ORIGINAL ARTICLE

Low Perceived Chances for Success in Life and Binge Drinking Among Inner-City Minority Youth

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Purpose: To examine the relationship between low perceived chances for success in life and binge drinking in a sample of economically disadvantaged, predominantly minority, urban adolescents.

Methods: A sample of predominantly black and Hispanic students (N = 774) from 13 inner-city schools completed confidential questionnaires in the 7th, 8th, and 9th grades. Eight items measured students' estimation of achieving certain adaptive life goals. Students who reported that they typically drink five or more drinks per drinking occasion were identified as binge drinkers.

Results: Chi-square proportional analyses indicated that rates of binge drinking increased and perceived life chances decreased for both boys and girls from the 7th to 9th grade. A cross-lagged path analytic model revealed that higher perceived life chances in the 7th grade predicted less binge drinking in the 8th grade, whereas binge drinking in the 8th grade predicted lower perceived life chances in the 9th grade, controlling for change over time in both variables.

Conclusions: Low perceived chances of success in life appear to play a role in the initiation and escalation of binge drinking during early adolescence, with a reciprocal relationship between the two factors developing over time. © *Society for Adolescent Medicine, 2004*

KEY WORDS:
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Recent evidence shows that binge drinking is a serious and growing problem in the United States. A recent study found that binge drinking among adults in the United States increased by 35% from 1995 through 2001 using data from nationally representative samples [1]. Notably, rates of binge drinking (defined as having five or more drinks in a single occasion) were highest among participants aged 18 to 25 years, with underaged drinkers (aged 18 to 20 years) reporting 15.3 episodes of binge drinking per year on average. Although binge drinking rates were higher among males and Whites, the increased rates of binge drinking were observed across gender, race/ethnicity, and education levels.

Because binge drinking often begins during adolescence, a key factor in reducing population-based rates among adults in the United States is to improve our understanding of the epidemiology and etiology of binge drinking among subgroups of adolescents. This information can help to inform and improve prevention efforts. Data from the 2001 Monitoring the Future Study [2] indicate that 13% of 8th graders reported binge drinking in the past 2 weeks. Rates of binge drinking were higher among older age groups of adolescence, with 25% of 10th graders and 30% of 12th graders reporting binge drinking in the past 2 weeks. In the 1998 National Household Survey on Drug Abuse [3], a subset of youth engaged in very frequent binge drinking, with 7% of youth aged 12 to 20 reporting binge drinking episodes on five different occasions during the past month.

These figures are notable because adolescent binge drinking and other forms of alcohol use contribute to a variety of negative behavioral and health outcomes. These include: motor vehicle fatalities; risky sexual behaviors that can increase the risk for sexually transmitted diseases, HIV infection, and unwanted pregnancy; heavy levels of alcohol, tobacco, and illicit drug use; poor physical and mental health; and a variety of occupational, financial, legal, and interpersonal problems [4–6]. Indeed, alcohol use plays a central role in the three leading causes of death among adolescents: unintentional injuries, homicide, and suicide [7]. Although experimental or occasional alcohol use does not lead invariably to deleterious patterns of use, empirical evidence has accumulated showing that the early initiation of alcohol use is associated with problematic outcomes. This is likely to be particularly true for the early initiation of binge drinking and other types of heavy alcohol use.

Binge Drinking During Early Adolescence

Most research on binge drinking has been conducted with older youth, particularly college undergraduates [8,9]. Less is known about binge drinking among youth during the first years of adolescence. The existing research suggests that there is a great deal of diversity in the early patterns and developmental trajectories of binge drinking over the course of adolescence [10–12]. For example, using a school-based sample of primarily Hispanic and white adolescents from grades 7 to 12 (N = 1918), Colder et al [10] identified several discrete longitudinal drinking patterns representing different types of growth trajectories in alcohol use. Among the identified groupings were youth that were occasional heavy drinkers from the 7th grade through the later grades in high school (9% of sample), those that escalated in frequency of heavy drinking (37%) or escalated rapidly (6.3%), and those who were early heavy drinkers but declined in frequency over time (1.3%). High risk-takers and those with greater levels of emotional distress were more likely to be heavy drinkers or rapid escalators. Rapid escalation of heavy drinking was associated with highest risk of alcohol-related problems in the 12th grade.

