

# Academic Achievement and Health

## Do Healthy Kids Really Learn Better?

Julia Dilley, PhD MES  
Nigel Chaumeton, PhD



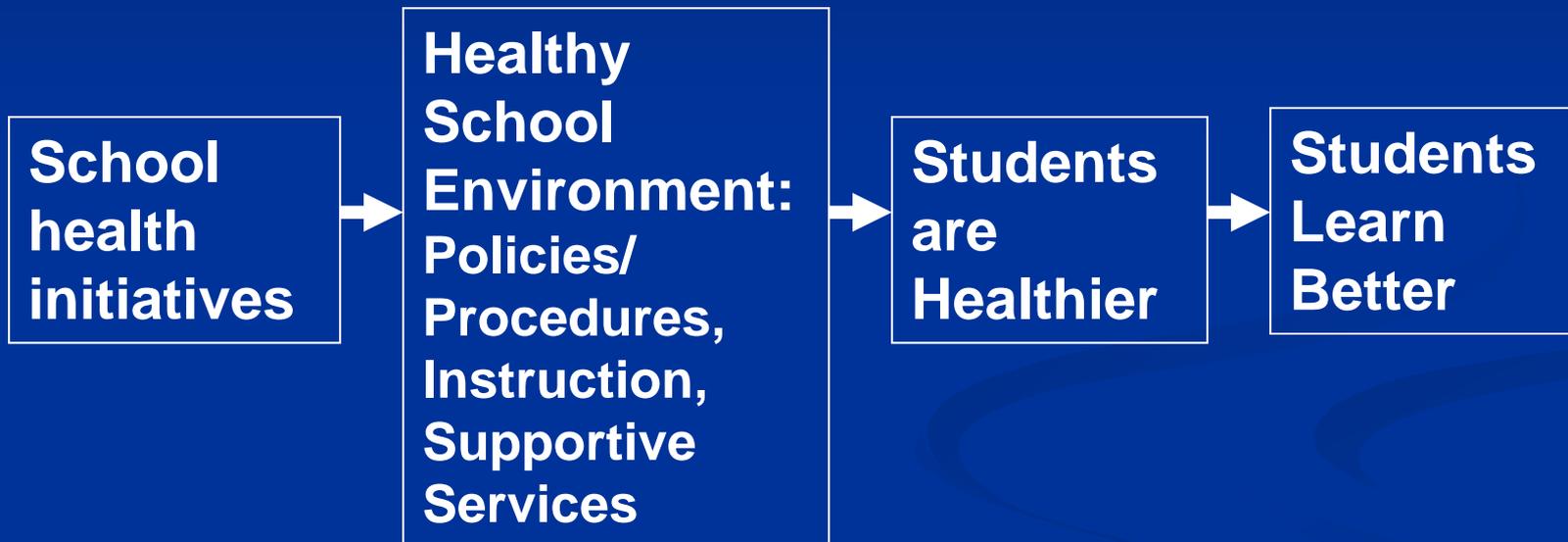
# Presentation Objectives

- Describe the relationship between student achievement and health
- Summarize research on achievement outcomes associated with school health interventions
- Highlight effective school health approaches

# Do Healthy Kids Learn Better?



# Theoretical Model for Intervention



Alignment of school health with educational mission is  
**critical**

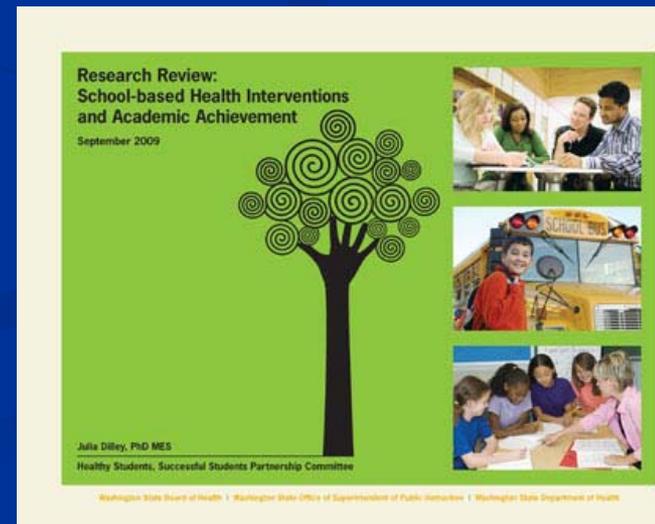
# Methods

- Healthy Youth Survey (HYS) and Oregon Healthy Teens (OHT) data analysis to describe associations between health and achievement
- Comprehensive literature review to identify research showing health interventions that improved achievement, and critical ingredients of successful school health programs

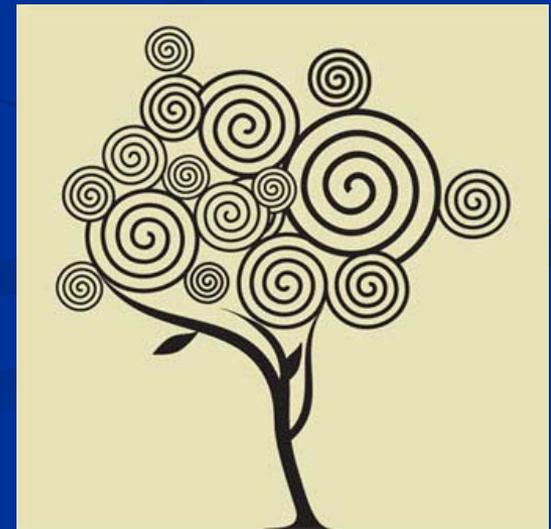
# Key Findings from Report

1. Students with health risks are also at-risk academically
2. Health risks are independent – each is important
3. Academic achievement gaps are at least partly due to health disparities
4. School health interventions can improve achievement

**Conclusion:** School health initiatives are an opportunity to improve academic achievement and equity in quality of life



