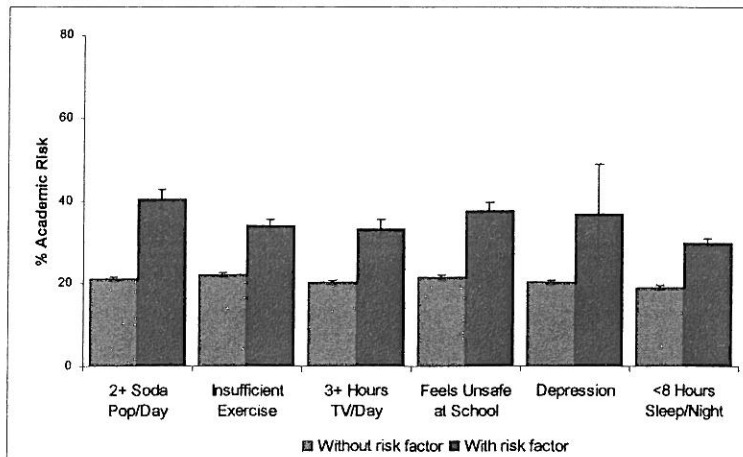
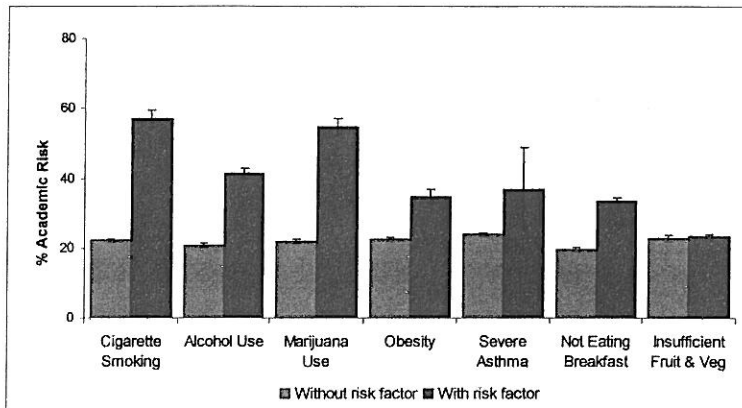


Academic Achievement and Health: Findings from Recent Research

These findings are from ongoing studies in school health that are published or will be published in peer-reviewed journals, including original research using data from Washington State students.

1. Students with specific health risks are also more likely to be at-risk academically

- Many Washington students have significant health risks.
- Substantial evidence from numerous studies published in peer-reviewed research journals indicates that students with health risks also do not do as well in school.
- Health risks include smoking, obesity, physical inactivity, depression, insufficient sleep, asthma: each of these is significantly associated with increased risk of having poor grades.
- For example, in the charts below we illustrate the percent of Washington 8th grade students with academic risk by whether they have any of thirteen common specific health risks.

