thinking about taking part in this study. Freshman and seniors are under a lot of stress. So, I hope to learn about how your relationship with your parents affects whether or not you decide to use alcohol during times when you are stressed.

This study is important because we do not know a lot about how the family affects teenage alcohol use. When I am done with this study, I will talk about the group results with the school administration. These results may help build some new services for students.

Time Frame of Study

It should take about forty minutes during a regular class period to finish the questionnaires.

What You Will Be Expected To Do

If you would like to take part, you will get a packet that has three questionnaires and another form. The first questionnaire, the Parental Attachment Questionnaire (PAQ), asks about how available you feel that your parents are to you, how much they understand you, and how much they accept you. The second questionnaire is the Inventory of Parent and Peer Attachment (IPPA), and asks about how open you feel your parents are to you and how you feel they respond to you. The Rutgers Alcohol Problem Index is the third questionnaire and asks about your use of alcohol in the past six months. The other form asks about your age, grade, race, culture, and members of your house. In the packet, there will also be a list of people you can talk to about some of these things if you would like to.

Participation Is Up To You

It is completely up to you to take part in this study. If you or your parents/guardians change your minds at any time, it is okay. There will not be any consequences at all.

College of Education and Human Services
Department of Professional Psychology and Family Therapy
Tel 973.761.5451
400 South Orange Avenue • South Orange, New Jersey 07079-5685

ENRICHING THE MIND, THE HEART AND THE SPIRIT
There Will Be No Way To Identify You
Your identity will be safe at all times. I will ask you to keep your name off of any of the papers in the packet. The numbers on the pages are random numbers and will be used to know how many people took part in the study. There will be no way to identify you or your school, because I will only talk about group results.

Papers Will Be Kept Private
All papers will be collected and kept to protect you. When you are finished filling out the questionnaires, you will return them to me in a blank, sealed envelope. Finished questionnaires will be stored in a locked cabinet in a safe place. Since Dr. Wesley Matsui is my research advisor for this study, only he and I will be able to look at the finished questionnaires. There will be no way to link you to your answers.

I would like to thank you for thinking about taking part in this study. If your parents/guardians have said that it’s okay, and if you would like to take part in this study, please read, sign, and date the Assent Form in this envelope. If you have any questions about this study or what you will be expected to do, please call me at (973) 761-9451. Thanks for your support.

Sincerely,

Alicia L. Polenski, M.S., LCSW
Doctoral Student: Marriage and Family Program
Department of Professional Psychology
and Family Therapy
Seton Hall University
400 South Orange Avenue
South Orange, NJ 07079
(973) 761-9451
polenski@shu.edu
APPENDIX D: STUDENT LETTER OF SOLICITATION FOR THOSE 18 YEARS OF AGE AND ABOVE
Dear Possible Participant:

My name is Alicia Poleshuk and I am a doctoral student in the Marriage and Family Program in the Department of Professional Psychology and Family Therapy at Seton Hall University in South Orange, NJ. I am studying how relationships with parents affect teenage alcohol use.

Purpose
Thank you for thinking about taking part in this study. Freshmen and seniors are under a lot of stress. So, I hope to learn about how your relationship with your parents affects whether or not you decide to use alcohol during times when you are stressed.

This study is important because we do not know a lot about how the family affects teenage alcohol use. When I am done with this study, I will talk about the group results with the school administration. These results may help build some new services for students.

Time Frame of Study
It should take about forty minutes during a regular class period to finish the questionnaires.

What You Will Be Expected To Do
If you would like to take part, you will get a packet that has three questionnaires and another form. The first questionnaire, the Parental Attachment Questionnaire (PAQ), asks about how available you feel that your parents are to you, how much they understand you, and how much they accept you. The second questionnaire is the Inventory of Parent and Peer Attachment (IPPA), and asks about how open you feel your parents are to you and how you feel they respond to you. The Rutgers Alcohol Problem Index is the third questionnaire and asks about your use of alcohol in the past six months. The other form asks about your age, grade, race, culture, and members of your house. In the packet, there will also be a list of people you can talk to about some of these things if you would like to.

Participation Is Up To You
It is completely up to you to take part in this study. If you change your mind at any time, it is okay. There will not be any consequences at all.

