



Rhode Island Data Brief

Academic Performance & High School Health Risks (2011)

Eight percent of RI high school students are poor academic performers ('D&F' grades).¹ This Brief examines if these students are in greater jeopardy from health risks than their high performing ('A&B' grades) peers (Chart 1), and whether those risks have improved or worsened over time (Chart 2). Twenty one measures are evaluated,² comprising seven areas of vulnerability (drugs and alcohol, injury, mental health, sex, tobacco, violence, and weight). The findings are intended to inform interested parties and stimulate further research.

In this Brief, the relationship between poor academic performance and health risks is one of association, not causation (e.g., poor performers are four times more likely to smoke cigarettes, but receiving low grades does not cause a student to smoke). In the text, only those differences in values (over time or between 'A&B' and 'D&F' students) that are statistically 'significant' at the 95% confidence level are noted.³ Lastly, with the exception of the 'lesbian, gay, or bisexual' measure, all others are unfavorable indicators, so lower/declining values are preferred.

Drugs & Alcohol: Over twice as many 'D&F' students use marijuana (47% vs. 21%), and over twice as many abused legal (prescription and 'over-the-counter') drugs (31% vs. 13%). Alcohol drinking was almost two times higher among 'D&F' students (52% vs. 29%).

Injury: More 'D&F' students do not wear bike helmets (93% vs. 71%), and five times as many do not wear seat belts (30% vs. 6%). Drinking and driving is twice as prevalent among 'D&F' students (11% vs. 5%), but those rates decreased from 23% to 11% (2007 to 2011).

Mental Health: 'D&F' students high schoolers experience a much higher rate of long-term (6+ months) emotional disability (28% vs. 12%), and are almost twice as likely to feel depressed (41% vs. 21%). These students are almost three times more likely to attempt suicide (17% vs. 6%)

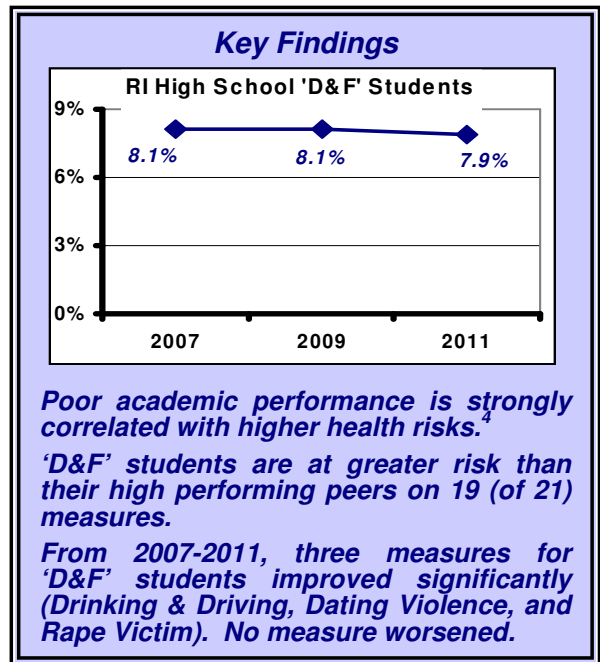
Sex: Poor performing students are 2.5 times more likely to identify as lesbian, gay or bisexual (15% vs. 6%). They are twice as likely to be sexually active (49% vs. 25%), and four times as likely to have unprotected sex (13% vs. 3%).

Tobacco: Cigarette smoking is four times more prevalent among 'D&F' students (29% vs. 7%) and heavy smoking (more than 10 cigarettes a day) is much more common (4% vs. 0.5%). The use of any tobacco product (cigarettes, cigars, smokeless tobacco) is also higher among these students (35% vs. 13%).

Violence: Physical fighting is three times more common among poor performing high schoolers (51% vs. 17%), and they are 2.5 times more likely to experience dating violence (15% vs. 6%). Dating violence among 'D&F' students improved however, from 30% to 15% (2007 to 2011). The incidence of rape is not statistically different for 'A&B' and 'D&F' students, but the rates improved from 22% in 2007 to 10% in 2011.

Weight: Obesity rates are not significantly different for 'A&B' and 'D&F' students. However, poor academic performers are twice as likely to not exercise (21% vs. 10%), and much more likely to have poor nutrition (10% vs. 2%).

Poor academic performance is strongly correlated with higher health risks⁴. Rhode Island's 'D&F' students are clearly in crisis, as students who struggle academically are much more likely to engage in risky behaviors. Some limited improvement in their health risks occurred since 2007, but considerable disparities remain and need to be addressed.



¹ Students self-reported 'mostly' 'A & B' or 'D & F' grades.

² Data are from RI's Youth Risk Behavior Survey, part of a biennial national survey of public high school students on the major causes of disease and injury morbidity and mortality. For more information contact Bruce Cryan, 401-222-5111, www.health.ri.gov/data/youthriskbehaviorsurvey/.