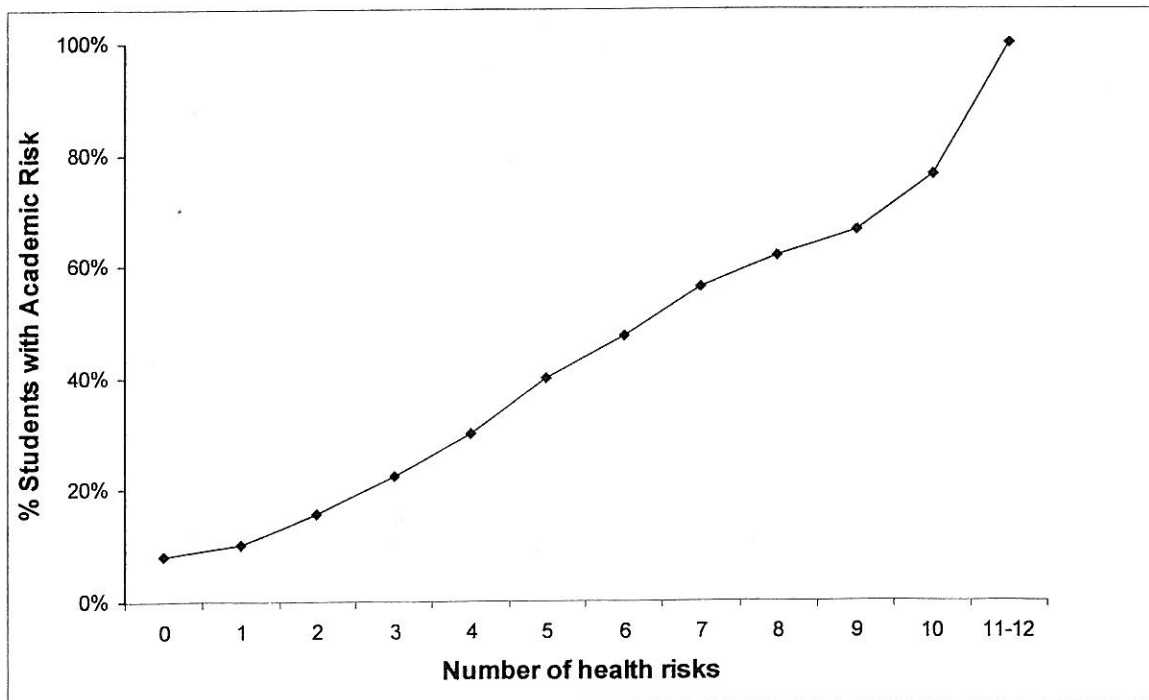


Data source: 2006 Washington State Healthy Youth Survey, 8th grade.
"Academic risk" is self-report of getting mostly Cs, Ds or Fs in school

- Additionally, poorer academic performance in school is associated with lower income in adulthood, which in turn leads to poorer health. So healthy behaviors in early life can also influence long-term quality of life.
- The direction of influence between academic achievement and health risk is not always clear. For example, cigarette smoking could impede learning as students skip classes to smoke, have more colds associated with smoking, and are less able to concentrate due to nicotine “fits.” On the other hand, smoking could also be a coping mechanism for students who are struggling academically. Although these relationships may not be entirely one-way, for the most part health is more likely to influence academics than the opposite.

2. These health risks are independent; every additional risk is associated with greater increases in academic risk

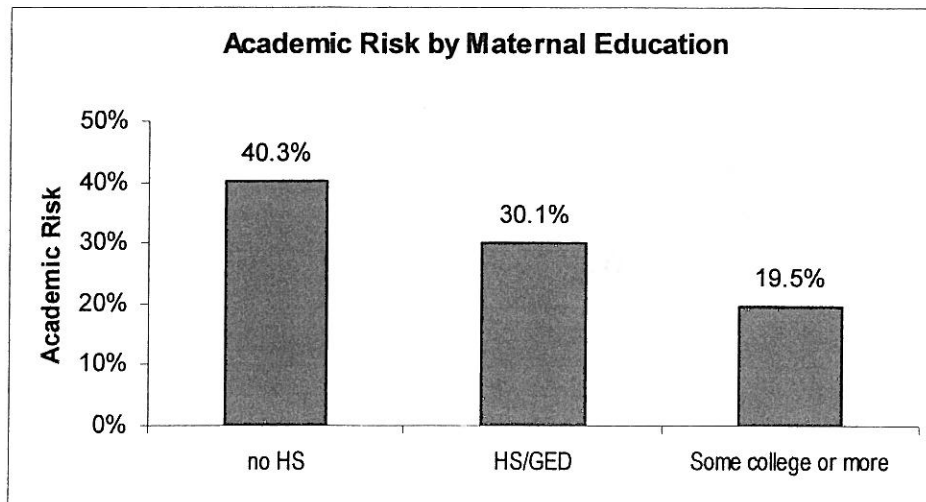
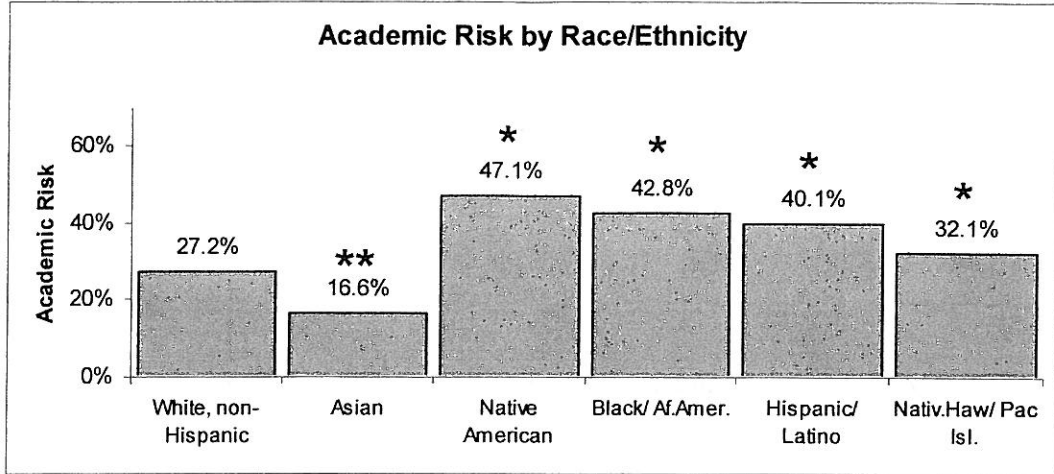
- After controlling for age, gender, race/ethnicity, and socioeconomic status, each health risk factor remained significantly associated with increased risks for poor academic performance.
- As illustrated in the chart below, risks were additive. Fewer than 10% of students with no health risks were at academic risk, but more than 50% of students with seven health risk factors and nearly all students with ten or more health risk factors were at academic risk.
- These risks were independently associated with academic performance. When all were combined in a statistical model, each remained significant. This means that for students who were matched in all other respects (either having or not having other risk factors), a single additional health risk factor still resulted in increased academic risk.



