

# 'Youth-at-Risk' –2009 Academic Performance & Health-Risk Behaviors

## RI Public High School Students



RI Departments of Health and Elementary & Secondary Education  
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**Introduction:** This report examines if there is a difference in health-risk behaviors between academically low-performing ('D&F' grades) and high-performing ('A&B' grades) high school students in Rhode Island (RI). It evaluates 26 risk-measures from RI's 2009 Youth Risk Behavior Survey (YRBS).

**The YRBS:** The YRBS is a biennial, anonymous survey of public high school students across the country. The Centers for Disease Control and Prevention developed the YRBS to monitor behaviors related to the major causes of injury, disease, and mortality. In the spring of 2009, 3,213 RI 9<sup>th</sup> to 12<sup>th</sup> grade students participated in the YRBS. The findings are representative of high school students statewide, and may be used to inform policy and programs alike.

**'Academic performance':** Students were asked: "During the past 12 months, how would you describe your grades in school? 1) mostly A's; 2) mostly B's; 3) mostly C's; 4) mostly D's; 5) mostly F's; 6) none of these grades; and 7) not sure." The responses were parsed into two categories, students self-reporting 'A&B' grades, and 'D&F' grades.

**Using the data:** The relationship between academic performance and risk behaviors may be both 1) 'correlated' and 2) 'significant.' 1) 'Correlation' refers to association, not causation (e.g., smoking was three times higher among low-performing students, but receiving poor grades doesn't cause one to smoke). The correlation coefficient ( $r$ ) is used to evaluate the association between academic achievement and overall health-risks. An  $r$ -value of '0.00' is no correlation, and '1.00' is perfect correlation (i.e., the two variables change in tandem). 2) 'Significance' is determined at the 95% level. Because sample surveys produce estimates (which may vary from true population values), the 95% 'significance' level refers to how likely it is that there is an actual or 'real' difference in the estimated rates between two groups. Lastly, the 26 risk-measures are all negative indicators, meaning that lower values are preferred.

### 2009 Highlights

Low-performing students ('D&F' grades) had significantly higher health-risks on 24 of 26 measures than students reporting high grades ('As&Bs'). There was a very strong (inverse) correlation between academic performance and risk behaviors ( $r = -0.892$ ), meaning that as grades rose, health-risks decreased.

Eight percent (8%) of RI public high school students reported receiving 'D&F' grades in 2009 (Chart 1). Ninth graders, Gays, Lesbians, Bisexuals or students unsure of their sexual orientation, and students with an emotional disability were more likely than their peers to have low grades. 'D&F' grades were also more common to Males, Hispanics, and students speaking a primary language other than English at home.

Violence was much more prevalent among students with low than high grades (Chart 2). Over twice as many 'D&F' students were in physical fights (49%), and twice as many (13%) 'cut' school because they felt unsafe. Almost twice as many 'D&F' students had been victims of dating violence (17%), and the forced intercourse rate was over two times higher for this group (13%).

Students with low grades had higher mental health risks than those with high grades (Chart 2). 'D&F' students were almost twice as likely to feel 'sad' or 'hopeless' (40%), and over 3 times more likely to have attempted suicide (17%).

Tobacco use was much more common among low-performing than high-performing students (Chart 2). Current smoking rates were three times higher for 'D&F' students (29%), and the use of any tobacco products was over twice as high (33%).

Alcohol and drug use was higher among 'D&F' than 'A&B' students (Charts 2 & 3). Current drinking rates were higher (53% vs. 30%), and binge drinking (37%) was over twice as common. Low-performing students used marijuana 2.5 times more often (52%), and were at greater risk from trying cocaine (10% vs. 3%), inhalants (17% vs. 7%), and painkillers without a prescription (24% vs. 14%).

Sexual activity was more prevalent among 'D&F' than 'A&B' students (Chart 3). Twice as many 'D&F' students had ever had intercourse (71%), and the rate for students currently sexually active (54%) was over two times greater.