³ As the RI-YRBS is a sample survey, if the 95% confidence intervals of two values do not overlap, one may conclude (with 95% certainty) there was a 'real' difference between the two values (i.e., the difference was not likely due to sampling bias).

⁴ The Phi Coefficient (r_{ϕ}) measuring the association of low grades and higher health risks is 0.905 ('0' is no correlation and '1' is perfect correlation).

Chart 1: RI 2011 High School Health Risks by Academic Performance

* statistically significant differences

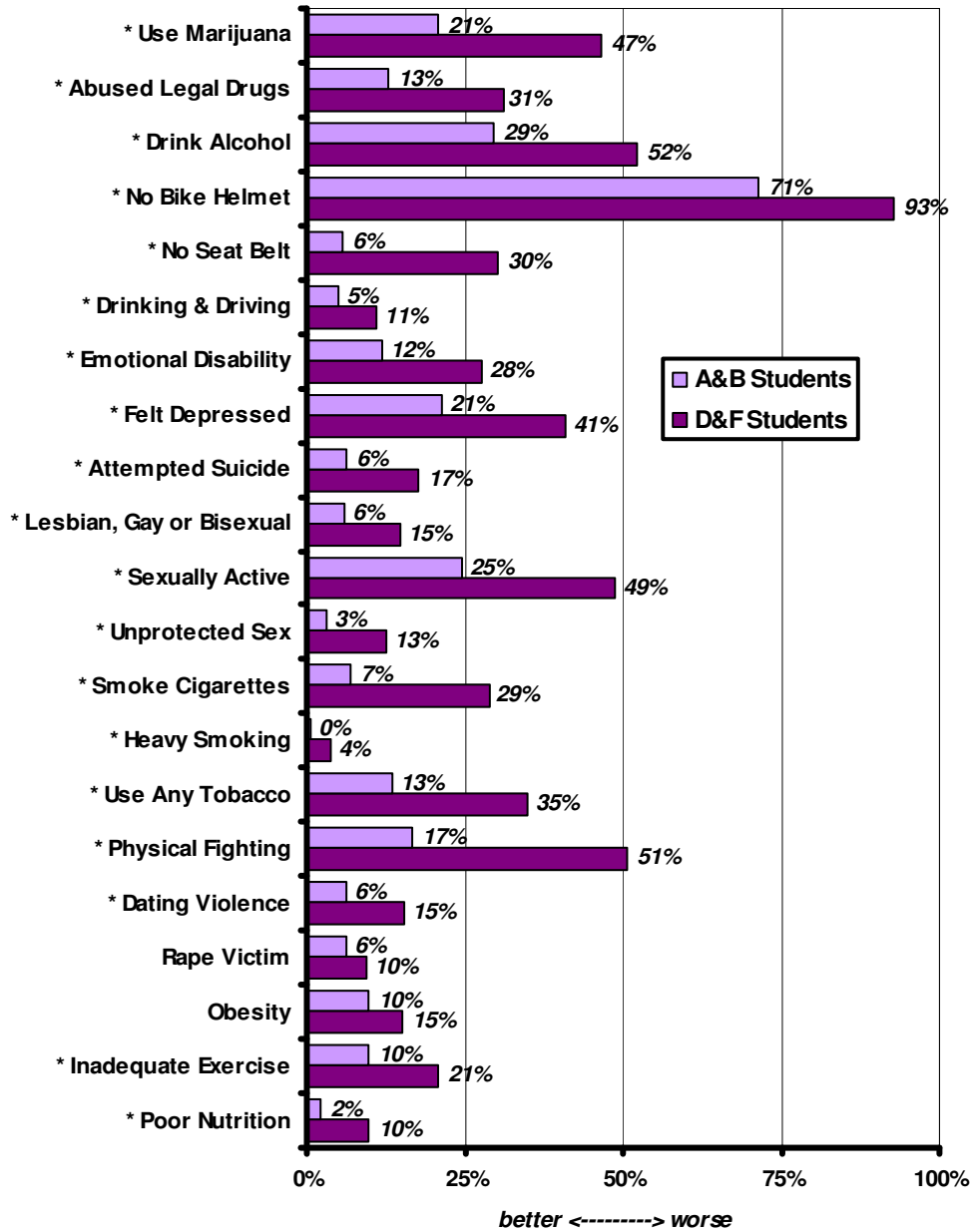
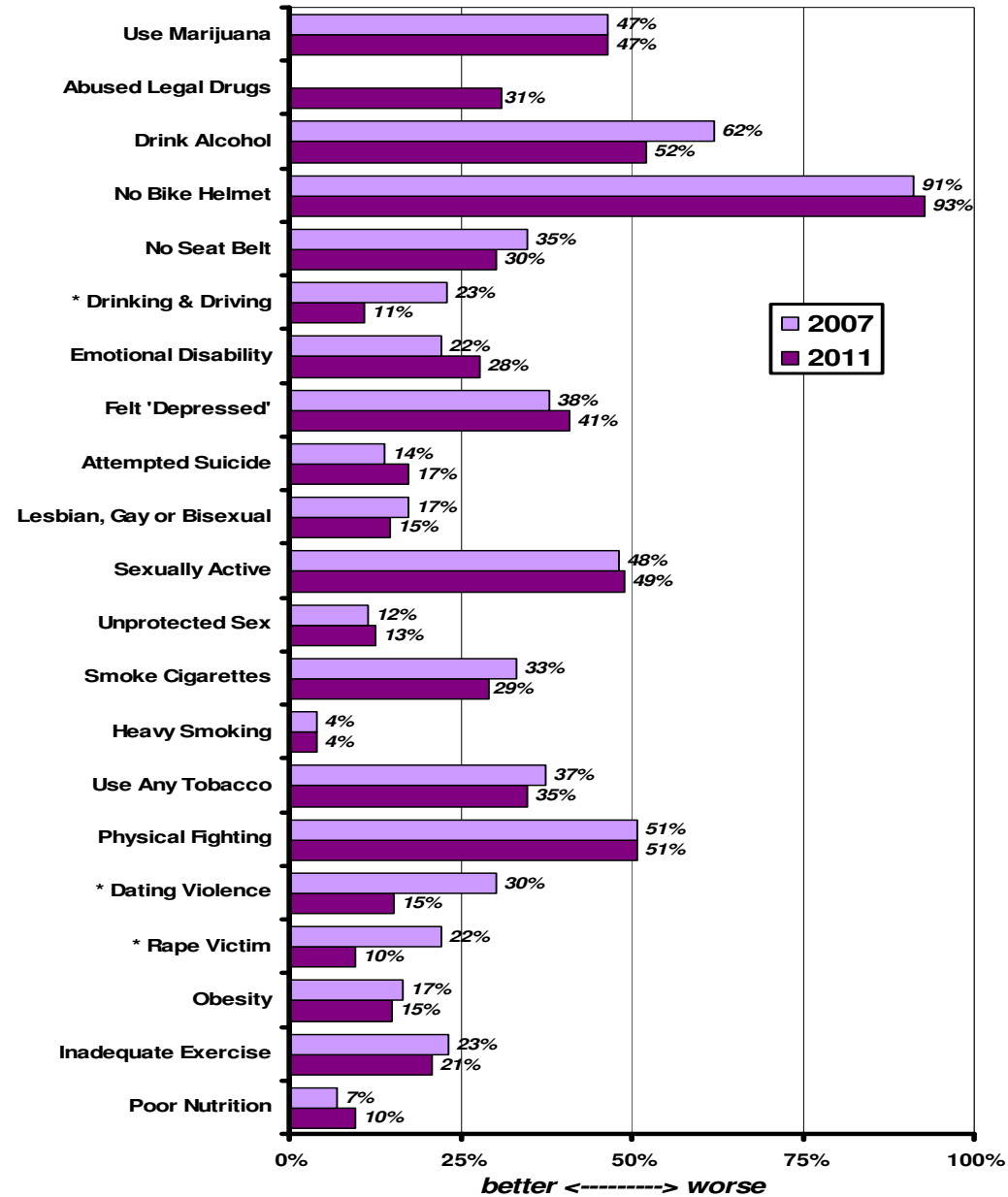