Seton Hall University
College of Education and Human Services
Department of Professional Psychology and Family Therapy
Tel: 973-761-9491
400 South Orange Avenue, South Orange, New Jersey 07079-3685

ENRICHING THE MIND, THE HEART AND THE SPIRIT
There Will Be No Way To Identify You

Your identity will be safe at all times. I will ask you to keep your name off of any of the papers in the packet. The numbers on the pages are random numbers and will be used to know how many people took part in the study. There will be no way to identify you or your school, because I will only talk about group results.

Papers Will Be Kept Private

All papers will be collected and kept to protect you. When you are finished filling out the questionnaires, you will return them to me in a blank, sealed envelope. Finished questionnaires will be stored in a locked cabinet in a safe place. Since Dr. Wesley Matsui is my research advisor for this study, only he and I will be able to look at the finished questionnaires. There will be no way to link you to your answers.

I would like to thank you for thinking about taking part in this study. If you would like to take part in this study, please read, sign, and date the Informed Consent Form in this envelope. If you have any questions about this study or what you will be expected to do, please call me at (973) 761-9451. Thanks for your support.

Sincerely,

[Signature]

Alicia L. Poleschuk, M.S., LCSW
Doctoral Student, Marriage and Family Program
Department of Professional Psychology
and Family Therapy
Seton Hall University
400 South Orange Avenue
South Orange, NJ 07079
(973) 761-9451
poleshai@shu.edu
APPENDIX E: CONSENT FORM
Consent Form

Alicia Poleshuk, a doctoral student in the Marriage and Family Program in the Department of Professional Psychology and Family Therapy at Seton Hall University in South Orange, NJ is conducting research for the doctoral dissertation titled "The Developmental Trajectory of Male Adolescent Alcohol Use." This is a request for parental/guardian permission to allow students to participate in a study on the parent-child attachment relationship and adolescent alcohol use.

Purpose and Duration of Research

Consideration is appreciated. As a result of student participation, the goal is to learn about the factors contributing to male adolescent alcohol use. The changes involved in going to a new school are acknowledged as a stressful time for adolescents. Therefore, the study will be examining the effects of the parent-child relationship on alcohol use during freshman and senior years. It is estimated that student involvement will take approximately forty minutes.

Procedure

If parental/guardian permission is granted and if the student is also interested in participating, students will get a packet that has three questionnaires and a demographic form. The packets will be completed during a regularly scheduled English class.

Questionnaires

The first questionnaire is the Parental Attachment Questionnaire (PAQ), which asks questions such as, "in general, my parents understand my problems and concerns" and "in general, my parents protect me from danger and difficulty." The second questionnaire is the Inventory of Parent and Peer Attachment (IPPA). Questions from the IPPA include, "my mother respects my feelings" and "my father helps me talk about my difficulties." The Rutgers Alcohol Problem Index (R-API) is the third questionnaire and asks questions whether the participant has ever, "noticed a change in your personality" or "[were] told by a friend or neighbor to stop or cut
down drinking." A demographic form asking about age, grade, race, ethnicity, religion and household composition, will also be included in the packet. In addition, referral information will be provided should students wish to talk to someone about these issues.

**Voluntary Participation**
Involvement in this study is completely voluntary. Parents/guardians and students may withdraw from the study at any time without consequence. Withdrawal will not involve any penalties and/or loss of benefits for students.

**Anonymity Preservation**
Student identities will be protected at all times. Students will be instructed to avoid including names and/or any other identifying information on the research materials. Any report on the data from this study will in no way identify the students or the school. Results will only be reported as group.

**Confidentiality Maintenance**
All materials will be collected and stored with confidence. Upon completion of the questionnaires, materials will be returned in an unmarked, sealed envelope. Returned questionnaires will be stored in a locked cabinet in a secured location and will be accessible only to the researcher and the research advisor.

**Anticipated Risks and Discomfort**
Due to the fact that the study is merely an investigation and students will not be receiving any treatment, there are minimal risks. Because the questionnaires ask about personal issues, some students may experience discomfort. Should students become uncomfortable during or after completing the questionnaires, they will be told to contact one of the agencies listed in the packet, a family member, school personnel, or the researcher. In addition, the Director of the High School Guidance Department, Mr. Ulrich, may be reached at (201) 261-1844.

**Anticipated Benefits**
By responding to research materials, students may become aware of some of their behavior(s).

Upon completion of this study, the researchers will provide the school administration with a brief group summary. Findings will be presented in group form to protect the identities of individual participants. Results will assist in identifying student needs and will provide additional information which may assist in the development of student services.