# Health and Education are Linked



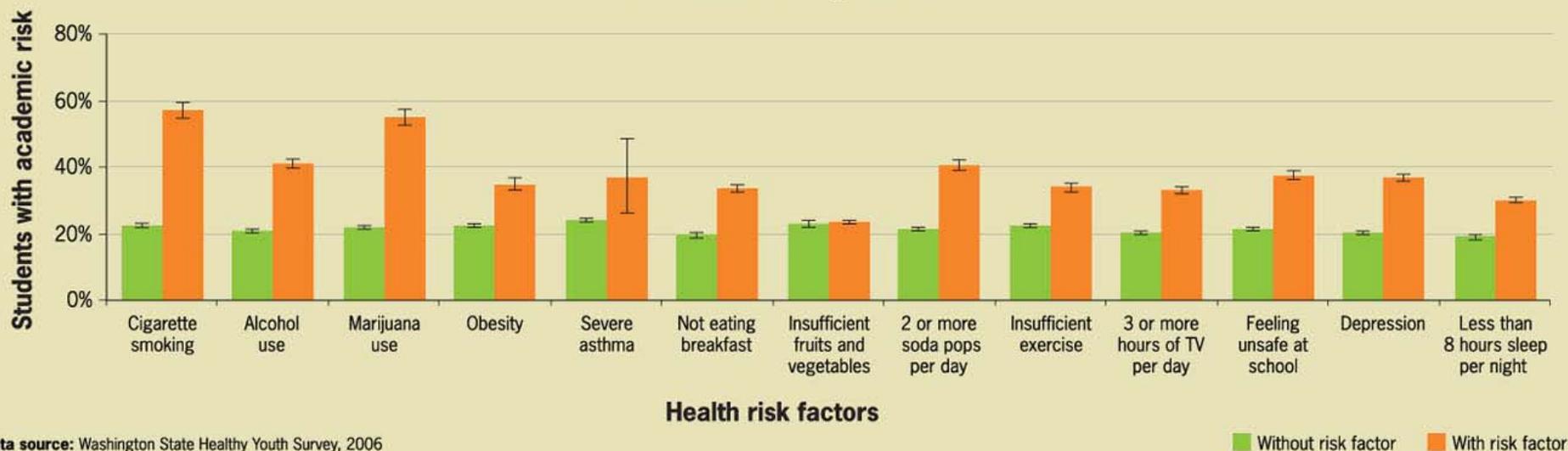
# “Oregon’s Unlucky 13”

## *Common 8<sup>th</sup> grade health risks*

No teacher really cares about me	7.3
Marijuana use	8.1
Cigarette smoking	8.5
Obesity	10.6
Drinking soda pop	10.9
Feeling depressed	17.2
Sexual Intercourse	17.7
No breakfast	17.9
Excess TV watching	27.1
Alcohol use	28.9
Insufficient exercise	31.9
Harassed at school	40.6
Insufficient fruit/vegetables	79.2

# Students with **Health Risks** also **Academically At-Risk**

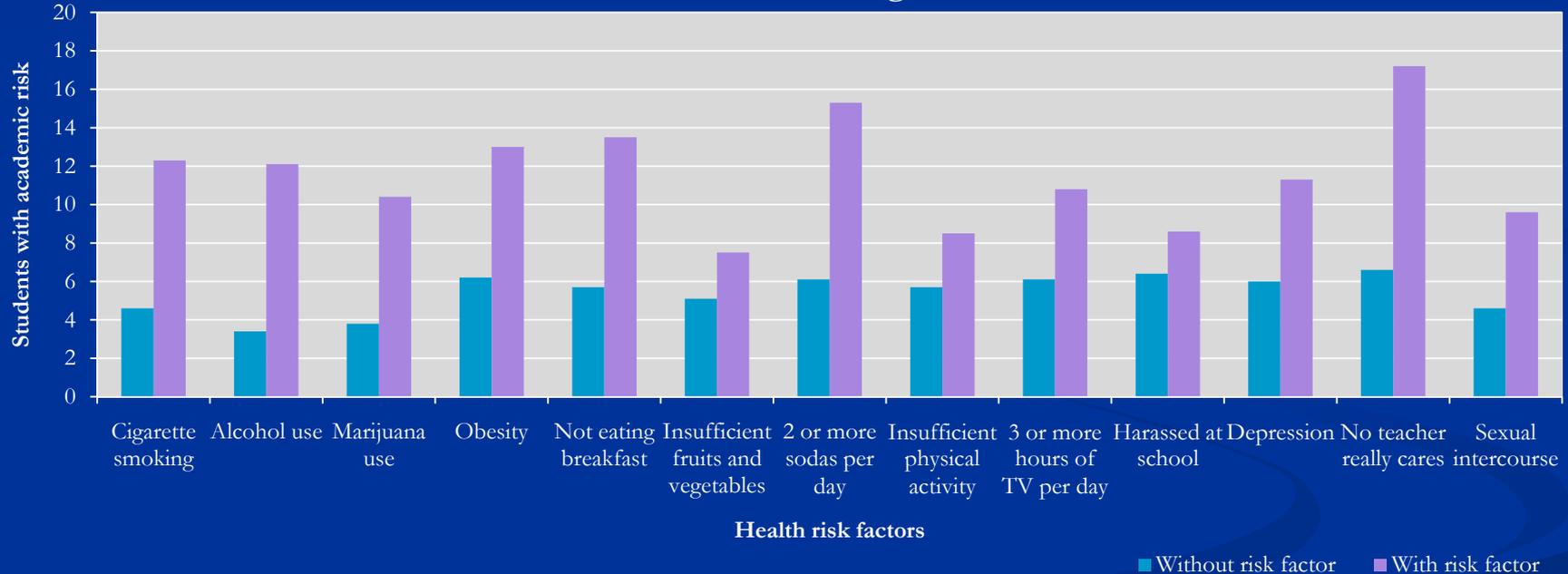
Percent of Students at Academic Risk With and Without Health Risk Factors  
8th Graders in Washington State



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

# Students with **Health Risks** also **Academically At-Risk**

Percent of Students at Academic Risk With and Without Health Risk Factors  
8th Graders in Oregon



Data source: 2008 Oregon Healthy Teens Survey, 11th grade.