Data source: 2006 Washington State Healthy Youth Survey.

3. The academic achievement gap may be at least partially attributable to health disparities

- The achievement gap is most evident among minority students (Black, Native American, Pacific Islander, Hispanic/Latino) and students in disadvantaged families, measured by maternal education (see charts below).



Data source: 2006 Washington State Healthy Youth Survey.

* indicates statistically significant higher academic risk than non-Hispanic white youth;

** indicates statistically significant lower academic risk than non-Hispanic white youth.

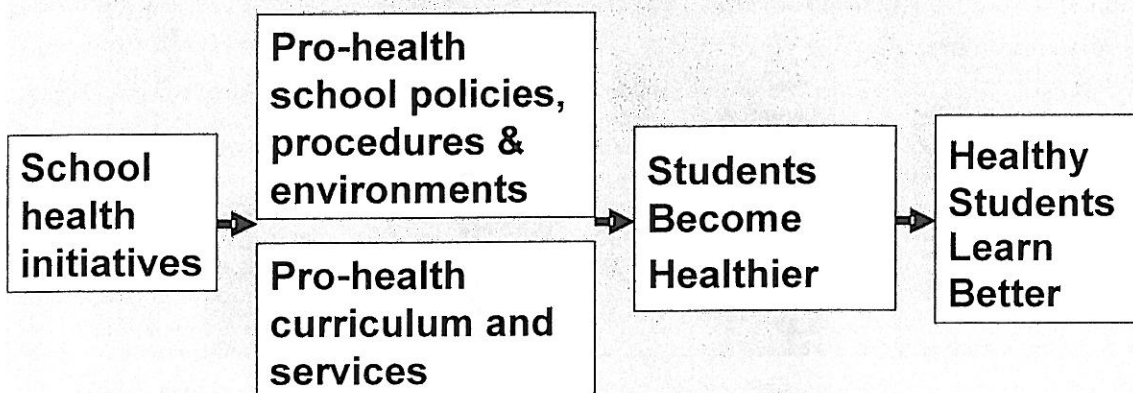
Maternal education is a validated proxy measure for socio-economic status of the family.

- These same student groups also have higher prevalence of many health risks, including tobacco use, poor nutrition, depression, etc. The relative distribution of most health risks is very similar to the academic risk distributions above.
- In one study, researchers calculated that approximately one-quarter of the achievement gap could be due to health disparities, the excess prevalence of health risks.

4. Schools can effectively influence and improve student health behaviors

- Many health interventions have been proven successful when applied in school environments.
- A growing body of evidence demonstrates that school health initiatives can improve health measures and also academic achievement or related measures such as cognitive functioning, absenteeism, grades, grade-level promotion, and graduation rates. This relationship is illustrated in the figure below.
- Schools can implement pro-health policies and procedures (such as strong tobacco-free policies, more healthy and fewer unhealthy food options), provide comprehensive instruction about the harms of health risks and benefits of healthy choices, as well as social skills to strengthen students' ability to remain committed to healthy choices; improve knowledge and skills of adults such as parents and school staff; and provide targeted programs or service to help students who need help with personal or family transitions, accessing support, or managing chronic diseases.
- Surrounding students with explicit and normative pro-health messages improves student health, and this provides the greatest chance for students to learn.

The influence of school health initiatives on academic achievement



Conclusion: Implementing pro-health policies, instruction and supportive services in schools is a clear opportunity to both improve students' academic achievement and equity in quality of life.

- Activities to improve student health are within the mission and expertise of schools, they need direction and resources to implement these activities.
- Individual and environmental interventions can reach all students, including those in groups at greater risk for health and academic challenges.

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