Seton Hall University
Institutional Review Board

**Nov 15 2005**

Approval Date

Expiration Date

Nov 15 2006
Research Contact
Thank you in advance for your consideration. Please contact the researcher, Alicia Poleshuk if you would like to receive a copy of summary results. Any questions regarding this study or what to expect from students’ voluntary participation, should be directed to Alicia Poleshuk at (973) 761-9451. Any questions about student rights to participate in this research or if a student has been placed at risk, contact the research advisor, Dr. Wesley Matsui at (973) 761-9451 or Dr. Mary Ruzicka, the Director of Seton Hall University Institutional Review Board for Human Subjects Research at (973) 313-6314.

This signature will allow the researcher to obtain the student’s assent to participate. Please return both this signed Consent Form and the Assent Form (with both signatures) in the enclosed self-addressed, stamped envelope as soon as possible. A copy of this signed and dated form will be returned.

The invaluable support is appreciated.

Parent/Legal Guardian __________________________________________ Date __________

Child’s Name ________________________________________________ Age _______

Seton Hall University
Institutional Review Board

Exp. Date: NOV 15 2006

Approval Date

NOV 15 2005
APPENDIX F: ASSENT FORM
Alicia Poleshuk, a doctoral student in the Marriage and Family Program in the Department of Professional Psychology and Family Therapy at Seton Hall University in South Orange, NJ is studying how relationships with parents affect alcohol use. Some parents/guardians have said that it’s okay to include some students in this study and now Alicia, the researcher, would like to see if it’s okay with the student.

Purpose and Time Frame of Study
Thanks for thinking about taking part in this study. Freshman and seniors are under a lot of stress. So, this study will try to see if relationships with parents/guardians make a difference on whether or not teenagers decide to use alcohol during stressful times. It should take about forty minutes to finish the questionnaires.

What Students Will Be Expected To Do
If a student would like to take part, he will get you a packet that has three questionnaires and another form. The packets will be given out during an English class. Please be aware that when this Assent Form is returned after both the student and his parents/guardian have signed it, it means that the student agrees to take part in this study.

Questionnaires
The first questionnaire is the Parental Attachment Questionnaire (PAQ), which asks about things like, “in general, my parents have trust and confidence in me” and “in general, my parents take my opinion seriously.” The Inventory of Parent and Peer Attachment (IPPAA), the second one asks questions like, “if my mother knows something is bothering me, she asks me about it” and “my father helps me talk about my difficulties.” The third questionnaire is the Rutgers Alcohol Problem Index (RAPA) and asks about whether or not a student has, “noticed a change in your personality” or “[were] told by a friend or neighbor to stop or cut down drinking.”

Seton Hall University Institutional Review Board
NOV 15 2005

College of Education and Human Services
Department of Professional Psychology and Family Therapy
400 South Orange Avenue, South Orange, New Jersey 07079-2185

Expiration Date
NOV 15 2006

Approval Date

ENRICHING THE MIND, THE HEART AND THE SPIRIT
The other form asks questions about age, grade, race, ethnicity, religion and members of the home. All of the answers are very important.

Participation Is Up To The Student
It is completely up to the student to take part in this study. If a student or his parents/guardians change your minds at any time, it is okay. There will not be any consequences at all.

There Will Be No Way To Identify Students
Student identity will be safe at all times. Students will be asked to keep their names off of all of the papers in the packet. The numbers on the pages are random numbers that will be used to know how many people took part in the study. There will be no way to link a student to his answers. Also, any report of the results will not name either students or their school.

Papers Will Be Kept Private
All papers will be collected and kept to protect students. When students are finished completing the questionnaires, they will return them in a sealed envelope. Finished questionnaires will be kept in a locked cabinet in a safe place. Since there is no record of student names, student identities will not be given out at any time. Since Dr. Matsui is the research advisor for this study, only he and the researcher will be able to look at finished questionnaires.

Risks and Discomfort
There are a few risks in involvement because this study is only an investigation. Students will not receive any type of treatment. Since the questionnaires ask about personal issues, some students may feel uncomfortable. So, if a student feels uncomfortable and/or would like to talk to someone, he should reach out to one of the agencies listed in the packet, a family member, someone at school, or the researcher. Also, a student can call the Director of the High School Guidance Department, Mr. Ulrich at (201) 261-1844.

