

**YOUNG ADULT ALCOHOL INVOLVEMENT: THE  
ROLE OF PARENTAL MONITORING, CHILD  
DISCLOSURE, AND PARENTAL KNOWLEDGE  
DURING CHILDHOOD**

by

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## **ABSTRACT**

Underage drinking is a leading public health problem in the United States. Despite the empirical support for the protective influence of parental monitoring on youth alcohol involvement, recently the construct has been criticized for typically being a measure of parental knowledge of children's whereabouts, behaviors, and peer associations rather than active parental behavior. Moreover, studies exploring the role of child disclosure on parental knowledge and youth alcohol use remain scant.

Using data from the ongoing biennial National Longitudinal Survey on Youth surveys, exploratory and confirmatory factor analyses were applied to empirically define parental monitoring using measures encompassing multiple facets of the construct. Parental monitoring was ultimately operationalized using a second-order confirmatory factor model, with four first-order factors (i.e. parental school involvement, communication, time involvement, rules/decision-making) supporting the definition of a 'set of correlated parenting behaviors' (Dishion & McMahon, 1998). Consistent with a transactional conceptual framework (Wills & Dishion, 2004), path analysis examined the direct and indirect longitudinal associations between parental monitoring, child disclosure, parental knowledge, and alcohol involvement among children and young adults.

Findings indicated that parental monitoring was a significant protective factor for females across a number of alcohol use measures, both directly and indirectly via child disclosure, maternal knowledge, and early alcohol initiation in the case of subsequent heavier alcohol use. In males, higher monitoring levels in middle childhood protected against alcohol-problem use in young adulthood. Child disclosure reduced the odds of

binge drinking in females, controlling for negative peer pressure and maternal alcohol use.

Through proper monitoring practices, parents play an important role in reducing both short-term and long-term alcohol involvement in youth, particularly among females. Proper monitoring could help buffer the observed independent effect of negative peer pressure in early childhood on later youth alcohol use. Child disclosure was an important mediator that warrants further attention. The study provides further support for parenting influences on youth alcohol use and will help guide existing family-focused evidence-based programs aimed at reducing youth substance use and misuse.

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*In the name of Allah, Most Gracious, Most Merciful*

## **DEDICATION**

I want to dedicate my dissertation work to the memory of my soul mate, my friend, my late brother, Mohammad Hani Ghandour (May his soul rest in peace).

Just a few months after joining Hopkins, my brother died in a car accident, but his laughter that still echoes in my ears, his words of encouragement that play in my mind, and his spirit that continues to live on have been my sources of determination throughout the past five years. Bro, I love and miss you like no words or actions or tears could ever express. You are in my thoughts and prayers every day.

I hope I have made you proud.

I also want to dedicate my work to my wonderful loving parents, Adnan and Annie.

I would not have made it this far in life had it not been for you.

Thank you for planting in me the roots to stay true to where I came from, and for giving me the wings to fly to higher grounds. You have been my rock financially, intellectually, and emotionally. Without your friendship, encouragement and faith, I could not have made it this far in my personal and professional life.

Thank you for being the wonderful parents that you are...

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PREVIEW

# **TABLE OF CONTENTS**

**ABSTRACT**

**DEDICATION**

**ACKNOWLEDGEMENTS**

**TABLE OF CONTENTS**

**LIST OF TABLES**

**LIST OF FIGURES**

|   |          |
|---|----------|
| <b>CHAPTER 1. INTRODUCTION.....</b>                   | <b>1</b> |
| 1.1 PROBLEM STATEMENT.....                            | 1        |
| 1.2 SPECIFIC STUDY AIMS.....                          | 3        |
| <b>CHAPTER 2. BACKGROUND AND SIGNIFICANCE .....</b>   | <b>5</b> |
| 2.1 UNDERAGE DRINKING.....                            | 5        |
| 2.1.1 Initiation and consumption levels               |          |
| 2.1.2 Health problems and other negative consequences |          |
| 2.1.3 Potential risk and protective factors           |          |
| 2.2 PARENTAL MONITORING.....                          | 9        |
| 2.2.1 Parenting and parental monitoring defined       |          |
| 2.2.2 Guiding theories                                |          |
| 2.2.3 Conceptualization of parental monitoring        |          |
| 2.2.4 Operationalization of parental monitoring       |          |
| 2.2.5 Role in youth alcohol involvement               |          |
| 2.3 CHILD SELF-DISCLOSURE.....                        | 21       |
| 2.3.1 Significance                                    |          |
| 2.3.2 Potential predictors                            |          |
| 2.3.3 Role in youth alcohol involvement               |          |