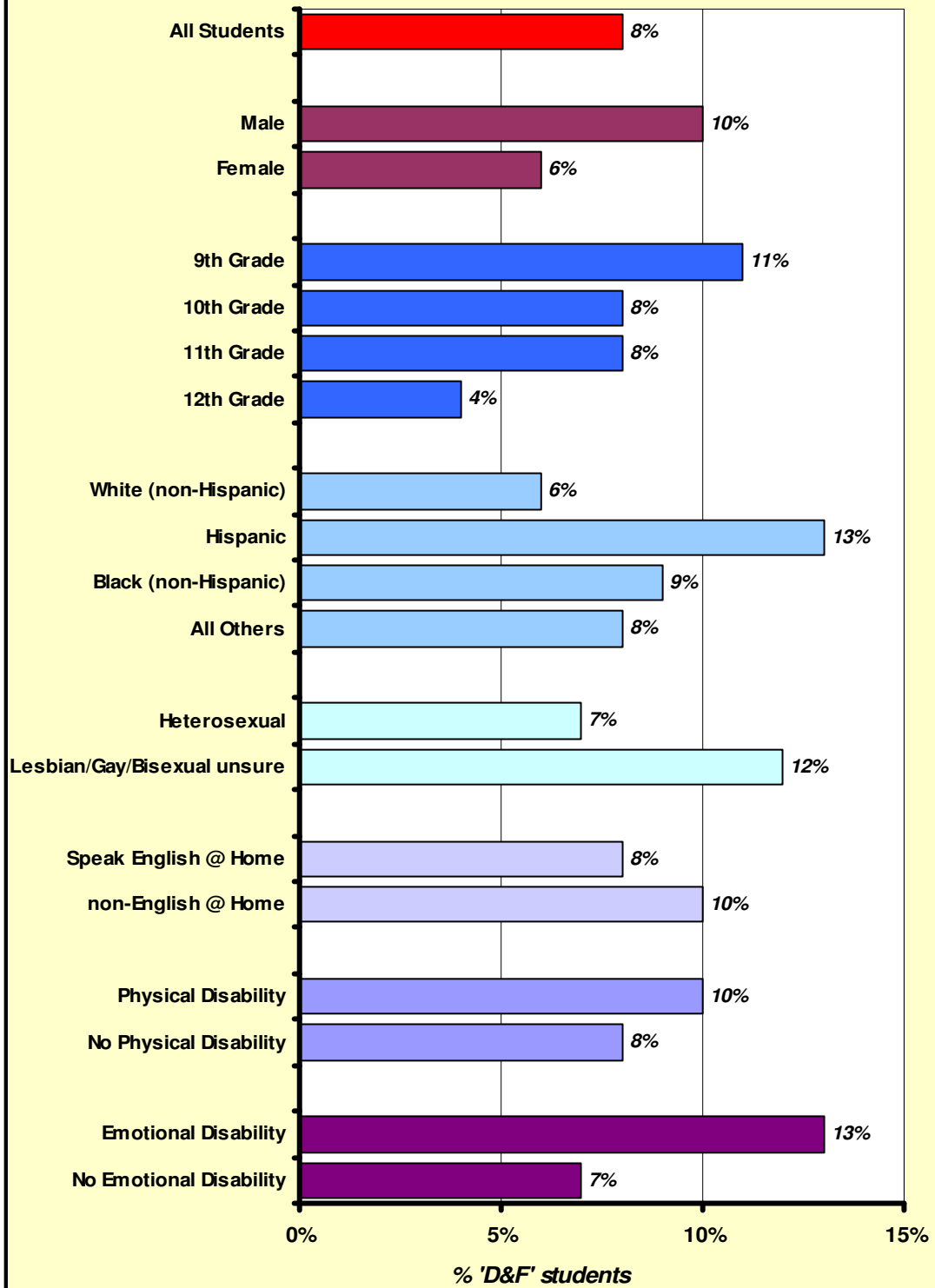
Students with low grades were at greater risk from injury and lack of physical activity than students with high grades (Chart 3). Four times more 'D&F' students did not wear seat belts (34%), they were more likely to not wear bike helmets (96% vs. 76%), or ride with a driver that had been drinking (34% vs. 19%). The obesity rate (18%) was twice as high for 'D&F' students, and more of them lacked sufficient exercise (68% vs. 52%).

The nexus between academic performance and healthy behavior is clear, as the data show that students who struggle academically are much more likely to engage in risky behaviors. Identifying which students are at-risk, what those risks are, and addressing those issues, will help to improve the public high school experience, including academic achievement.