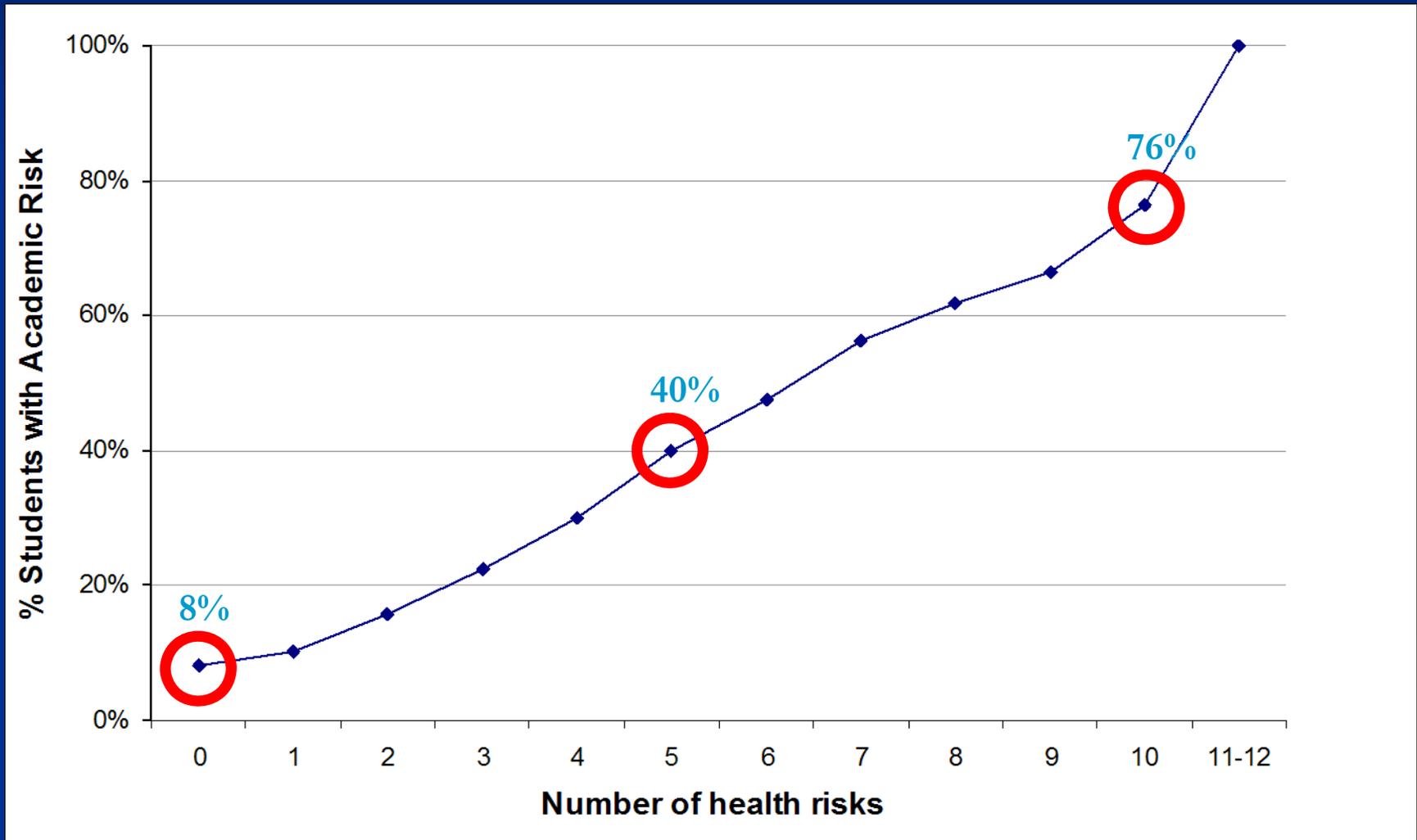
“Academic risk” is self-report of getting mostly Ds or Fs in school

# Students with Health Risks also Academically At-Risk (cont.)

- We limited to more prevalent conditions, but diabetes also worked the same
- Other possible health factors: unhealthy weight loss behaviors (fasting, vomiting), dental health, gambling

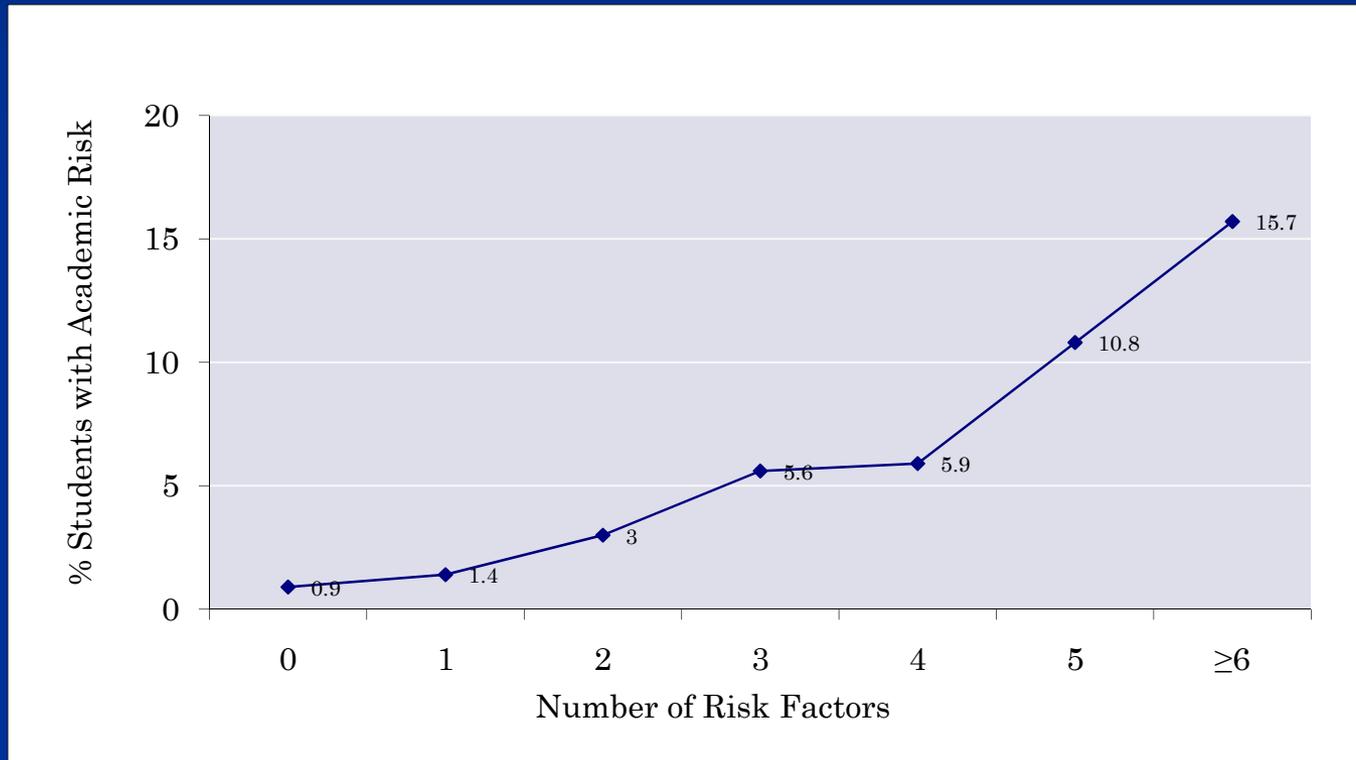
**Every health risk  
makes a difference.**

# Each Additional Health Risk Makes a Difference



Data source: 2006 Washington State Healthy Youth Survey, 8<sup>th</sup>-10<sup>th</sup> grade combined