|  |           |
|--|-----------|
| 2.4 OTHER FACTORS INFLUENCING THE ASSOCIATION BETWEEN PARENTAL MONITORING AND YOUTH ALCOHOL INVOLVEMENT..... | 24        |
| 2.5 GAPS IN THE EXTANT LITERATURE.....   | 30        |
| <b>CHAPTER 3. MATERIALS AND METHODS .....</b>  | <b>32</b> |
| 3.1 RESEARCH DESIGN.....   | 32        |
| 3.2 DATA COLLECTION.....   | 32        |
| 3.3 INSTRUMENTS.....   | 33        |
| 3.4 STUDY SAMPLE.....  | 34        |
| 3.5 MEASURES.....  | 38        |
| 3.5.1 Alcohol use measures   |           |
| 3.5.2 Parent monitoring, child disclosure and parental (maternal) knowledge                                  |           |
| 3.5.3 Other potential risk and protective factors  |           |
| 3.6 ANALYTICAL METHODS.....  | 48        |
| 3.6.1 Descriptive statistics   |           |
| 3.6.2 Exploratory factor analysis  |           |
| 3.6.3 Confirmatory factor analysis   |           |
| 3.6.4 Structural Equation Modeling/Path analysis   |           |
| 3.7 MISSINGNESS .....  | 55        |
| <b>CHAPTER 4. RESULTS: DESCRIPTION OF THE STUDY SAMPLES.....</b>   | <b>56</b> |
| 4.1 PROFILE OF THE NON-INTERVIEWED CHILDREN.....   | 56        |
| 4.2 PROFILE OF THE BASELINE AND FOLLOW-UP SAMPLES.....   | 57        |
| 4.3 PREVALENCE AND PATTERNS OF ALCOHOL INVOLVEMENT; DEMOGRAPHIC AND OTHER DIFFERENCES .....                  | 67        |
| 4.3.1 Prevalence and patterns of alcohol involvement   |           |
| 4.3.2 Demographic and other differences in alcohol involvement   |           |

|   |            |
|---|------------|
| <b>CHAPTER 5. RESULTS: PARENTAL MONITORING: OPERATIONALIZATION AND ASSOCIATED FACTORS.....</b>  | <b>78</b>  |
| 5.1 PARENTAL MONITORING: OPERATIONALIZATION.....  | 78         |
| 5.1.1 Exploratory factor analysis   |            |
| 5.1.2 Confirmatory factor analysis  |            |
| 5.2 PARENTAL MONITORING: ASSOCIATED FACTORS .....   | 91         |
| 5.2.1 Gender, race/ethnicity, and other child-level factors   |            |
| 5.2.2 Familial factors  |            |
| 5.2.3 Peer pressure and poverty status  |            |
| <b>CHAPTER 6. RESULTS: CHILD ALCOHOL INVOLVEMENT: THE CROSS-SECTIONAL ROLE OF PARENTAL MONITORING, CHILD DISCLOSURE, AND MATERNAL KNOWLEDGE.....</b>                | <b>96</b>  |
| 6.1. PARENTAL MONITORING, CHILD DISCLOSURE AND MATERNAL KNOWLEDGE.....  | 96         |
| 6.1.1. Factors associated with maternal knowledge   |            |
| 6.1.2. Factors associated with child disclosure   |            |
| 6.1.3. Gender differences   |            |
| 6.2. ALCOHOL USE IN CHILDREN: THE CROSS-SECTIONAL ROLE OF PARENTAL MONITORING, CHILD DISCLOSURE, MATERNAL KNOWLEDGE AND OTHER COVARIATES.....                       | 103        |
| 6.3. PARENTAL MONITORING, CHILD DISCLOSURE, MATERNAL KNOWLEDGE AND LIFETIME USE: GENDER DIFFERENCES .....   | 107        |
| <b>CHAPTER 7. RESULTS: PARENTAL MONITORING, CHILD DISCLOSURE, AND MATERNAL KNOWLEDGE IN PREDICTING SUBSEQUENT ALCOHOL INVOLVEMENT IN CHILDREN/YOUNG ADULTS.....</b> | <b>109</b> |
| 7.1. ALCOHOL INVOLVEMENT AT FOLLOW-UP: BIVARIATE ASSOCIATIONS BY PARENTAL MONITORING AND OTHER BASELINE CHARACTERISTICS .....                                       | 109        |

