ALCOHOL POLICIES AND MOTOR VEHICLE INJURY FATALITIES AMONG UNDERAGE YOUTH IN THE UNITED STATES

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**Purpose:** Motor vehicle injuries (MVIs) are a leading cause of death among youth in the United States. Several state alcohol policies have been linked to reduced alcohol-related MVI mortality. However, most studies to date have examined the influence of single policies rather than states’ overall alcohol policy environments, which include multiple policies directed at reducing alcohol consumption or impaired driving, and those that are population-oriented or youth-specific. We examined the relationship between states’ alcohol policy environments and alcohol-related MVI fatalities among underage youth.

**Methods:** To quantify alcohol policy environments, we used the Alcohol Policy Scale (APS), a validated assessment of alcohol policies across 50 states and Washington, DC from 1999-2011. The APS score is calculated for each state/year by summing the presence of 29 policies after weighting each by efficacy and implementation ratings developed by a Delphi panel of policy experts from a range of disciplines including law, sociology, economics, epidemiology, and psychology. To determine efficacy ratings, panelists judged the strength of every policy in each of four domains: (i) reducing alcohol consumption in the general population, (ii) reducing impaired driving in the general population, (iii) reducing youth alcohol consumption, and (iv) reducing youth impaired driving. We then extracted data on fatal MVIs for drivers <21 years from the Fatality Analysis Reporting System (FARS). For each state/year, we calculated the crash incidence ratio (CIR), the number of fatally injured drivers with blood alcohol content (BAC) $\geq 0.08\%$ divided by the number of fatally injured drivers with BAC $<0.08\%$ (i.e., the odds that fatally injured drivers in a given state/year were alcohol-impaired). We examined states’ APS scores in relation to CIRs, introducing a one-year lag between policies and MVI fatalities. Analyses used multiple linear regression with generalized estimating equations to account for repeated within-state observations, and were stratified by gender. Multivariable analyses adjusted for state-level race/ethnicity, college education, household income, religiosity, and degree of urbanization.

**Results:** APS scores generated using each of the four efficacy ratings were associated with significantly lower CIRs among underage youth in bivariate analyses (using efficacy ratings for reducing general population alcohol consumption: odds ratio [OR], 0.92 per 10-point increase in APS score; 95% confidence interval [CI], 0.86-0.98); for general population impaired driving: OR, 0.93; 95% CI, 0.88-0.99; for youth alcohol consumption: OR, 0.91; 95% CI, 0.86-0.97; for youth impaired driving: OR, 0.94; 95% CI, 0.88-0.99). In multivariable analyses, APS scores using efficacy ratings for reducing general population impaired driving were associated with reductions in youth alcohol-related MVI fatalities, a finding that held for males (adjusted OR, 0.92; 95% CI, 0.84-0.99) but not for females (OR, 0.97; 95% CI, 0.87-1.09).

**Conclusions:** Stronger alcohol policy environments are associated with reduced alcohol-related MVI mortality among underage youth. General population-oriented policies stringent for reducing impaired
driving may be most protective. Future studies should further scrutinize gender variability in policy effects to further support reductions in youth alcohol use and MVI fatalities.

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**26. THE ROLE OF SOCIAL CONTEXT AND FUTURE ORIENTATION IN ADOLESCENT ALCOHOL AND MARIJUANA USE AND INTENTIONS: EXPANDING THE REASONED ACTION MODEL**

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**Purpose:** Alcohol and marijuana use are common during adolescence, yet both may have detrimental consequences to health and well-being. Researchers have identified factors associated with adolescent alcohol and other drug (AOD) use. The Reasoned Action Model (RAM; Fishbein & Ajzen, 2010), which posits that AOD intentions and use stem from attitudes toward AOD use, perceived norms in favor of AOD use, and perceptions of control related to AOD use, has been used to explain AOD use behavior. However, less is known about how external background factors and positive intraindividual assets may relate to RAM constructs and, thereby, increase or reduce AOD intentions and use. The purpose of this study was to build upon the RAM by incorporating positive and negative contextual factors (i.e., positive and negative peer influence and school environment) and a positive intraindividual asset (i.e., positive future orientation) to examine AOD avoidance intentions and lifetime alcohol and marijuana use in a sample of high school students.

**Methods:** Data were collected from a sample of 9th – 12th grade students attending a Midwestern high school (n = 311; 45% male; 81% White). Structural equation modeling in Mplus 7.0 was used to test a mediation model that examined the relationship between peer influence and school environment and AOD avoidance intentions and lifetime alcohol and marijuana use via positive future orientation and the RAM constructs of attitudes (i.e., positive expectancies regarding AOD use), perceived social norms regarding AOD use, and perceived control over AOD use.