Chart 2: 2007 & 2011 RI Health Risks for 'D&F' Students

* statistically significant changes



DRUG & ALCOHOL MEASURES: Use Marijuana (1+ times, past mo.); Abused Legal Drugs (abused prescription and/or 'over-the-counter' drugs 1+ times, ever); DRINK ALCOHOL (1+ days, past mo.); **INJURY MEASURES:** No Bike Helmet (never or rarely wore, past yr.); No Seat Belt (never or rarely wore, past yr.); Drinking & Driving (1+ times, past mo.); **MENTAL HEALTH MEASURES:** Emotional Disability (for 6+ mos.); Felt 'Depressed' (for 2+ weeks, past yr.); Attempted Suicide (1+ times, past yr.); **SEX MEASURES:** Lesbian, Gay or Bisexual (sexual self-identity); Sexually Active (1+ partner, past 3 mos.); Unprotected Sex (no protection, last encounter); **TOBACCO MEASURES:** Smoke Cigarettes (on 1+ days, past mo.); Heavy Smoking (over 10 cigarettes per day, past mo.); Use Any Tobacco (used chewing tobacco, snuff, dip, or smoked cigars or cigarettes on 1+ days, past mo.); **VIOLENCE MEASURES:** Physical Fighting (1+ times, past yr.); Dating Violence (physically abused by partner in the past yr.); Rape Victim (forced into sexual intercourse, ever); **WEIGHT MEASURES:** Obesity (over the 95th percentile for body mass index); Inadequate Exercise (60+ min. of exercise on 0 days, past wk.); Poor Nutrition (no fruit or vegetables, past wk.)