|  |            |
|--|------------|
| 7.1.1 Alcohol use at 1998 follow-up: differences by baseline characteristics           |            |
| 7.1.2 Alcohol use at 2002 follow-up: differences by baseline characteristics           |            |
| 7.1.3. Alcohol use at 2004 follow-up: differences by baseline characteristics          |            |
| 7.2 PREDICTING ALCOHOL INITIATION AT 12-14 YEAR OLD: EXPLORING GENDER DIFFERENCES..... | 114        |
| 7.3 PREDICTING ALCOHOL INVOLVEMENT AMONG YOUNG ADULTS.....                             | 117        |
| 7.3.1 Monthly alcohol use at the age of 16-18 years                                    |            |
| 7.3.2 Frequent alcohol use at the age of 16-18 years                                   |            |
| 7.3.3 Heavy drinking at the age of 16-18 years   |            |
| 7.3.4 Binge drinking, heavy drinking and problem use by 18-20 years                    |            |
| 7.3.5 The influence of maternal alcohol use  |            |
| <b>CHAPTER 8. DISCUSSION AND CONCLUSIONS.....</b>                                      | <b>130</b> |
| 8.1 SUMMARY OF FINDINGS.....   | 130        |
| 8.2 STUDY LIMITATIONS AND STRENGTHS.....   | 138        |
| 8.2.1 Limitations  |            |
| 8.2.2 Offsetting strengths   |            |
| 8.3 RELATION TO EXTANT LITERATURE.....   | 141        |
| 8.4 PUBLIC HEALTH IMPLICATIONS.....  | 147        |
| 8.4.1 Implications for measurement and research  |            |
| 8.4.2 Implications for prevention science  |            |
| 8.5 FUTURE DIRECTIONS FOR RESEARCH.....  | 149        |
| 8.6 CONCLUSIONS.....   | 151        |
| <b>REFERENCES .....</b>  | <b>153</b> |
| <b>CURRICULUM VITAE.....</b>   | <b>171</b> |

## LIST OF TABLES

|            |  |
|------------|--|
| Table 3.1  | Numbers of NLSY children/young adults assessed in 1996 and followed up in 1998, 2002 and 2004                                  |
| Table 3.2  | NLSY specific questions of parental monitoring and other measures used in the present study                                    |
| Table 4.1  | Weighted estimates of the demographics of baseline and follow-up samples, NLSY children and young adults                       |
| Table 4.2  | Weighted descriptive profile of the baseline and follow-up samples, NLSY children and young adults                             |
| Table 4.3  | Weighted estimates of parental monitoring measures in baseline sample, NLSY children and young adults                          |
| Table 4.4  | Weighted estimates of selected covariates in baseline sample, NLSY children and young adults                                   |
| Table 4.5  | Weighted estimates of alcohol use measures in baseline and follow-up samples, NLSY children and young adults                   |
| Table 4.6  | Weighted estimates of alcohol use measures, NLSY children and young adults followed up in all four time points                 |
| Table 4.7  | Weighted estimates of alcohol use by demographics in baseline sample, NLSY children and young adults                           |
| Table 4.8  | Weighted estimates of alcohol use by demographics in the 1998 follow-up sample, NLSY children and young adults                 |
| Table 4.9  | Weighted estimates of alcohol use by demographics in the 2002 follow-up sample, NLSY children and young adults                 |
| Table 4.10 | Weighted estimates of alcohol use by demographics in the 2004 follow-up sample, NLSY children and young adults                 |
| Table 5.1  | Eigenvalues for sample correlation matrix: EFA of original recoded parental monitoring items, baseline sample (1996)           |
| Table 5.2  | Selected fit indices for one-to-seven factor models: EFA of original recoded parental monitoring items, baseline sample (1996) |