Benefits
By answering the questionnaires, students may become aware of some of things they’ve been doing. When this study is done, the researcher will talk about the results with the school administration. She will only talk about group results. There will be no way to tell who the students are. Results from this study may help build some new services for students.

Contact Information

INSTITUTIONAL REVIEW BOARD

Approval Date

Expiration Date

NOV 15 2005

NOV 15 2006
copy of study results, he can call the researcher, Alicia Poleshuk. If a student has any questions about this study or what he will be expected to do, please feel free to call Alicia at (973) 761-9451. If there are any questions about student rights or if a student has been harmed, please contact Dr. Wesley Matsui at (973) 761-9451 or Dr. Mary Ruzicka, the Director of Seton Hall University Institutional Review Board for Human Subjects Research at (973) 313-6314.

If the student agrees to take part in this study, sign and date the end of this form. The researcher also needs a parent/guardian's signature. After everyone signs this Assent Form, please send it back in the enclosed, stamped envelope. Students will get back a copy to keep. Thanks for supporting this study.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent/Legal Guardian</td>
<td>Date</td>
</tr>
</tbody>
</table>

Seton Hall University Institutional Review Board

Expiration Date

NOV 15 2006

Approval Date
Alicia Poleshuk, a doctoral student in the Marriage and Family Program in the Department of Professional Psychology and Family Therapy at Seton Hall University in South Orange, NJ is studying how relationships with parents affect alcohol use. Alicia, the researcher would like to see if it’s okay to include students in this study.

**Purpose And Length Of Study**
Thanks for thinking about taking part in this study. Freshman and seniors are under a lot of stress. So, this study will try to see if relationships with parents/guardians make a difference on whether or not teenagers decide to use alcohol during stressful times. It should take about forty minutes to finish the questionnaires.

**What You Will Be Expected To Do**
If a student would like to take part, the student will get a packet that has three questionnaires and another form. The packets will be given out during an English class. Please be aware that when this signed Informed Consent Form is returned, it means that the student agrees to take part in this study.

**Questionnaires**
The first questionnaire is the Parental Attachment Questionnaire (PAQ), which asks about things like, "in general, my parents have trust and confidence in me" and "in general, my parents take my opinion seriously." The second one, the Inventory of Parent and Peer Attachment (IPPA), asks about things like, "if my mother knows something is bothering me, she asks me about it" and "my father helps me talk about my difficulties." The third questionnaire is the Rutgers Alcohol Problem Index (RAPI) and asks about whether or not a student has, "noticed a change in your personality" or "[were] told by a friend or neighbor to stop or cut down drinking." The other form asks things about age, grade, race, ethnicity, religion and members of living in the house. All answers are very important.

**Participation Is Up To The Student**
It is completely up to the student to take part in this study. If a student changes his mind at any time, it is okay. There will not be any consequences or any loss of benefits at all.

**There Will Be No Way To Identify Students**
Student identity will be safe at all times. Students will be asked to keep their names off of all of the papers in the packet. The numbers on the pages are random numbers that will be used to see how many people took part in this study. There will be no way to link students to their answers. Also, any report of the results will not name either students or the school.

---

Seton Hall University  
Institutional Review Board

College of Education and Human Services  
Department of Professional Psychology and Family Therapy

400 South Orange Avenue, South Orange, New Jersey 07079-2685

Expiration Date: NOV 15 2006

Approval Date: NOV 15 2005
Papers Will Be Kept Private
All papers will be collected and kept to protect the students. When students are finished completing the questionnaires, they will return them in a sealed envelope. Finished questionnaires will be kept in a locked cabinet in a safe place. Since there is no record of personal information, student identities will not be given out at any time. Since Dr. Matsui is the research advisor for this study, only he and the researcher will be able to look at finished questionnaires.

Risks and Discomfort
There are a few risks in student involvement because this study is only an investigation. Students will not receive any type of treatment. Since the questionnaires ask about personal issues, students may feel uncomfortable. So, if a student becomes uncomfortable and/or would like to talk to someone, he should reach out to one of the agencies listed in the packet, a family member, someone at school, or the researcher. Also, students can call the Director of the High School Guidance Department, Mr. Ulrich at (201) 261-1844

Benefits
By answering the questionnaires, students may become aware of some of their behavior. When this study is done, the researcher will talk about the results with the school administration. The researcher will only talk about group results. There will be no way to tell who the students are. Results from this study may help build some new services for students.