# Each Additional Health Risk Makes a Difference

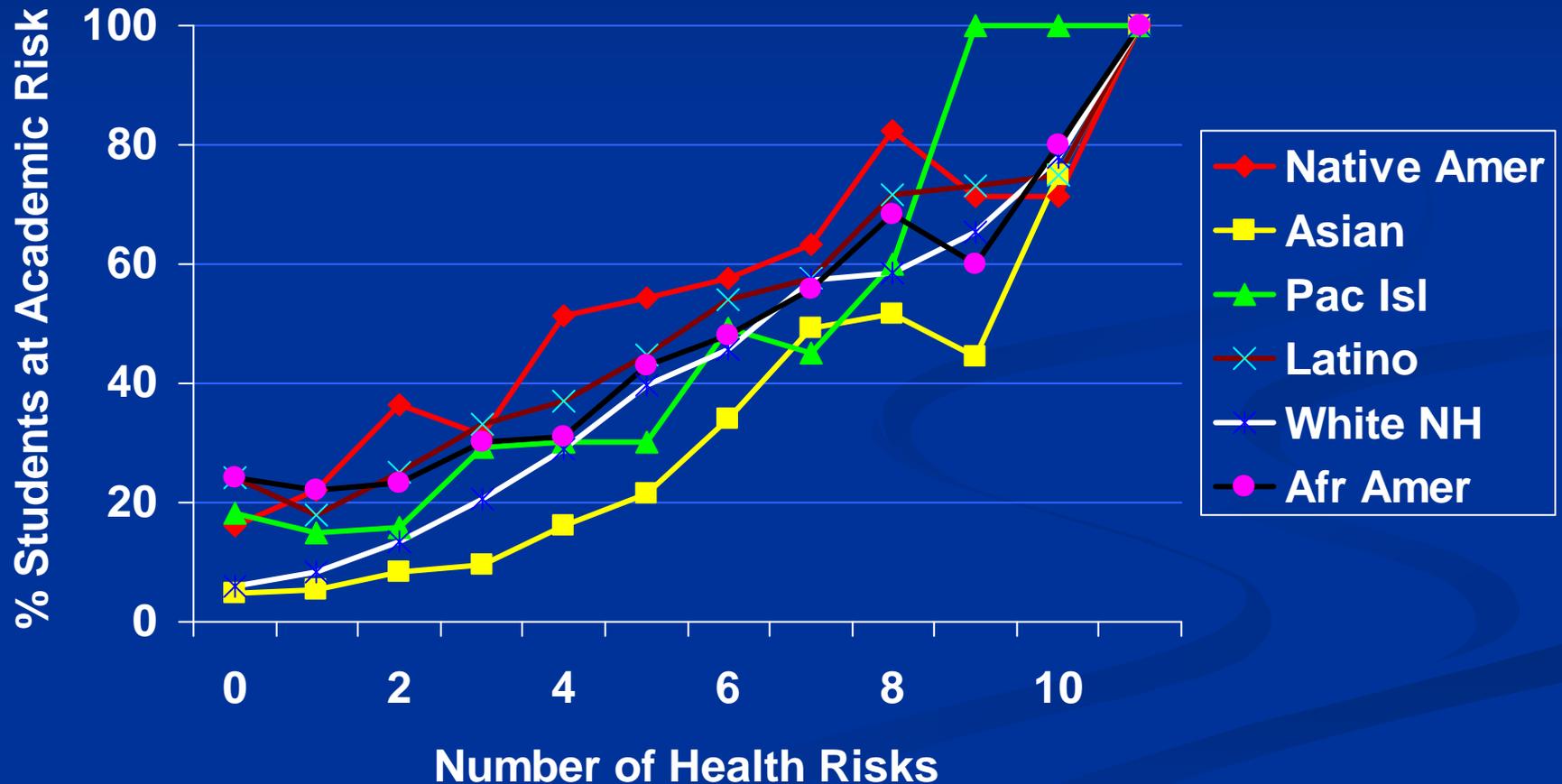


# Which are *most important* health risks?

- Strongest associations (approaching double risk)
  - Smoking, severe asthma, marijuana, no breakfast, depression
- Moderate associations (about 50% greater risk)
  - Obesity, soda pop, insufficient exercise, TV, alcohol, feeling unsafe at school
- Weakest associations (10-20% risk increase)
  - Sufficient fruit & veg, not enough sleep

# Health & Academic Association

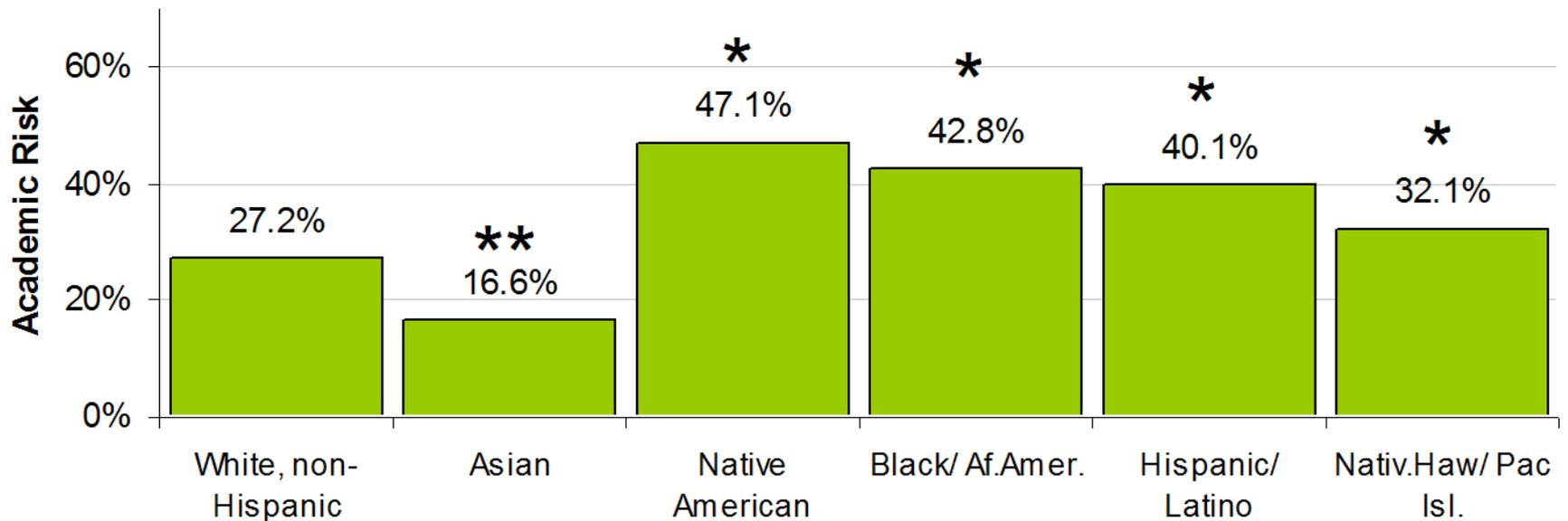
## Works the Same for Different Students