|           |  |
|-----------|--|
| Table 5.3 | Promax-rotated factor loadings of a 6-factor EFA solution, baseline sample (1996)  |
| Table 5.4 | Eigenvalues for sample correlation matrix: EFA of final set of 15 parental monitoring items, baseline sample (1996)  |
| Table 5.5 | Selected fit indices for one-to-five factor models: EFA of final set of 15 parental monitoring items, baseline sample (1996)   |
| Table 5.6 | Promax-rotated factor loadings of one-to-five factor models using the final set of 15 parental monitoring items, baseline sample (1996)  |
| Table 5.7 | Promax-rotated factor loadings of four factor models using the final set of 15 parental monitoring items, baseline sample (1996)   |
| Table 6.1 | Cross-sectional associations between parental monitoring, child disclosure, and maternal knowledge, NLSY children and young Adults, baseline sample (1996)   |
| Table 6.2 | Weighted estimates of alcohol use by parenting measures and other covariates, NLSY children and young adults, baseline sample (1996)   |
| Table 6.3 | Cross-sectional associations between lifetime alcohol use and parental monitoring, child disclosure, and maternal knowledge, NLSY children and young adults, baseline sample (1996)  |
| Table 7.1 | Weighted estimates of alcohol use by parenting measures and other covariates, NLSY children and young adults, 1998 follow-up sample  |
| Table 7.2 | Weighted estimates of alcohol use by parenting measures and other covariates, NLSY children and young adults, 2002 follow-up sample  |
| Table 7.3 | Weighted estimates of alcohol use by parenting measures and other covariates, NLSY children and young adults, 2004 follow-up sample  |
| Table 7.4 | Path analysis of the direct and indirect associations of parental monitoring, child disclosure, maternal knowledge, incidence of lifetime alcohol use at 1998 follow-up, and subsequent monthly alcohol use at 2002 follow-up, male and female NLSY children and young adults  |
| Table 7.5 | Path analysis of the direct and indirect associations of parental monitoring, child disclosure, maternal knowledge, incidence of lifetime alcohol use at 1998 follow-up, and subsequent frequent alcohol use at 2002 follow-up, male and female NLSY children and young adults |

Table 7.6 Path analysis of the direct and indirect associations of parental monitoring, child disclosure, maternal knowledge, incidence of lifetime alcohol use at 1998 follow-up, and subsequent heavy drinking at 2002 follow-up, male and female NLSY children and young adults

Table 7.7 Path analysis of the direct and indirect associations of parental monitoring, child disclosure, maternal knowledge, incidence of lifetime alcohol use at 1998 follow-up, and subsequent binge drinking, heavy drinking and alcohol problem use at 2002/2004 follow-up, male and female NLSY children and young adults

PREVIEW

## **LIST OF FIGURES**

- Figure 2.1 An integrated conceptual framework of parenting and child influences on adolescent alcohol involvement
- Figure 3.1 Diagram of the baseline sample in 1996, and the follow-up samples in 1998, 2002 and 2004
- Figure 5.1 Screeplot of EFA solution including all 33 parental monitoring measures, baseline sample (1996)
- Figure 5.2 Weighted factor loadings of the final second-order factor model of 15 parental monitoring measures, baseline sample (1996)
- Figure 6.1 A path analytic model illustrating the cross-sectional direct and indirect associations between parental monitoring, child disclosure and maternal knowledge and lifetime/past year use in childhood, baseline sample (1996)
- Figure 7.1 A path analytic model illustrating the longitudinal direct and indirect associations between parental monitoring, child disclosure and maternal knowledge in childhood and young adult alcohol involvement, baseline and follow-up samples (1996-2004)