Little research, however, has focused specifically on binge drinking among inner-city minority youth during early adolescence. Research is needed to increase our understanding of alcohol use and binge drinking among these youth because, in addition to the normative challenges of adolescence, minority youth from economically disadvantaged neighborhoods often must confront issues such as poverty, exposure to crime, and a lack of educational and occupational resources and opportunities [13]. A number of studies focusing on the experiences of inner-city minority youth suggest that adolescents living in impoverished communities may develop a sense of hopelessness about their chances for success in life and may come to believe that it is unlikely that they will achieve a variety of socially approved outcomes [14]. Hopelessness, defined as an individual's negative expectations regarding the self and the future, can develop owing to real or perceived lack of resources and opportunities and an expectation that desirable normative outcomes are not obtainable. Inner-city youth that struggle with feelings of hopelessness and lack of viable life options for the future may abandon conventional notions of success in favor of outcomes they can achieve in the short-term.

The notion that binge drinking may serve as a functional response to a lack of perceived life chances and feelings of hopelessness is consistent with Jessor's Problem Behavior Theory (PBT) [15]. PBT proposes that adolescents engage in problem behaviors to achieve social or personal goals that they believe they cannot achieve in more adaptive ways. According to PBT, alcohol use and other problem behaviors are purposeful and functional from the adolescent's point of view. This suggests that adolescents who believe they cannot achieve desired developmental goals in the short term (e.g., acceptance by peers, attention from adults) or in the longer term (e.g., educational, occupational, and other types of success) may engage in alcohol use as an alternative. The goal of the present study was to examine the relationship between low perceived chances for success in life and subsequent binge drinking among inner-city minority youth during early adolescence.

Methods

Students from 13 schools in New York City participated in the present study. Recruitment of schools began by first obtaining permission from school district personnel, and then from individual school principals. School district personnel were approached in four boroughs of New York City: Manhattan, Bronx, Brooklyn, and Queens (Staten Island was excluded because it is largely white.). Schools were eligible to participate if they were located in a predominantly minority community and had at least 75% minority students.

All students in regular education 7th grade classrooms of participating schools were selected for inclusion in the study. The full 7th grade sample consisted of 2229 participants: 49% were male, 48% were black, 32% Hispanic, 9% Asian, and 5% white. The sample was composed of economically disadvantaged youth from predominantly low socioeconomic status families as indicated by the fact that 62% of the students received free lunch at school. Approximately half (54%) of the students lived in two-parent households (including households with a stepparent), and 36% lived in mother-only households.

Approximately 87% of eligible students participated in the present study during the first assessment. Of the remaining students, about 10% were absent from school and 3% either did not receive parental consent or refused to participate. Approximately 80% of the 7th grade sample completed surveys in the 8th grade, and 66% of the 7th grade sample completed the follow-up assessment in the 9th grade. Although 35% of lifetime alcohol users dropped out compared with 32% of non-users over the course of the 3 years, this difference was not statistically significant, χ^2 (1) = 1.2, p = .27. Of the 1445 participants in the panel sample who completed all three assessments, 774 completed 50% or more of all items. This number was fairly low because the items on perceived life chances were at the end of the survey and not all participants were able to finish the survey, particularly in the 7th grade assessment. For this final sample (N = 774), an expectation maximization procedure was used to impute the remaining missing data points. The final panel sample was 38% male, 42% black, 33% Hispanic, 12% Asian, and 5% white. About 58% of the students in the final sample lived in two-parent households (including households with a step-parent), and 35% lived in mother-only households.

Students completed a self-report questionnaire annually from the 7th to 9th grades that assessed substance use behaviors and several psychosocial variables hypothesized to be associated with the initiation and escalation of substance use in adolescents. Unique identification codes were placed on each survey rather than student names to ensure confidentiality. Students were informed that their responses would not be made available to school personnel, teachers, or parents. Questionnaires were administered during a regular classroom period by a team of several data collectors that were of the same ethnic groups as participants. The research protocol and consent procedures were reviewed and approved by the Institutional Review Board at Cornell Medical College. Data were collected from 1993 to 1995.