**The Achievement  
Gap is related to  
Health Disparities**

# Race/Ethnicity and Achievement

Academic Risk by Race/Ethnicity



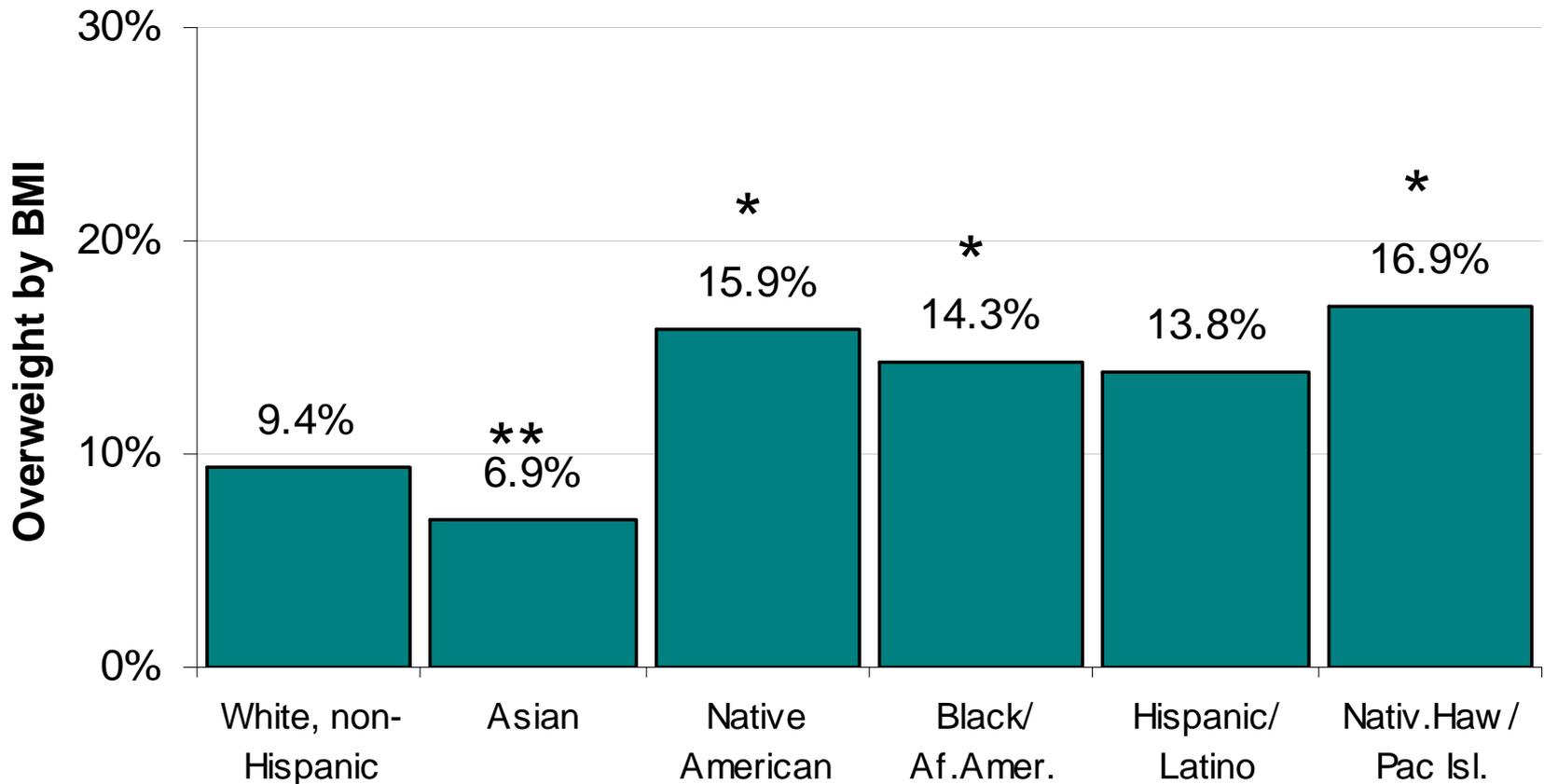
Data source: 2006 Washington State Healthy Youth Survey.

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

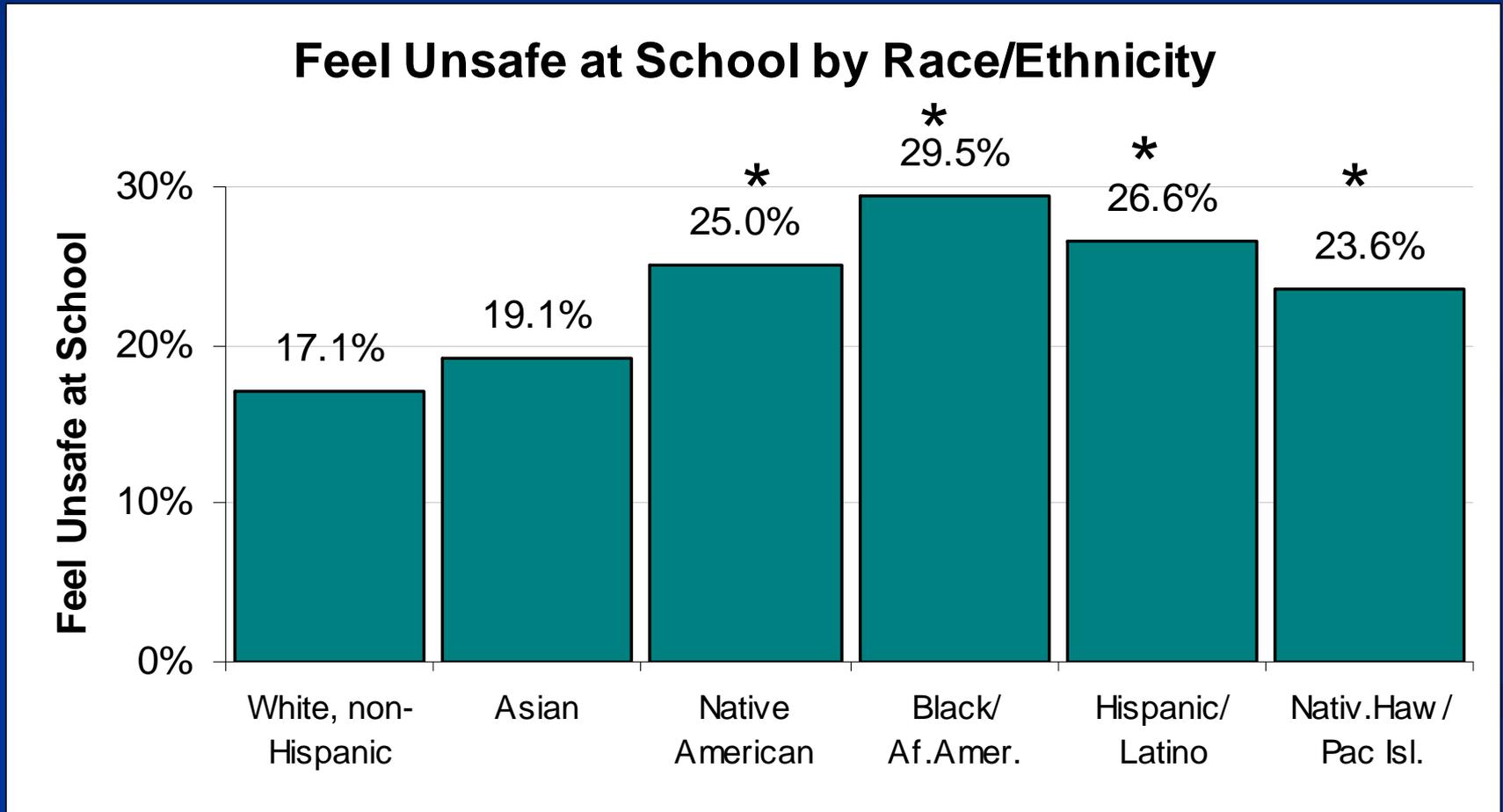
\*\* indicates statistically significant lower academic risk than non-Hispanic white youth.