**Results:** Youth who reported higher levels of positive peer influence and positive school environment reported higher levels of positive future orientation. Negative school environment was associated with lower levels of positive future orientation. Positive future orientation was associated with more feelings of control over AOD use, less positive AOD use expectancies, and lower levels of injunctive norms favoring AOD use. Positive AOD use expectancies and norms that favor AOD use were associated with lower intentions to avoid AOD use and more lifetime alcohol and marijuana use. Youth with stronger feelings of control over AOD use reported higher intentions to avoid use. Positive peer influence and positive school environment were indirectly associated with less lifetime alcohol and marijuana use via future orientation and the RAM constructs. Positive peer influence indirectly predicted higher intentions to avoid AOD use via future orientation and injunctive norms. Negative peer influence indirectly predicted lower intentions to avoid AOD use and more lifetime alcohol and marijuana use via positive expectancies and injunctive norms.
**Conclusions:** Contextual factors and positive future orientation played important roles in AOD intentions and alcohol and marijuana use in adolescence. Reducing adolescent AOD use, increasing disapproval of use, and increasing risk perceptions of AOD use are key objectives for prevention. Thus, understanding what factors may decrease both AOD use and positive perceptions of use is critically important. Interventions that address peer context and the school environment, as well as help support the development of future goals and aspirations, could play a vital role in substance use prevention efforts. **Sources of Support:** National Institute of Drug Abuse (K01-DA034765)

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**27.**

**EXPECTANCY AND ACHIEVEMENT GAPS IN EDUCATIONAL ATTAINMENT AND SUBSEQUENT ADVERSE HEALTH EFFECTS AMONG ADOLESCENTS WITH AND WITHOUT CHRONIC MEDICAL CONDITIONS**

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**Purpose:** As a multiple determinants of health model posits that hierarchical and dynamic circumstances and environments play a substantial role in determining individual health, the importance of understanding developing socioeconomic context during critical periods cannot be overstated. While socioeconomic status is known to cumulatively affect health across the life-course, it is unknown to what extent pediatric onset chronic conditions contribute to achievement gaps in educational attainment, a critical component of SES, and how these disparities may independently or jointly contribute to disparities in health. As such, we sought to investigate disparities in educational aspiration, expectations, and achievement among adolescents and young adults with and without chronic conditions, and to determine if these relationships mediated subsequent disparities in health status during young adulthood.

**Methods:** Longitudinal data are from 3215 youth interviewed between the ages of 12 and 26 from 2002-2011 for the Panel Study of Income Dynamics, Child Development and Transition to Adulthood Supplements, a nationally representative, population-based survey. Multivariable multinomial regression was used to assess disparities in expectations and actual educational achievement during adolescence and emergent adulthood for youth with and without chronic conditions, adjusting for important potential confounders, and the subsequent effects on self-reported global health and life satisfaction.

**Results:** Youth with chronic conditions (YCC, 57% of sample) did not report significantly lower educational aspirations than their healthy peers (41.0% of all youth reported aspiring to earn a bachelor’s degree); however, compared to their counterparts, fewer YCC reported that they actually expected to earn such a degree (37.1% vs 46.0%, p=0.0193) and fewer YCC had earned a 4yr degree by the end of follow-up (13.5% vs 21.0%, p=0.0029). These disparities persisted after adjustment for confounders and differences in educational attainment by conditions did not appear to be mediated by educational aspirations and expectations. YCC reported significantly worse general health in young adulthood (10.2% in fair/poor health vs 4.1% for healthy youth, p=0.0003) and less life satisfaction (3.2%
not very/not at all satisfied vs 1.6% for healthy youth, \( p=0.0030 \); youth with lower educational attainment also reported significantly worse general health and less life satisfaction (\( p<0.01 \)). These disparities persisted after adjustment for confounders. Although disparities in general health by chronic condition status were not substantially mediated by educational attainment, disparities in life satisfaction by condition status appeared to be partially mediated by educational attainment (yet remained statistically significant).

**Conclusions:** Findings suggest an important risk mechanism through which youth with pediatric onset chronic medical conditions are more susceptible to acquiring socioeconomic disadvantage than their healthy peers as they progress through normal development, and that these lags in educational achievement may in turn increase their susceptibility to worse health and well-being in the future. Clinicians may have an opportunity to intervene in adolescence among YCC and youth with lower educational expectations in order to prevent health decrements seen with lower educational attainment.