## CHAPTER 1. INTRODUCTION

### 1.1 PROBLEM STATEMENT

Given the negative life outcomes associated with early alcohol involvement, underage drinking has been identified as a significant public health concern in the United States (NIAAA, 2004-5). Nationwide surveys, as well as studies in specific subpopulations, show that alcohol is the most commonly used substance among youth in the US. Recent national data indicate that 28% of those between the ages of 12 and 20 years old have had at least one alcoholic drink in the preceding month, two-thirds of which further reported having had five or more drinks on one occasion (NIAAA, 2004-5). Findings from the 2005 Monitoring the Future (MTF) study on secondary students indicated that 41% of eighth graders, 62% of tenth graders, and 73% of twelfth graders had used alcohol in their lifetime; 11%, 22%, and 25% respectively had also reported episodic heavy drinking, defined as having five or more drinks in a row at least once in the preceding two weeks (Johnston, O'Malley, Bachman, & Schulenberg, 2006).

The protective role of parents has been investigated in relation to several outcomes in adolescence, such as substance use, delinquency, and physical injury (Chen, Storr, & Anthony, 2005; DeVore & Ginsburg, 2005). One particular parenting practice that has received much attention in the literature is 'parental monitoring' (Chilcoat, Dishion, & Anthony, 1995; Chilcoat & Anthony, 1996; Dishion & McMahon, 1998), often defined as "a set of correlated parenting behaviors involving attention to and tracking of the child's whereabouts, activities, and adaptations" (Dishion & McMahon, 1998). Despite its empirical support, more recently, the multidimensional construct of monitoring has been shown to be mired with conceptual and measurement issues

(Dishion & McMahon, 1998; Stattin & Kerr, 2000). With the construct validity of its measurement in question, prior findings become limited in their empirical utility and application to preventive interventions.

Specifically, parental *monitoring*, while labeled as such, has typically been an assessment of actual or perceived parental *knowledge* (i.e. whether parents know where or with whom the child is), rather than active parental behaviors (Crouter & Head, 2002; DiClemente et al., 2001; Rai et al., 2003; Veal & Ross, 2006). Moreover, parental monitoring has been commonly operationalized as a unidimensional continuous construct using a scale whose items are not always comprehensive (Borawski, Ievers-Landis, Lovegreen, & Trapl, 2003; McHale, Crouter, & Tucker, 2001). The independent effects of other sources of knowledge (e.g., *child disclosure*) on parental knowledge and on children's behaviors have also only just begun to be disentangled (Smetana, Metzger, Gettman, & Campione-Barr, 2006; Stattin & Kerr, 2000).

Thus, despite the large body of literature on parental monitoring, additional research was needed on the conceptualization and operationalization of parental monitoring. Moreover, the direct and indirect effects of parental monitoring, child disclosure and parental knowledge on the youth's alcohol involvement remain unknown. Although there is increasing awareness of these three mechanisms in relation to other youth outcomes in late adolescence (Kerr, Stattin, & Trost, 1999; Stattin & Kerr, 2000), research examining these associations among younger groups of children as they relate to alcohol use is scant. Furthermore, related studies have been mostly cross-sectional, which limits our understanding of the directionality of the observed associations needed to delineate potential targets for intervention. Having a better understanding of the temporal

influences of parenting factors on children's risk for alcohol use will also guide the development of preventive interventions for children and their families.

The current study applied a transactional framework (Wills & Yaeger, 2003; Wills & Dishion, 2004) and built on multiple theories, such as the social context model of the development of adolescent antisocial behavior (Patterson, DeBaryshe, & Ramsey, 1989) to address the aforementioned gaps in the literature. Using prospective data on children and young adults, parental monitoring was empirically defined using theoretically-driven measures, and the indirect and direct effects of parental monitoring, child disclosure, and parental knowledge on the initiation of alcohol use in childhood and heavy alcohol involvement in young adulthood were examined. The study also considered the role of maternal alcohol use, negative peer pressure, and other important predictors and covariates on the observed associations.