# Race/Ethnicity and Health

## Overweight by Race/Ethnicity

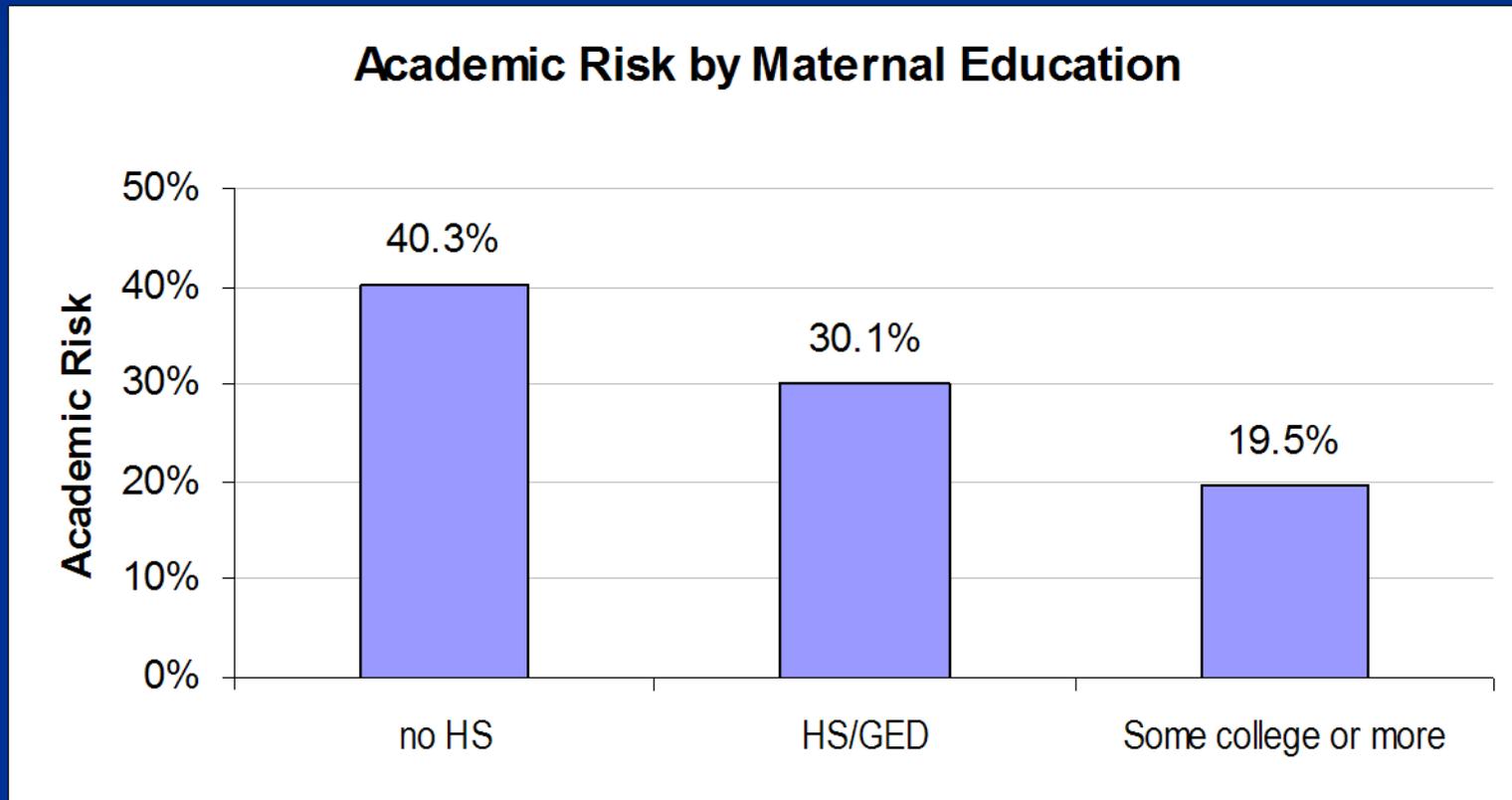


# Race/Ethnicity and Health



Source: 2006 Healthy Youth Survey, state sample only grades 8-10-12 combined.