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**28.**

**SOURCES, TYPE AND USE OF SOCIAL SUPPORT DURING EARLY SEXUAL DEVELOPMENT OF BLACK GAY AND BISEXUAL ADOLESCENT MALES**

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**Purpose:** Positive social support is thought to promote positive health outcomes in young gay and bisexual men (YGBM). Little work has focused on understanding sources, type and use of social support in young Black gay and bisexual men (YBGBM). We sought to describe how a sample of YBGBM was using social support during early sexual development.

**Methods:** Fifty Black gay and bisexual males aged 15-19 years were recruited through referral, adolescent medicine and school-based health clinics, social venues (serving sexual minority youth), and Internet sites (e.g. Jack’d). Individuals participated in a brief 10-minute baseline survey, including the Outness Inventory (OI (range 0-77)), coefficient alpha 0.87 and a 90-minute in-depth face-to-face interview. Interviews were transcribed verbatim and coded independently by two coders. A phenomenological framework to guide and analyze the interviews. In order to compare differences between groups, we organized and tallied the type and number of sources of support described during interviews to be able to group individuals into high versus low/no sources of support.

**Results:** Participants had a mean age of 17.7 y.o. (S.D. 1.2). Most participants self-identified as gay/homosexual (66%, n=31), with a mean OI of 37.2 (SD 16.1). The four most common sources of support were: female friends (52% n=26), male friends (46%, n=23), extended female family members (46%, n=23), and mothers (40%, n=20). No participants described support from fathers. Most described receiving emotional (78%, n=39), informational (64%, n=32), or motivational (50%, n=25) support. Participants described using support to help develop/confirm one’s sexual orientation/experiences...
(emotional), support condom use during sex (informational), and reach goals (motivational support). One bisexual male describes a female friend who supported him – stating, “You good. You can be who--you can be yourself. It’s you.” While participants commonly described a lack of support from fathers - “... I talked to my father one time when I was around 14 and I told him that I was bisexual, and he called me a disgrace because of it, and he was like, ‘No, not my son, not my oldest son. I’m not gonna let that happen. You either change your ways or just get out of my life completely.”

**Conclusions:** We found that females (friends, family members, and mothers) were key sources of support in this sample of YBGBM, while there was an absence of support from fathers, brothers, and older male non-gay identified figures. Future health interventions should leverage the role that female friends, family and mothers play in providing information about condoms and support and whether the absence of males impacts sexual risk and leads to poor health outcomes.

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**A SNAPSHOT OF THE SEXUAL EXPERIENCES OF BISEXUAL BLACK ADOLESCENT MALES OVER 1 YEAR**

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**Purpose:** Little work has examined the early sexual experiences of bisexual black male adolescents, how such partnerships evolve over time, and potential risk environments for exposure to sexually transmitted diseases (STDs), especially HIV. Thus, we sought to describe the sexual experiences of Black bisexual males over 1 year and the role those experiences may play in exposing youth to HIV and other STDs.

**Methods:** Fourteen young black bisexual males (YBBM) aged 15-19 were interviewed four times over a 12 month period about first same-sex experiences (baseline) and recent sexual encounters at follow-up. All interviews were audio-recorded, transcribed and de-identified. A three-person research team used inductive open coding to code each participant’s data set. In order to identify themes related to sexual experiences, partnerships and contextual factors influencing condom use overtime, interviews within participants were organized using a case study analysis where participants with similar themes were grouped, and themes were compared between groups.

**Results:** Mean age of the sample was 17.4 years (SD= 1.4) mean age of sexual debut was 13.6 years and the mean number of sexual partners reported during the year was 2.1 (SD=1.5). Participants fell into one of two groups 1) bisexual males who had sex with males and females) or 2) bisexual males who had sex with males only. Four themes emerged from the data: 1) sexual explosion (surge of male and female sexual partners) after first partner; 2) fewer female partners over time; 3) increase in casual older partnerships; and 4) inconsistent condom use during sex. Social context of using social and sexual network sites to meet partners promoted older partnerships, while use of substance use prior to sex and using heuristics like trust in one’s partner (not to have an STD) influenced condom non-use.
Conclusions: This study underscores the need to understand early sexual experiences and behavior in YBBM, including how such behavior changes over time. Young men in this sample were using potentially high risk Internet sites to meet partners during a period of sexual exploration. This may predispose some YBBM to risk for HIV infection. More work is needed to understand this phenomenon in order to better protect YBBM during adolescent development and emerging adulthood as they explore sexual and romantic partnerships with other YBMSM.

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