Measures

Perceived life chances were assessed using 8 items (α = .90) [16] that measure one's estimation of achieving certain adaptive life goals on a 5-point scale from "very low" to "very high." Items assessed perceived chances of outcomes such as "going to college," "having a job that I enjoy doing," "having a job that pays well," and "having good friends I can count on." For certain analyses, those who responded that their chances of success were "very low" or "low" were grouped together and these youth were considered as perceiving their life chances as "unlikely."

Quantity of alcohol use per drinking occasion was assessed by asking students "If you drink alcohol, how much do you usually drink each time you drink?" with 6 response options ranging from "I don't drink" to "More than six drinks". A dichotomous variable was created to identify binge drinkers as students who reported that they typically drink 5 or more drinks per drinking occasion.

Data Analysis

Descriptive statistics and frequencies of binge drinking and perceived life chances were examined in each of the 3 years of the study. In addition, cross-lagged path analyses were conducted using EQS [17]. Maximum likelihood estimation was used for the path analysis models. However, to account for the skewed distributions of the variables, robust statistics were computed in testing the models. Robust statistics compute standard errors for model parameters that are correct even if the distributional assumption of multivariate normality is not met. This procedure yields a revised Satorra-Bentler χ^2 statistic and a robust Comparative Fit Index [18].

Results

In the 7th grade, 5% of youth believed their chances of graduating high school were unlikely; 6% believed their chances of attending college were unlikely; 5% responded that their chances of getting a job that pays well were unlikely; 6% believed it was unlikely that they would get a job they enjoyed; 8% reported that their chances of having a happy family life were unlikely; 8% responded that their chances of staying
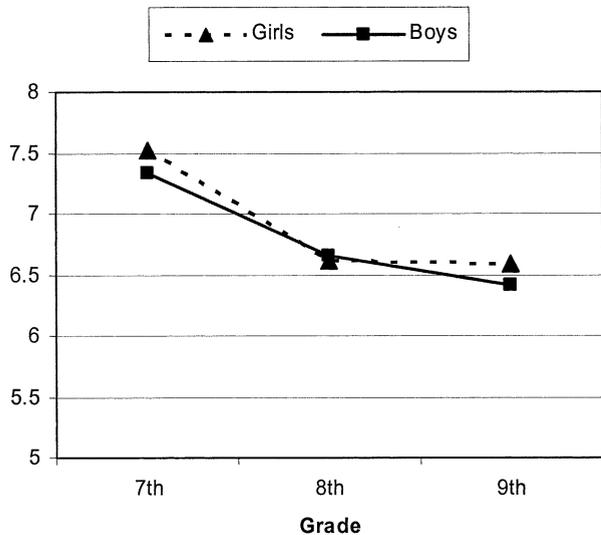
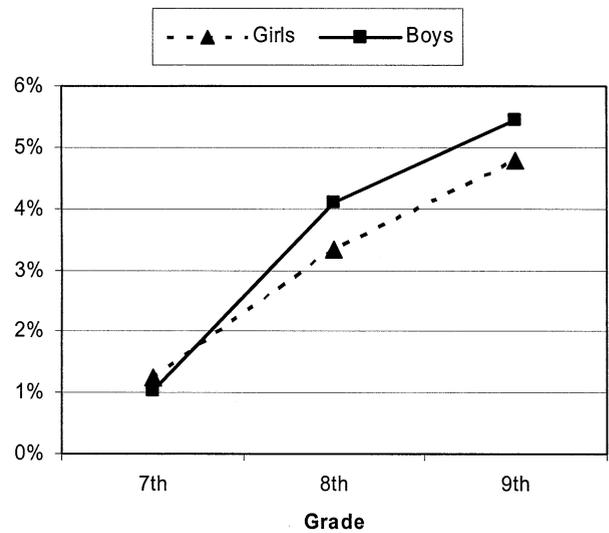**Figure 1.** *Perceived Life Chances by Gender.*

Figure 2. *Binge Drinking by Gender.*

in good health most of the time were unlikely; 9% believed their chances of being respected in the community were unlikely; and 8% responded that their chances of having good friends to count on were unlikely. There were significant gender differences in three of these areas, with girls more likely than boys to believe it was unlikely that they will have a job that pays well and one that they enjoy doing, and girls more likely than boys to report their chances of having good friends to count on as unlikely. Altogether, 18% of 7th graders reported that it was unlikely that they would achieve one or more of the eight desired life outcomes.