# Socio-Economic Status and Achievement

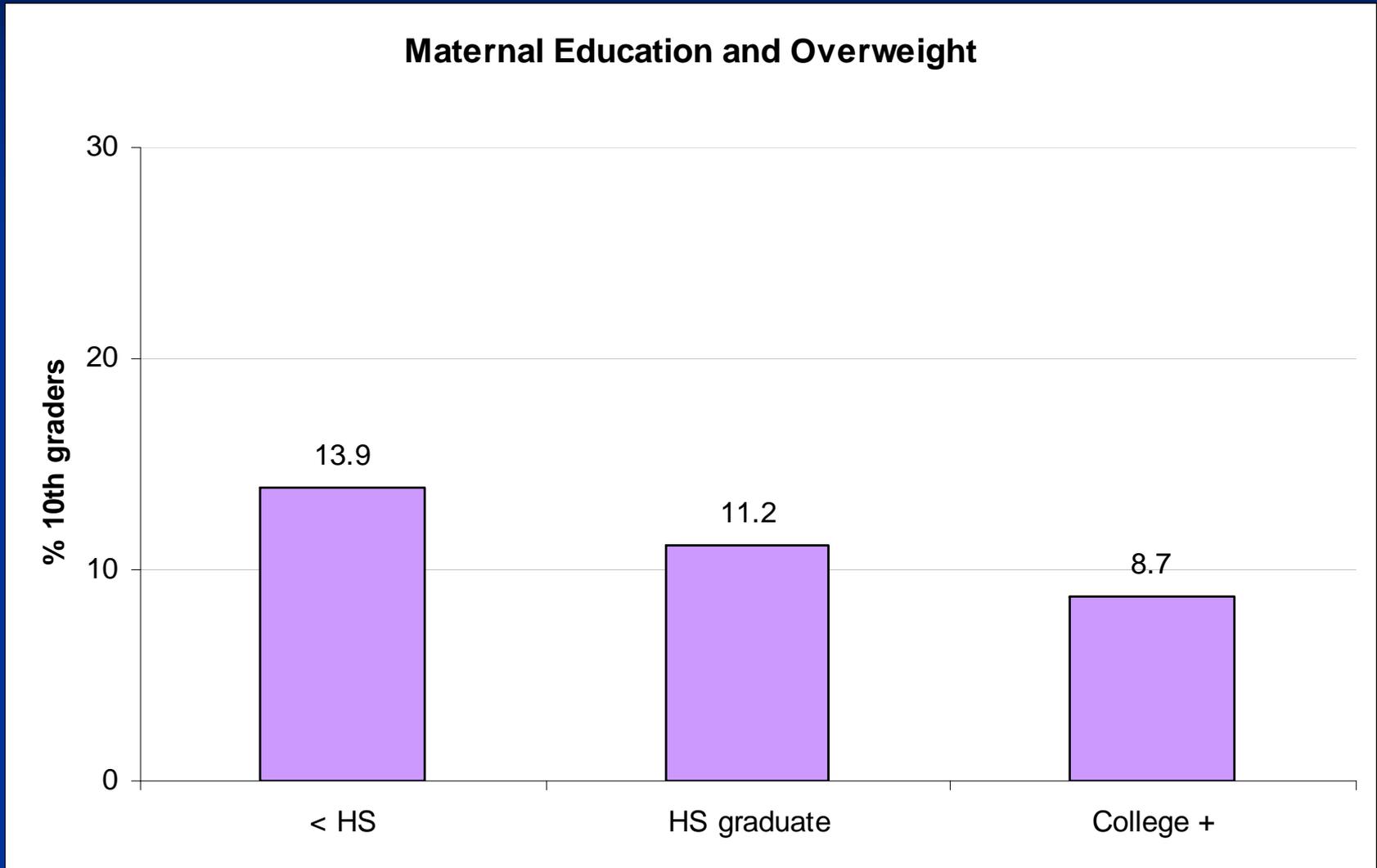


Data source: 2006 Washington State Healthy Youth Survey.

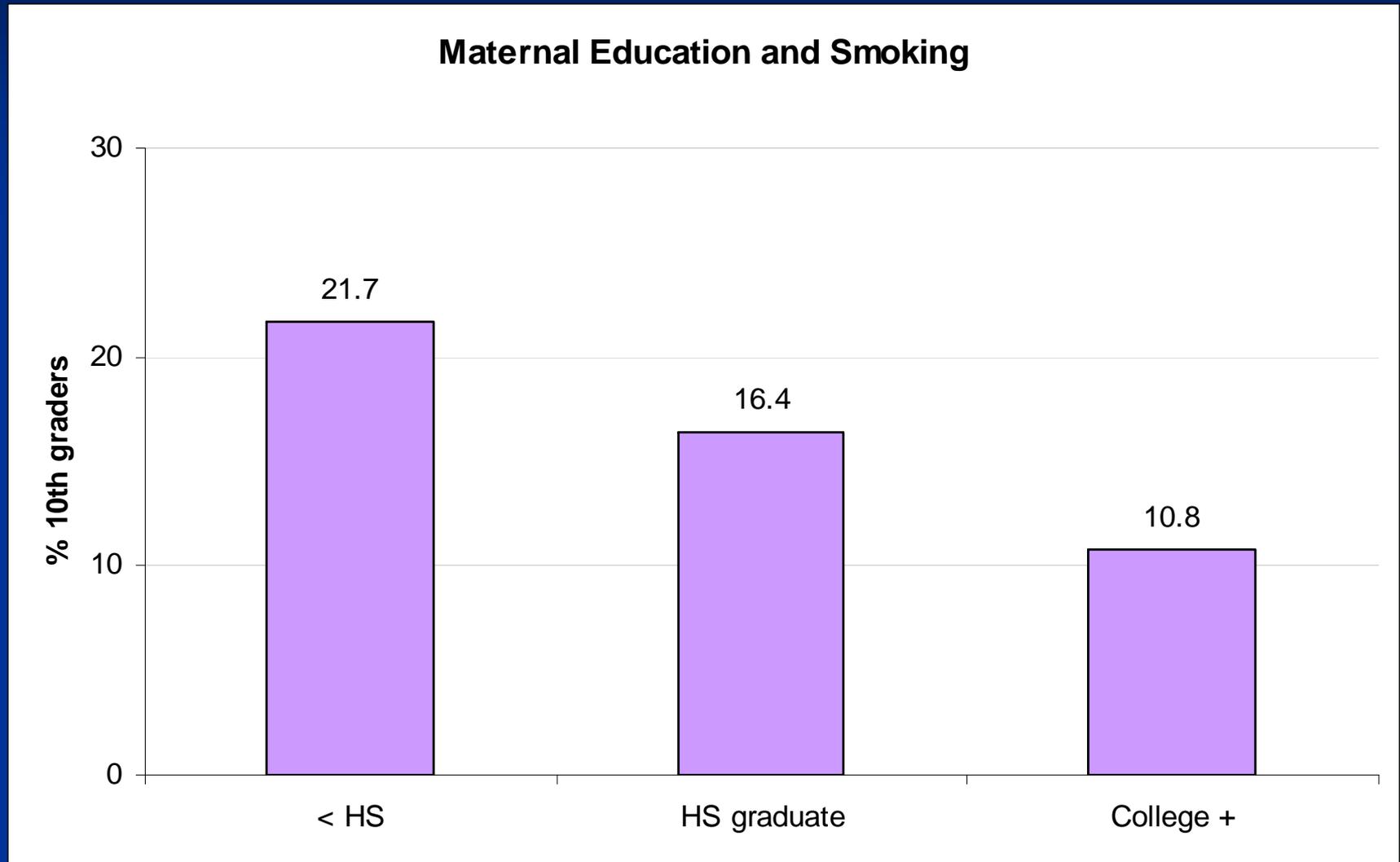
Maternal education is a validated proxy measure for socio-economic status of the family.