Contact Information
Thanks again for thinking about taking part in this study. If a student would like to receive a copy of study results, he can call the researcher, Alicia Poleshek. If there are any questions about this study or what a student will be expected to do, please feel free to call Alicia at (973) 761-9451. If there are any questions about student rights or if a student has been placed at risk, call Dr. Wesley Matsui at (973) 761-9451 or Dr. Mary Ruzicka, the Director of Seton Hall University Institutional Review Board for Human Subjects Research at (973) 313-6314.

If a student would like to take part in this study, please sign and date the end of this form. Please return this signed Informed Consent Form in the enclosed, stamped envelope. Students will get a copy back.

Thanks for supporting this study.

Participant

Seton Hall University
Institutional Review Board

NOV 15 2005

Expiration Date

NOV 15 2008

Approval Date
August 31, 2005

Doctoral Student: Marriage and Family Program
Department of Professional Psychology and Family Therapy
Seton Hall University
400 South Orange Avenue
South Orange, NJ 07079

Dear Ms. Poleshuk:

This letter is my consent to allow you to recruit interested participants from Bergen Catholic High School for your research.

I am aware that your study will specifically center on alcohol use during life-cycle transition periods in our students enrolled in their freshman and senior years. I thank you for the information on the purpose, duration, and procedures involved with your research.

With the knowledge that participation is voluntary and anonymity and confidentiality will be preserved, I give my consent willingly to your recruitment of participants from Bergen Catholic.

Yours truly,

[Signature]
Dr. Joseph S. Fusco
Principal

JSF:jvs
APPENDIX I: DEMOGRAPHIC PAGE
Age: _________________

Grade level in school: ____________

Mother's Ethnic/Cultural Background: ________________

Father's Ethnic/Cultural Background: ________________

Religious Affiliation: ________________

Household Composition: (Please circle one):

Two Biological Parents

Biological Parent and Stepparent

One Biological Parent

One Stepparent

Legal Guardian

Other Relative/Friend
If you would like more information about alcohol and related problems, please contact the following agencies:

Council on Alcoholism and Drug Abuse of Bergen, Inc.
(201) 488-8680
www.bergenecouncil.org

Al-Anon/Alateen
(613) 723-8484
www.al-anon.org

If you feel that either you or a friend have a problem with alcohol (and/or other drugs), please contact the following agency for treatment and/or a referral for treatment:

High Focus Centers
(800) 877-FOCUS
www.highfocuscenters.com

If you would like to discuss alcohol and/or any related problems, the Director of Guidance, Mr. Ulrich, may be reached at (201) 261-1844.
APPENDIX K: PAQ
This questionnaire asks you about your mother and father. If you have more than one (1) mother and one (1) father, think about the mother and father to whom you feel closest.

**M**

In the first column (marked M) I am thinking about my:

1. biological mother
2. stepmother
3. adopted mother
4. foster mother
5. other (please write-in)

6. I will not be answering this column because I don't have a mother.

**F**

In the second column (marked F) I am thinking about my:

1. biological father
2. stepfather
3. adopted father
4. foster father
5. other (please write-in)

6. I will not be answering this column because I don't have a father.

<table>
<thead>
<tr>
<th>Not at All (0-10%)</th>
<th>Somewhat (11-35%)</th>
<th>A Moderate Amount (36-65%)</th>
<th>Quite a Bit (66-90%)</th>
<th>Very Much (91-100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

In general, my mother/father...

**M**

1. is someone I can count on to listen to me when I feel upset.
2. supports my goals and interests.
3. sees the world differently than I do.
4. understands my problems and concerns.
5. respects my privacy.
6. limits my independence.
7. gives me advice when I ask for it.
8. takes me seriously.
9. likes me to make my own decisions.
10. criticizes me.
11. tells me what to think or how to feel.
12. gives me attention when I want it.
13. is someone I can talk to about anything.