As shown in Figure 1, perceived life chances worsened over time from the 7th through 9th grades for both boys and girls. The largest changes were with regard to educational and occupational outcomes. For example, the proportion of students reporting that their chances of attending college were unlikely increased from 6% of 7th graders to 22% of 9th graders; and the proportion of students reporting that their chances of getting a job that they enjoyed were unlikely increased from 6% of 7th graders to 19% of 9th graders. Altogether, 46% of 9th graders reported that it was unlikely that they would achieve one or more of the eight desired life outcomes.

As shown in Figure 2, binge drinking was somewhat infrequent in the sample but increased over time. Among 7th grade students, 1.2% reported binge drinking (1.0% of boys and 1.3% of girls). This increased to 3.7% reporting binge drinking in the 8th grade (4.1% of boys and 3.3% of girls) and 5.0% reporting binge drinking in the 9th grade (5.4% of boys and 4.8% of girls).

To examine the relationships between perceived life chances and binge drinking from the 7th to 9th grade, a cross-lagged path analytic model was tested. The results of this model are illustrated in Figure 3. In terms of the repeated measurements of each variable, prediction over time was stronger for perceived life chances than for binge drinking, with 7th grade perceived life chances predicting 8th grade perceived life chances ($\beta = .24$, $p < .001$) which in turn predicted 9th grade perceived life chances ($\beta = .45$, $p < .001$). For binge drinking, 7th grade levels predicted 8th grade binge drinking ($\beta = .19$, $p < .05$) which in turn predicted 9th grade binge drinking ($\beta = .40$, $p < .001$). In terms of cross-lagged effects, findings indicated that higher perceived life chances in the 7th grade significantly predicted less binge drinking in the 8th grade ($\beta = -.17$, $p < .05$). However, binge drinking in the 7th grade was not significantly associated with perceived life chances in either the 7th grade or 8th grade. The model revealed that binge drinking in the 8th grade predicted lower perceived life chances in the 9th grade
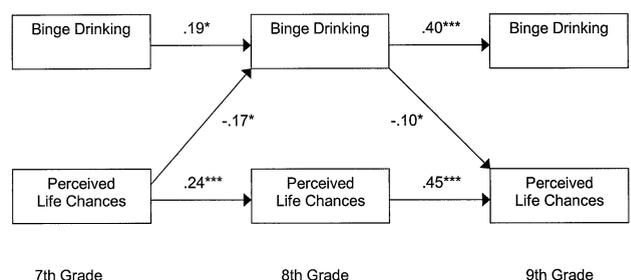

Figure 3. *Path Model of Perceived Life Chances and Binge Drinking.*

($\beta = -.10$, $p < .05$), whereas perceived life chances in the 8th grade did not predict later binge drinking.

Several criteria served to evaluate the overall fit of the path, including (a) the Satorra–Bentler robust χ^2 p-value, which if $p > .05$ indicates that there are no statistically significant discrepancies between the observed data and the hypothesized model; (b) the Chi-square to degree of freedom ratio, which should be less than 5.0 [19]; (c) the standardized root mean squared residual (SRMR), which should be less than .05; and (d) the Robust Comparative Fit Index (CFI), which compares the predicted covariation in the hypothesized model to that of the null model, with values greater than .90 indicating a good fit of the model to the data. According to these criteria, there was a good fit of the model to the data, Satorra–Bentler χ^2 (8, N = 774) = 9.4, p = .31; χ^2 / df = 1.2; SRMR = .02; and Robust CFI = .99. In addition to comparing binge drinkers to non-binge drinkers, we examined the drinking quantity variable as a continuous measure of drinking per occasion in a separate path model and found that the findings were identical to the binge drinking model.