Dose-response relationship is statistically significant ( $p < .05$ )

# Socio-Economic Status and Health



# Socio-Economic Status and Health



# Other potentially vulnerable groups

- Sexual minority youth
- Race/ethnic subgroups
  - For example, Eastern European immigrants
- Children with disabilities
- Other groups in your community

# Why?

- Background factors could be driving both health & achievement gaps
  - Life stress, adverse events
  - Family instability
  - Mobility
- Whatever the underlying cause, intervention could be positive

# DISCUSSION

- Who needs to hear the message about linkages between student health & achievement? Why?
- Who argues against the association between student health & achievement? Why?
- Has anyone been successful convincing school leaders or key people about this relationship?

**School Health  
Interventions Can  
Improve  
Achievement**

# What works in School Health Interventions?

- Many, many studies have documented effectiveness for specific health-focused interventions in schools
- We wanted to find studies of health-focused interventions that influenced both health & achievement-related outcomes
- Not finding studies may simply mean that academic outcomes weren't studied, they might still work
- Not creating the “list of things to buy” – documenting the kinds of things that work

# Research Review Criteria

- Peer-reviewed research studies or included in “best practice” databases meeting some reasonable review criteria
- Grouped into similar strategies
- 2+ studies to include a strategy
- Both health & achievement outcomes
  - Health outcomes: similar to one of the 13 we saw in our Healthy Youth Survey data
  - Academic outcomes: grades, attendance, graduation, cognitive function, test scores, attachment to school

# 7 Effective Strategies

1. Handwashing
2. Increasing physical activity
3. Cognitive-social skills training
4. Parent-teacher communication skills training
5. School breakfast programs
6. Chronic disease management training
7. School-based health clinics (secondary)



# Handwashing

- How it works
  - Assure working sinks with warm water and soap (regular soap), allow time for washing, promote good washing technique – provide hand sanitizers as a backup (such as in class before snacks). Wash after using the bathroom & before eating.
  - Decreased colds and flu, foodborne illness transmission; decreased absences from school
- Effective among
  - Wide variety of ages and settings

# Physical Activity

- How it works
  - Incorporate physical activity into classroom day, improve opportunities during recess, increase quality/duration of physical education classes
  - Increases students meeting recommended activity levels; improves cognitive functioning
- Effective among
  - Tested among elementary/middle school students, suggestive efficacy among other groups

# Cognitive-Social Skills Training

## ■ How it works

- Teach students goal setting, decision-making, peer refusal skills for prevention (many curricula exist)
- Different studies showed decreased alcohol, substance abuse, sexual partners, violent behavior; improved grades, test scores.

## ■ Effective among

- Variety of settings: universal or targeted, late elementary through high school

# Parent-Teacher Communication Skills Training

- How it works
  - Adults (sometimes in combination with youth) trained in effective communication, conflict management, setting family or classroom expectations
  - Some studies showed decreased substance abuse, sexual behaviors, improved self-esteem; improved grades, attendance
- Effective among
  - Variety of ages, sometimes targeted to children of divorce or other trauma

# School Breakfast Programs

- How it works
  - Free breakfast programs to all or low-income students
  - Improves student nutrition, demonstrated increases in attention/functioning
- Effective among
  - Tested among elementary and middle school students, may work for high school

# Chronic Disease Management Training

- How it works
  - Provide training to students, parents, staff (sometimes peers), create an asthma control plan, how to avoid triggers
  - Students have fewer symptoms that disrupt sleep and study, miss less school, better grades
- Effective among
  - Low income elementary students with asthma

# School-based Health Centers

- How it works
  - Provide screenings, physical and/or mental health, social support and referrals to community resources
  - Provide services to teen parents including  
Participants reduced dropout, increased graduation
- Effective among
  - Higher-risk secondary school students (alternative schools)

# Other promising approaches

- Dental health services
  - Acute dental issues can affect attention and attendance in schools; school-based dental services can improve dental health
- Staff wellness programs
  - Decreased staff absences in one school-specific study, other studies show improved productivity/attention in workplace, thus may improve teaching
- Indoor air quality improvement
  - WSU study showed absences were higher for students in portables/rooms with poor air quality

# DISCUSSION

- What are low-cost approaches to the proven school health interventions here, or other school health interventions?
- Has anyone had the experience of doing a school health intervention that had positive influences on achievement?

# Making a Plan

# Coordinated School Health Approach

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- **Family and community involvement**
- **Healthy school environment**
- **Health education**
- **Physical education**
- **Staff wellness**
- **Nutrition services**
- **Health services**
- **Counseling, psychological and social services**



# Comprehensive Approaches

Fewer resources

More resources

Health-promoting  
school policies,  
procedures, and  
environments

Health-promoting  
curriculum,  
instruction, and  
training

Supportive  
services  
for health

Universal reach

Selective reach

# How about that Coordinated School Health Research?

- Since it's a framework, not a program, it looks different every time.
- What we are sure about is this:  
Spending class time and resources on implementation of school health does not appear to negatively impact academic achievement – and it does improve health.

# Implementing for Success

# “Key Ingredients” for Success

1. Strong, ongoing Advisory Group
2. Coordinated approach to school health
3. Plan that considers the whole child
4. Working continuously to improve the program (a.k.a. evaluation)
5. Supportive political environment
6. Sufficient resources to implement

# Getting Started

- Use assessment tools to give your advisory a clear view of what's going on
  - School Health Index
  - ASCD Healthy Schools Report Card
  - Alliance for a Healthier Generation (Nutrition/PA)
  - Healthy Youth Survey
- Include health measures in School Improvement Planning (SIP) goals

# Conclusion

# Schools Can Influence and Improve Student Health

- Health is important for achievement, maybe especially for specific students
- A growing body of evidence demonstrates that school health interventions can improve health measures and academic achievement or learning measures
- The Coordinated School Health approach organizes health interventions in a way that makes sense for school systems

# Bottom Line (again)

School health initiatives are a clear opportunity to improve both students' academic achievement and equity in quality of life.

*Learn more at [www.HealthySchoolsWA.org](http://www.HealthySchoolsWA.org)*

# Thank you!

Julia Dilley  
Senior Research Scientist  
Program Design and Evaluation Services  
Oregon Public Health Division  
(360) 402-7877  
[Julia.Dilley@state.or.us](mailto:Julia.Dilley@state.or.us)

Nigel Chaumeton  
Research Analyst  
Healthy Kids Learn Better Program  
Oregon Public Health Division  
(971) 673-0267  
[Nigel.R.Chaumeton@state.or.us](mailto:Nigel.R.Chaumeton@state.or.us)