## **1.2 SPECIFIC STUDY AIMS**

The overall purpose of the study was to use a theory-based latent variable empirical approach to empirically define and operationalize parental monitoring and examine its direct and indirect cross-sectional and prospective influences on alcohol involvement in youth. The potential mediating role of child disclosure and parental knowledge was examined. Gender differences in these associations were also explored.

**Aim 1:** To empirically define the construct of 'parental monitoring' in childhood.

**Sub Aim 1.1:** To empirically explore the multiple facets of parental monitoring using exploratory factor analysis, and empirically define the construct of parental monitoring using confirmatory factor analysis.

**Sub Aim 1.2:** To describe the factors associated with parental monitoring.

**Aim 2:** To examine cross-sectionally the inter-relationships between parental monitoring, child disclosure, and parental knowledge, and to explore how they relate to lifetime and past year alcohol use among children aged 10-12.

**Sub Aim 2.1:** To examine the independent and confounding influence of other child-level (e.g., concurrent externalizing behaviors), familial (e.g., home environment) and peer level (e.g., concurrent negative peer pressure) on the observed associations.

**Sub Aim 2.2:** To examine the independent and confounding influence of earlier maternal alcohol use on the observed associations.

**Aim 3:** To examine the direct as well as indirect effects of parental monitoring namely via child disclosure and parental knowledge at age 10-12 on youth alcohol involvement. To further examine the independent effects of child disclosure and parental knowledge and the moderating role of gender controlling for other important determinants.

**Sub Aim 3.1:** To test the abovementioned indirect and direct effects on the incidence of lifetime alcohol use at age 12-14.

**Sub Aim 3.2:** To test the abovementioned indirect and direct effects on subsequent frequent and heavy alcohol use in late adolescence and young adulthood.

## CHAPTER 2. BACKGROUND AND SIGNIFICANCE

### 2.1 UNDERAGE DRINKING

#### 2.1.1 Initiation and consumption levels

Alcohol use in the US is a significant public health concern. In 2007, two thirds of the twelfth grade students (66%), more than half (56%) and about a third (32%) of the tenth and eighth graders respectively reported having had at least one drink in the preceding year (Johnston et al., 2006). Heavy use was also somewhat substantial among this group of youth, such that 28%, 22%, and 10% (respectively) reported consuming alcohol heavily (i.e. having five or more drinks in a row at least once in the preceding two weeks) (Johnston et al., 2006). The proportion of youth who reported ever getting drunk in the preceding year was also relatively high across these three grade levels (46%, 34%, and 13% respectively) (Johnston et al., 2006). Estimates from the 2005 Youth Risk Behavior Survey (YRBS) present a somewhat similar picture; 75% of students in the ninth through twelfth grades reported having had at least one drink in their lifetime, 43% had consumed alcohol in the preceding thirty days, and 25% reported having had five or more drinks in a row also in the preceding thirty days (CDC, 2005). These findings on the prevalence of alcohol involvement in youth warrant close attention and highlight the need for further research relevant to preventive interventions.

Drinking often begins at very young ages. One study reported a 10% lifetime alcohol use prevalence among 9- to 10-year-olds (Donovan, 2004), and nearly a third of the youth in another study had consumed their first drink before age 13 (Grunbaum et al., 2004). A median age of 15 years for first alcohol use has also been reported (DeWit, Adlaf, Offord, & Ogborne, 2000). While early alcohol use is typically more common

among males, gender differences have been narrowing over the last decade. Self-reports of ever getting drunk among males in the eighth grade were only slightly higher, and about equal in males and females in the tenth grade (Johnston et al., 2006). Racial/ethnic differences with respect to alcohol use have been somewhat consistent across time for students in all grades; specifically, the prevalence of current and heavy drinking tends to be highest among White youth, followed by Hispanic youth, then African American youth (Johnston et al., 2006).