**F**

14. has no idea what I am feeling or thinking.
15. lets me try new things out and learn on my own.
16. is too busy to help me.
17. has trust and confidence in me.
18. tries to control my life.
19. protects me from danger and difficulty.
20. ignores what I have to say.
21. is sensitive to my feelings and needs.
22. is disappointed in me.
23. gives me advice whether or not I want it.
24. respect my decisions, even if they don't agree.
25. does things for me which I would rather do for myself.
26. is someone whose expectations I feel I have to meet.
27. treats me like a younger child.
<table>
<thead>
<tr>
<th>Not at All (0-10%)</th>
<th>Somewhat (11-33%)</th>
<th>A Moderate Amount (36-65%)</th>
<th>Quite A Bit (66-90%)</th>
<th>Very Much (91-100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>28. I looked forward to seeing</td>
<td>35. who made me feel guilty and anxious.</td>
<td>36. I liked telling about what I have done recently.</td>
<td>37. for whom I felt feelings of love.</td>
<td>38. I tried to ignore.</td>
</tr>
<tr>
<td>29. with whom I argued.</td>
<td>30. with whom I felt comfortable.</td>
<td>31. who made me angry.</td>
<td>32. I wanted to be with all the time.</td>
<td>33. towards whom I felt cool and distant.</td>
</tr>
<tr>
<td>(go to next column)</td>
<td>(go to next column)</td>
<td>(go to next column)</td>
<td>(go to next column)</td>
<td>(go to next column)</td>
</tr>
</tbody>
</table>

**Following times spent together, I leave my mother/father...**

<table>
<thead>
<tr>
<th>M</th>
<th>F</th>
<th>42. with warm and positive feelings.</th>
<th>43. feeling let down and disappointed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(go to next column)</td>
<td>(go to next column)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**When I have a serious problem or an important decision to make...**

<table>
<thead>
<tr>
<th>M</th>
<th>F</th>
<th>44. I look to my family for help.</th>
<th>48. I ask it over with a friend.</th>
</tr>
</thead>
<tbody>
<tr>
<td>45. I go to a therapist, school counselor, or clergy (priest, rabbi, or minister).</td>
<td>49. I know that my family will know what I should do.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>46. I think about what my mom or dad might say.</td>
<td>50. I ask my family for help if my friends can't help.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47. I work it out on my own, without help from anyone.</td>
<td>(go to next column)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**When I go to my mother/father for help...**

<table>
<thead>
<tr>
<th>M</th>
<th>F</th>
<th>51. I feel more sure of my ability to handle the problems on my own.</th>
<th>54. I feel sure that things will work out as long as I follow my parent's advice.</th>
</tr>
</thead>
<tbody>
<tr>
<td>52. I continue to feel unsure of myself.</td>
<td>53. I feel that I would have gotten more understanding from a friend.</td>
<td>55. I am disappointed with their response.</td>
<td></td>
</tr>
<tr>
<td>(go to next column)</td>
<td>(go to next column)</td>
<td>(go to next column)</td>
<td>(go to next column)</td>
</tr>
</tbody>
</table>
APPENDIX L: IPPA-PARENT SUBSCALES
APPENDIX M: RAPI
### Rutgers Alcohol Problem Index (RAPI)

Different things happen to people while they are drinking ALCOHOL or because of their ALCOHOL drinking. Several of these things are listed below. Indicate how many times each of these things happened to you **within the last six months**.

Use the following code:

- **1 = None**
- **2 = 1-2 times**
- **3 = 3-5 times**
- **4 = More than 5 times**

#### How Many Times Has This Happened To You While You Were Drinking Or Because Of Your Drinking During The Last Six Months?

<p>| | | | | |</p>
<table>
<thead>
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<tr>
<td>Not able to do your homework or study for a test</td>
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<td>Got into fights with other people (friends, relatives, strangers)</td>
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<tr>
<td>Missed out on other things because you spent too much money on alcohol</td>
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<td>Went to work or school high or drunk</td>
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<td>Caused shame or embarrassment to someone</td>
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<td>Neglected your responsibilities</td>
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<td>Relatives avoided you</td>
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<tr>
<td>Felt that you needed more alcohol than you used to in order to get the same effect</td>
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<td>Tried to control your drinking (tried to drink only at certain times of the day or in certain places, that is, tried to change your pattern of drinking)</td>
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<td>Had withdrawal symptoms, that is, felt sick because you stopped or cut down on drinking</td>
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<td>Noticed a change in your personality</td>
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<td>Felt that you had a problem with alcohol</td>
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<td>Missed a day (or part of a day) of school or work</td>
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<td>Wanted to stop drinking but couldn’t</td>
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<td>Suddenly found yourself in a place that you could not remember getting to</td>
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<td>Passed out or fainted suddenly</td>
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<td>Had a fight, argument or bad feeling with a friend</td>
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<tr>
<td>Had a fight, argument or bad feeling with a family member</td>
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<td>Kept drinking when you promised yourself not to</td>
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<td>Felt you were going crazy</td>
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<td>Had a bad time</td>
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<td>Felt physically or psychologically dependent on alcohol</td>
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<tr>
<td>Was told by a friend, neighbor or relative to stop or cut down drinking</td>
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Dear Student:

Thank you very much for the time that you are spending here today. Permission forms were sent out a couple of weeks ago and I have not received written permission for you to take part in this study. That is okay, but at this point, it is impossible to give you the questionnaires.