Discussion

Like the US population at large, the adolescent population is becoming increasingly ethnically and racially diverse and will continue to do so for decades to come [20]. However, few studies have examined the etiology of binge drinking among minority youth. The present study examined the relationship between low perceived chances for success in life and binge drinking in a sample of predominantly disadvantaged inner-city minority youth. These variables were chosen based on the hypothesis that young people who believe that failure or the inability to achieve success in life is an inevitable part of their future may develop a sense of hopelessness, and that these negative perceptions about the future may in turn make socially unacceptable and risky behaviors such as binge drinking increasingly attractive. On the other hand, binge drinking may have a negative impact on perceived life chances. Findings indicated that from 5% to 9% of 7th graders believed that normative developmental outcomes were unlikely, such as graduating high school, going to college, finding a job that they enjoy and that pays well, and being respected in their community. However, an increasing number of students came to believe these outcomes would be unlikely from the 7th to 9th grade, particularly with

regard to educational and occupational outcomes. Rates of binge drinking were low in the 7th grade (1.2%) and increased somewhat from the 7th to 9th grades (to 5%).

A cross-panel path analysis model showed that high perceived life chances in the 7th grade were protective in terms of subsequent binge drinking, yet binge drinking in the 8th grade was associated with subsequent decreases in perceived life chances. Thus, low perceived chances of success in life appear to play a role in the initiation and escalation of binge drinking during early adolescence, and a reciprocal relationship develops between the two factors over time. These findings are consistent with research showing that hopelessness plays an important role in binge drinking and other forms of substance use among inner-city minority youth. In a sample of largely African-American adolescents, Bolland [14] found high levels of hopelessness (nearly 50% of males and 25% of females reported moderate or severe feelings of hopelessness), and that hopelessness predicted high levels of risk behavior including violent and aggressive behavior, substance use, sexual behavior, and accidental injury. Although the study was cross-sectional, the findings support the notion that adolescents who see their future success in life as uncertain may abandon hope and engage in high-risk behaviors. These and other findings suggest that youth may turn to alcohol, tobacco, and other drug use to regulate negative affect or alleviate feelings of meaninglessness, perceived powerlessness, or dissatisfaction with life [21–23]. This latter possibility is consistent with the self-medication hypothesis used to explain alcohol and drug abuse behavior among adults with substance abuse disorders [24].

The present findings also support the salience of perceived "possible selves" in identity formation among adolescents. Possible selves represent an "an individual's ideas of what they might become, what they would like to become, and what they are afraid of becoming" [25]. Positive perceived future selves have been found to be associated with school persistence among black youth [26] whereas negative perceived future selves have been linked to a broad array of delinquent and negative health behaviors [27,28]. To the extent that youth believe that they can achieve certain adaptive life goals in the future in education, employment, and social domains, they are likely to internalize a variety of positive "possible selves." Furthermore, success in school and in other conventional pursuits may contribute to a perception that there are realistic, positive life options available,

and such beliefs may play an important role in being able to envision adaptive future selves [28].

Limitations

The present study has several limitations that should be considered. First, panel participants in the present study were likely to be at lower risk than the baseline sample because students that were absent or who did not complete the entire survey may be involved in more high risk behaviors, resulting in a somewhat restricted range in the drinking outcome variable among those that participated. For these reasons, the parameter estimates of the final models may in fact be conservative. Second, because middle schools with predominant minority enrollments (>75% black and Hispanic) in New York City were selected for participation, the results may not generalize to New York City middle school students as a whole. Third, the binge drinking measure asked about "usual use" per occasion rather than specifying a time frame, which may serve to increase the number of false negatives, such as adolescents who do in fact indulge in high-volume drinking on a frequent basis but whose intake is more variable across occasions. Thus, the measure of binge drinking used in the present study may reflect past intake levels instead of reflecting more current levels of intake. Finally, we were not able to rule out the possibility that the relationship between perceived life chances and binge drinking represents the influence of a third unmeasured variable. Further research is needed to examine alternative hypotheses and to replicate the current findings.

Conclusions

The present findings suggest that young people's perceptions of their ability to achieve later success in various adaptive life goals (e.g., career, education, family, and social life) decrease considerably during early adolescence. Furthermore, these changes occur at a time in life when rates of binge drinking typically increase. Although low perceived chances for success may play a role in the initiation and escalation of binge drinking during early adolescence, it appears that the relationship between these factors develops into a reciprocal one over time. An implication of these findings is that efforts to prevent binge drinking during early adolescence may be more effective if they include opportunities for youth in disadvantaged settings to develop social and

personal competencies that foster success in developmental tasks and contribute to a sense of self-efficacy in one's ability to achieve success in the future.

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