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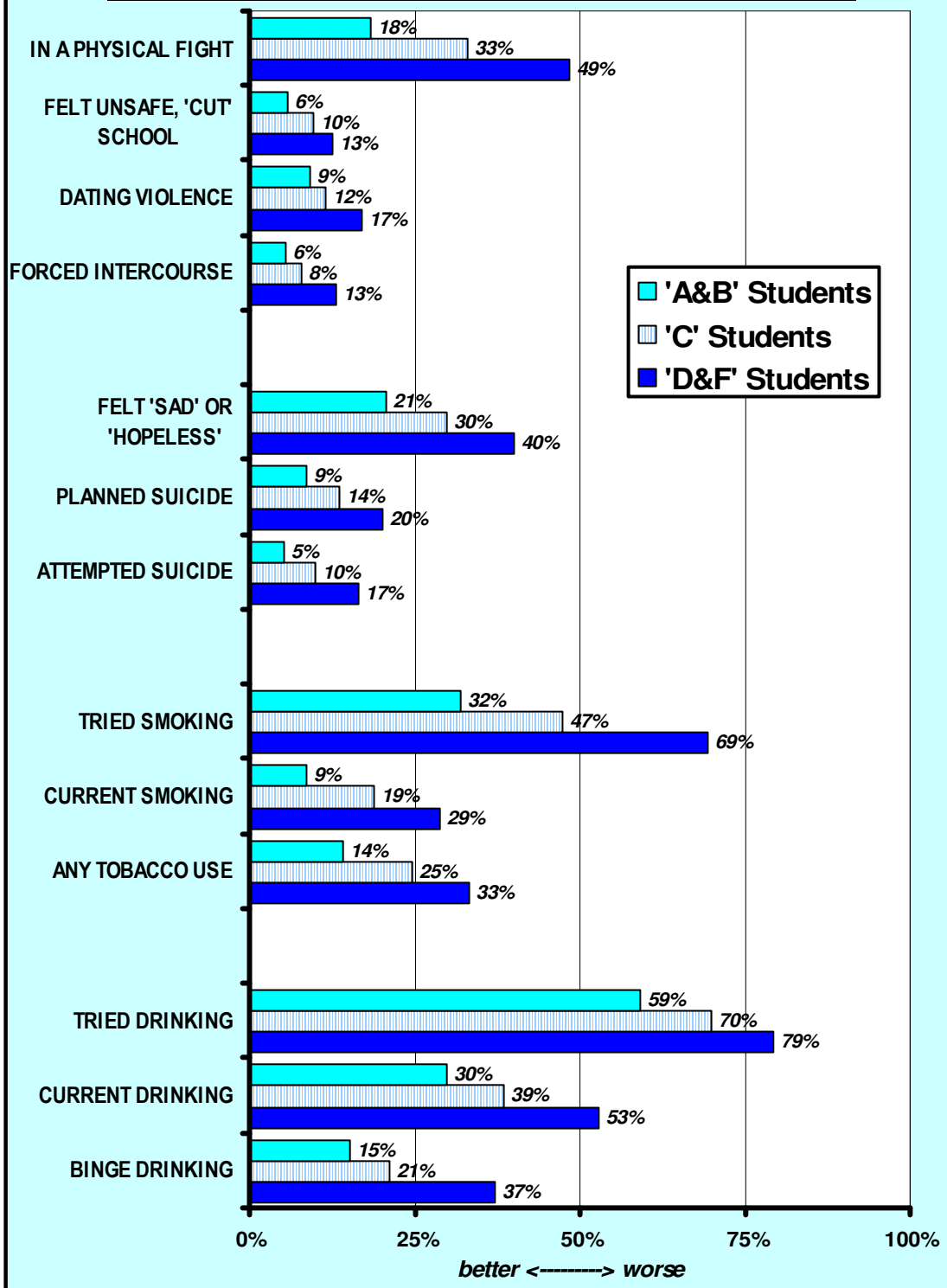
'Youth-at-Risk' topical report series

**Chart 1: 2009 Prevalence of 'D&F' Students**  
*~by demographic group~*



Source: 2009 RI-YRBS (n=3,213)