All of the packets look exactly the same and have the same number of pages in them. This way, no one will be able to tell who has what packet.

I have given you some activities that I hope you find enjoyable. I ask you to use this time in a useful way for you.

Sincerely,

Alicia L. Poleshuk
APPENDIX O: MATERIALS GIVEN TO NON-PARTICIPANTS
This questionnaire asks you about entertainment. Trivia about movies and television are included. Available at www.fun trivia.com.

Please choose the one correct answer.

1. Name Eddie Murphy's con artist character in the movie "Trading Places"?
   A. Axel Foley
   B. Billy Ray Valentine
   C. Jeff Johnson
   D. Lester Watkins

2. In "Spider-Man," Peter Parker gains his powers after being bitten by a radioactive spider?
   A. True
   B. False

3. In the film "Tommy Boy," Chris Farley's character passe his college history class with what grade?
   A. C
   B. D
   C. D+
   D. C-

4. On the "Simpsons," who replaced Homer in right field as a ringer for Mr. Burns' baseball team?
   A. Barry Bonds
   B. Darryl Strawberry
   C. Rickey Henderson
   D. Ken Griffey Jr.

5. In the "Usual Suspects," Kevin Spacey plays the role of a seemingly harmless con artist, Roger Kint. What is Roger Kint's nickname?
   A. Verbal
   B. Insatiable
   C. Smooth
   D. Happy

6. Billy Madison agrees to re-complete his education in order to inherit what?
   A. A casino
   B. A bank franchise
   C. A shopping mall
   D. A hotel chain

7. In "A Few Good Men," what is the name of the Marine colonel played by Jack Nicholson?
   A. Jonathan Kendrick
   B. Daniel Kaffee
   C. Nathan Jessep
   D. Jack Ross

8. On the "Simpsons," who plays Homer's half-brother, Herbert Powell?
   A. Jack Nicholson
   B. Dabney DeVito
   C. Tom Hanks
   D. Jeff Daniels
9. In “Austin Powers,” Dr. Evil mentions that his father claimed to have invented what?
A. The Hustle
B. The Rubik’s Cube
C. The Tap Shoe
D. The Question Mark

10. In “Star Wars,” the aunt that Luke lived with is named:
A. Anydala
B. Beru
C. Organa
D. Antilles

11. In “The Lord of the Rings,” who took the One Ring after being lost for so long?
A. Gollum/Smeagol
B. Frodo Baggins
C. Saruman
D. Óllo Baggins

12. On the “Simpsons,” what is the name of the convenience store clerk?
A. Apu
B. Smithers
C. Barney
D. Moe

13. In “Me, Myself, and Irene,” where is Charlie when he first becomes Hank?
A. Grocery store
B. Barber shop
C. In the park
D. Driving a car

14. What is the name of the college in “Animal House?”
A. Faber
B. Wormer
C. Varber
D. Delta

15. In “Anger Management,” Dave is a Brown University alumni?
A. True
B. False

16. In “Clerks,” Dante works at Quick Stop Groceries?
A. True
B. False

17. In the “Gladiator,” who plays Marcus Aurelius?
A. Joaquin Phoenix
B. Richard Harris
C. Russell Crowe
D. None of these

18. In “Batman Begins,” where does Bruce Wayne first find Bruce Wayne?
A. At school
B. In prison
C. In the Batcave
D. At the opera

19. In “X-Men,” what is Wolverine’s first name?
A. Logan
B. Frank
C. George
D. James
Which of the following was the only high end car to forth for production in 2007?

- Tesla Roadster
- Ford GT
- Chevrolet Corvette
- Audi R8
- Porsche 911

Which of the following ranks the most revenue yields in the NFL in 2007?