The findings relating alcohol involvement to the youth's socioeconomic status (SES) are mixed. One recent study has found that both abstinence and risk drinking (i.e. weekly consumption of over 21 drinks per week) were associated with lower parental social status (Mortensen, Jensen, Sanders, & Reinisch, 2006), whereas another reported negative associations among eighth graders and positive associations among older adolescents (twelfth graders) (O'Malley, Johnston, Bachman, Schulenberg, & Kumar, 2006). In contrast, research by Richter and colleagues suggested little to no association between parental SES (assessed via parental occupation and family affluence) and the risk of drunkenness (Richter, Leppin, & Nic Gabhainn, 2006).

### 2.1.2 Health problems and other negative consequences

Underage drinking has been associated with a range of adverse short- and long-term consequences including injuries, risk-taking behaviors, alcohol and substance-related disorders, and other health problems and fatalities. In 2005, 28% of all of motor-vehicle crashes among young drivers (15-20 years old) were alcohol-related, and it is estimated that approximately three teenagers die each day from drinking and driving

(NHTSA, 2005). Furthermore, lower ages of alcohol initiation have been linked to an increased likelihood of harmful behaviors, including drug use and sex with multiple partners (Grunbaum et al., 2004), physical fights (Hingson, Heeren, & Zakocs, 2001), and unintentional injury (Hingson, Heeren, Jamanka, & Howland, 2000). Approximately 142,701 alcohol-related emergency department visits are made each year by patients aged 12 to 21 years of age, and nearly half (42%) of all drug-related emergency department visits among patients of this age group involve alcohol (SAMHSA, 2006a). It is possible that early onset of alcohol use may be reflecting the interplay of individual and social factors that are bringing about substance use earlier than would normatively be the case. Nevertheless, and from a public health perspective, alcohol use among children and adolescents warrants close attention especially if delaying onset of use and misuse may possibly negate the occurrence of later problems, and thereby avert individual, social, economic, and health related costs.

While many young drinkers may reduce their alcohol consumption by the time they reach young adulthood in order to conform with the expectations and obligations of that phase of their life (Chilcoat & Breslau, 1996), there is evidence that early onset alcohol use is associated with a greater risk of problem drinking (Warner & White, 2003; Warner, White, & Johnson, 2007), abusive alcohol consumption, and the development of alcohol and other substance use disorders (DeWit et al., 2000; Grant & Dawson, 1998; Gruber, DiClemente, Anderson, & Lodico, 1996; Hawkins et al., 1997; Prescott & Kendler, 1999). A study using the National Survey on Drug Use and Health (NSDUH) 2002-2004 data showed that approximately six percent of those aged 12-17 years met criteria for alcohol abuse and/or dependence during that time period (SAMHSA, 2006b).

The National Longitudinal Alcohol Epidemiologic Survey (NLAES) of individuals aged 18 and older in the US showed that those who started to drink before the age of 15 were four times more likely to meet criteria for alcohol dependence during their lifetime (Grant & Dawson, 1998). Data from the National Longitudinal Survey of Youth (NLSY) have also shown that individuals who are binge drinkers in adolescence are more likely to binge drink in early adulthood (McCarthy & Gallo, 1992). Specifically, 50% of the males who were binge drinkers at ages 17 to 20 were also binge drinkers at 30 to 31, compared to approximately 20% of those who did not binge drink during adolescence (McCarthy & Gallo, 1992). In addition to an increased likelihood of alcohol and other substance-related disorders in adulthood, recent studies have shown that heavy exposure to alcohol during adolescence may interfere with normative development and increase the risk for memory loss and other cognitive impairments (The Center on Alcohol Marketing and Youth, 2006).

### 2.1.3 Potential risk and protective factors

The ecological model draws our attention to risk factors at multiple levels of the child's environment (Bronfenbrenner, 1979). Several factors at the individual level, family level, and contextual level have been shown to operate independently and/or jointly to predict alcohol involvement in youth, among other behaviors (Hawkins, Catalano, & Miller, 1992). Specifically, child-level risk factors for the development of alcohol use disorders (abuse and/or dependence) include the child's history of problem behavior (Ensminger, Juon, & Fothergill, 2002; Windle, 1990), whereas the child's self-disclosure about his or her whereabouts serves as a protective factor (Soenens,