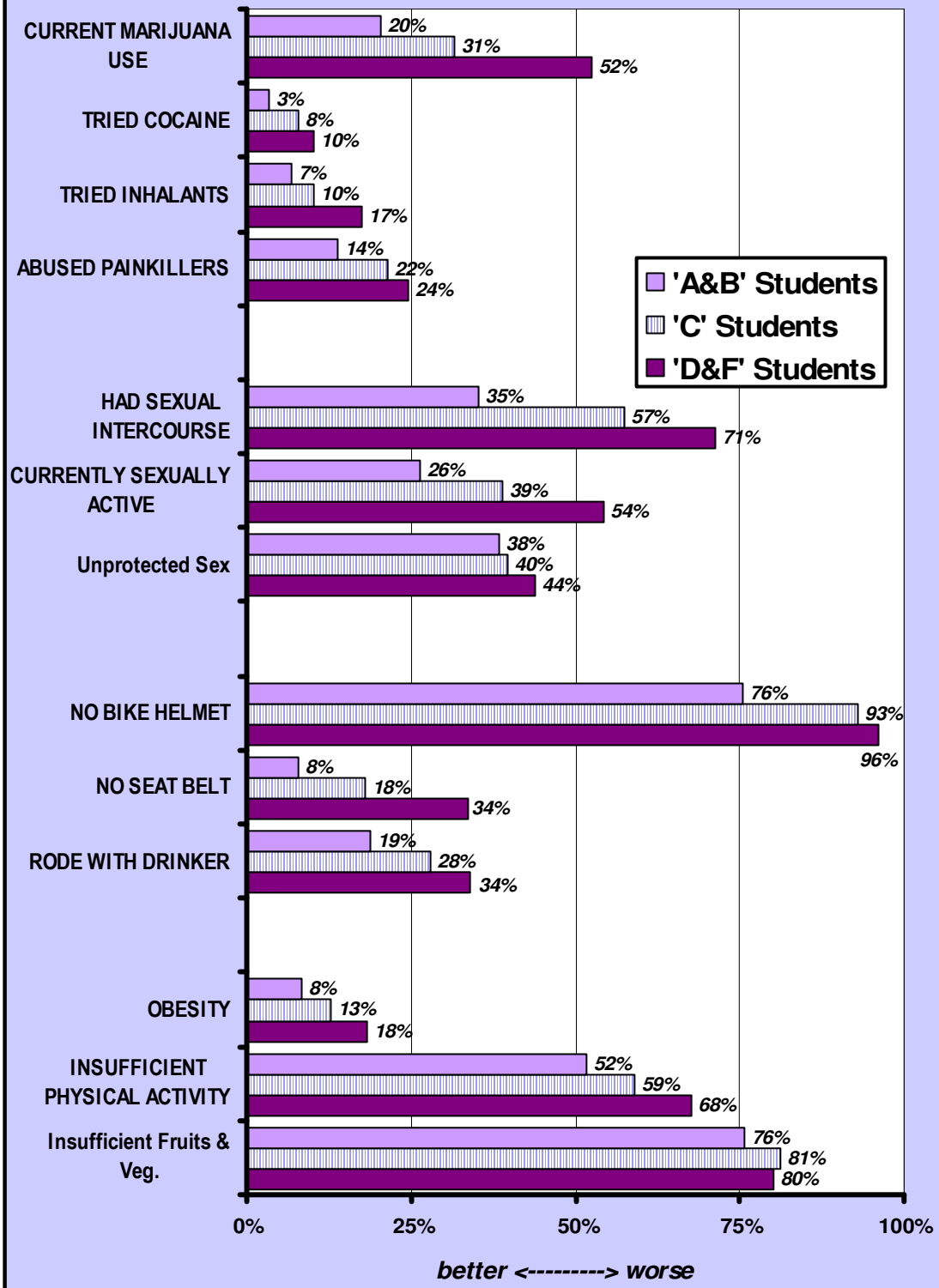
**Chart 2: RI 2009 H.S. Health-Risks -by academic performance**  
 ~significant differences (@95%) between 'A&B' and 'D&F' students are in CAPS~



Source: 2009 RI-YRBS (n=3,213)

**Definitions:** *In a Physical Fight* (1+ times in the past yr.); *Felt unsafe, 'Cut' School* (on 1+ days in the past mo.); *Dating Violence* (hit, slapped or hurt by boyfriend/girlfriend in the past yr.); *Forced Intercourse* (ever had sexual intercourse against your will); *Felt 'Sad' or 'Hopeless'* (for 2+ wks. in a row in the past yr.); *Planned Suicide* (in the past yr.); *Attempted Suicide* (1+ times in the past yr.); *Tried Smoking* (ever); *Current Smoking* (smoked on 1+ days in the past mo.); *Any Tobacco Use* (used chewing tobacco, snuff, dip, or smoked cigars or cigarettes on 1+ days in the past mo.); *Tried Drinking* (1+ drinks, ever); *Current Drinking* (drank alcohol on 1+ days in the past mo.); *Binge Drinking* (5+ alcohol drinks in a row, on 1+ days in the past mo.)

**Chart 3: RI 2009 H.S. Health-Risks -by academic performance**  
 ~significant differences (@95%) between 'A&B' and 'D&F' students are in CAPS~



Source: 2009 RI-YRBS (n=3,213)

**Definitions:** *Current Marijuana Use* (1+ times in the past mo.); *Tried Cocaine* (1+ times, ever); *Tried Inhalants* (to get high, 1+ times ever); *Abused Painkillers* (without a doctor's prescription, 1+ times ever); *Had Sexual Intercourse* (1+ times, ever); *Currently Sexually Active* (1+ partner in the past 3 mos.); *Unprotected Sex* (for sexually active students, no condom last time); *No Bike Helmet* (rarely/never wear a bike helmet); *No Seat Belt* (rarely/never wear a seat belt as a passenger); *Rode With Drinker* (rode in car w/driver that had been drinking, 1+ times in the past mo.); *Obesity* (a calculated measure, BMI at or above the 95<sup>th</sup> percentile by age & gender); *Insufficient Physical Activity* (not physically active for 1+ hrs. on 5+ days in past wk.); *Insufficient Fruits & Vegetables* (<5 servings per day in the past wk.)