- Dallas Cowboys
- New England Patriots
- San Francisco 49ers
- New York Giants
- New England Patriots

Which of the following products was at least 1,000 available per 100

- Nintendo Wii
- Apple iPhone
- Facebook
- YouTube
- Google

What of the following guarantees the NFL in anything oddments?

- National Football League
- National Basketball Association
- Major League Baseball
- National Hockey League
- Major League Soccer

Which of the following guarantees the NFL in anything oddments?

- National Football League
- National Basketball Association
- Major League Baseball
- National Hockey League
- Major League Soccer

This section asks you questions about the 2007 season. Please circle the ONE correct answer.

What was the total number of touchdowns in 2007?

- 2,000
- 1,500
- 1,000
- 500
- 700

What of the following statements is the NFL in print exams for a

- $2,000
- $1,500
- $1,000
- $500
- $700

FOOTBALL SEASON TRIVIA (Q2)
Part II
This section asks you about the 2004-2005 NFL season. Please circle the one correct answer.

1. On the Thursday before opening day, which team took on the defending Super Bowl champions?
   A. Arizona Cardinals
   B. Carolina Panthers
   C. Indianapolis Colts
   D. Pittsburgh Steelers

2. On the first Monday Night Football of the season, which wide receiver broke his leg?
   A. Donald Driver
   B. Muhsin Muhammad
   C. Ricky Proehl
   D. Steve Smith

3. Which running back ran for over 150 yards in his first NFL start in Week 1?
   A. Duce Staley
   B. LaDanian Tomlinson
   C. Quentin Griffin
   D. Dominick Davis

4. In Week 1, Deion Sanders had 1 punt return for how many yards?
   A. 57
   B. 3
   C. 67
   D. 5

5. Eli Manning started for the New York Giants in Week 1?
   A. True
   B. False

6. In Week 2, which team pulled off a come from behind victory in the fourth quarter against the Denver Broncos?
   A. Jacksonville Jaguars
   B. Oakland Raiders
   C. San Diego Chargers
   D. Detroit Lions

7. Which team did the Eagles beat in Week 2 on Monday Night with large contributions from Donovan McNabb and Terrell Owens?
   A. Minnesota Vikings
   B. Indianapolis Colts
   C. Green Bay Packers
   D. Cleveland Browns

8. When the Rams played the Falcons in Week 2, who had the most running yards in the game?
   A. Marc Bulger
   B. Warrick Dann
   C. Michael Vick
   D. Marshall Faulk

9. In Week 2, which rookie quarterback went in when the starting quarterback on his team sustained an elbow injury?
   A. Eli Manning
   B. Ben Roethlisberger
   C. Joey Harrington
   D. Marc Bulger

10. At the end of Week 2, how many teams were 2-0?
    A. 5
    B. 6
    C. 7
    D. 8
BASEBALL TRIVIA QUESTIONNAIRE

Available at www.funtrivia.com. A multiple choice quiz about baseball MVP Awards. Please circle the letter of the correct answer.

THERE IS ONLY ONE CORRECT ANSWER.

1. Which player won the first American League season MVP Award in 1911?
   ****A. Julian Javier
   ****B. Ty Cobb
   ****C. Joe Tugnutt
   ****D. Raul Alcantara

2. Which of the following pitchers did not win a season MVP and Cy Young award in the same season?
   ****A. Roger Clemens
   ****B. Bob Gibson
   ****C. Bob Feller
   ****D. Denny McLain

3. Which player won the American League MVP in 2003?
   ****A. Barry Bonds
   ****B. Josh Beckett
   ****C. Alex Rodriguez
   ****D. Albert Pujols

4. Who was the first player to win an MVP Award with two different teams?
   ****A. Brooks Robinson
   ****B. Roger Hornsby
   ****C. Walter Johnson
   ****D. Whitby Ford

5. Who was the first player in history to win three consecutive season MVP Awards?
   ****A. Don Mattingly
   ****B. Barry Bonds
   ****C. Rickey Henderson
   ****D. No one has done this

6. In which year did the MVP Award begin?
   ****A. 1888
   ****B. 1911
   ****C. 1945
   ****D. 1968

7. In 1975, it could not be decided who would be the National League MVP. The award was finally shared by Keith Hernandez of the Cardinals and which Pittsburgh Pirate?
   ****A. Rod Carew
   ****B. Harmon Killebrew
   ****C. Ted Williams
   ****D. Willie Stargell