Fostering an academic-school district partnership to improve school health information, planning and decision-making

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Center for Urban Population Health

Working together to improve the health of communities

University of Wisconsin School of Medicine and Public Health | UWMILWAUKEE | Aurora Health Care

Project Partners

- Center for Urban Population Health
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  - Susan Partington, Co-PI
  - Jessica Bergstrom, Project Coordinator
- Milwaukee Public Schools
  - M. Kathleen Murphy, Community Partner
- University of Wisconsin-Milwaukee, College of Nursing, Institute for Urban Health Partnerships
  - Elizabeth Fayram, Investigator
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Finding Common Ground, Nurturing Partnerships and Innovation

Milwaukee Public School District

- Total of 218 public schools for grades K-12
- Total of 93,516 students
  - 75% eligible for Free/Reduced Lunch
  - 58.4% African American
  - 20.0% Hispanic
  - 13.3 % White
  - 4.5% Asian
  - 3.0% Other
  - 0.8% American Indian

(Source: 2005-2006 MPS District Report Card)

Health Information Improvement Project (HIIP)

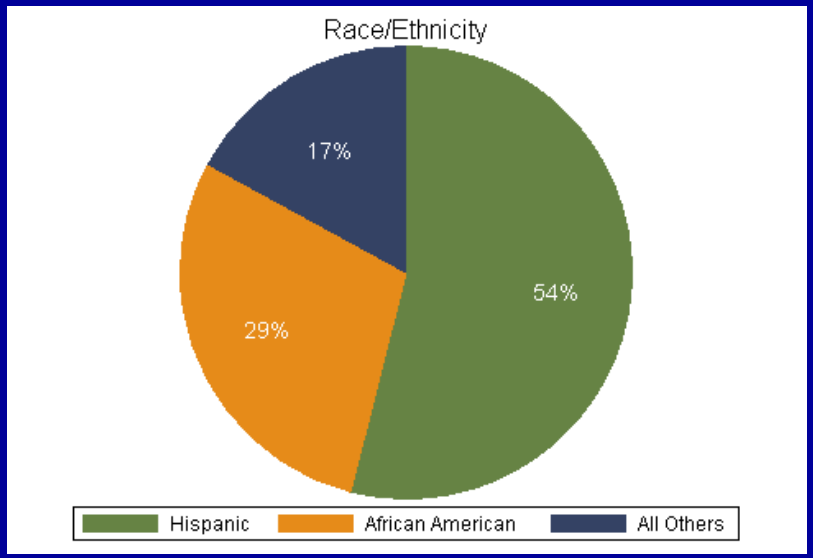
- Purpose: To examine the health of a diverse urban population of school children

- Main Study Goals: To improve school health information and provide the MPS District with student health data for health planning and decision-making

- Methods:
  - Child Health and Illness Profile-Child Edition
  - Biometric measurements: height, weight and blood pressure
  - Parent interviews including Children with Special Health Care Needs Screener

Sample Description (n=553)

- 50% Female
- Mean age 8.7 years



Child Health and Illness Profile-Child Edition: CHIP-CE

(Riley, 2001; Riley et al., 2004)

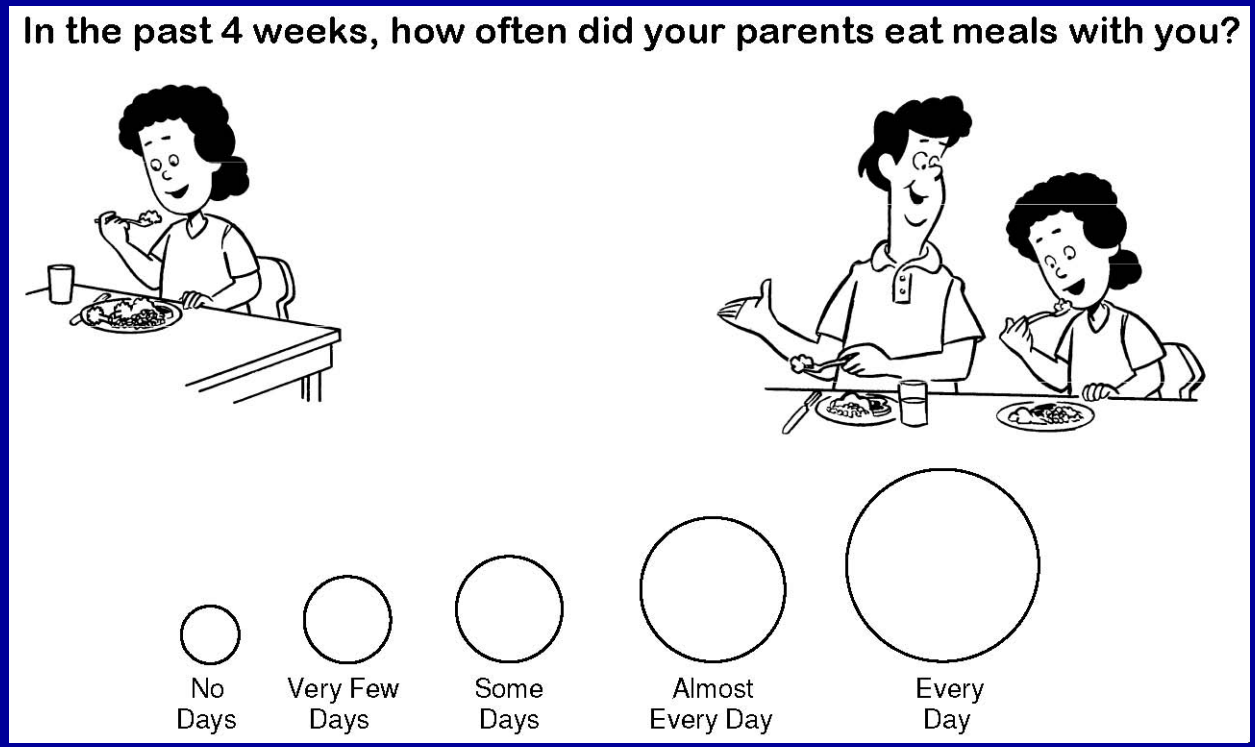
- 45 Questions
- Illustrated
- Likert scale responses
- 5 domains

- Domains:
  - Satisfaction
  - Comfort
  - Resilience
  - Risk Avoidance
  - Achievement

CHIP Domains- sample questions

- **Comfort**
  - P4wks, h/o have a sore throat?
  - P4wks, h/o have a bad stomachache?
  - P4wks, h/o feel really sad?
  - P4wks, h/o too sick to play at home?
- **Resilience**
  - P4wks, h/o play active games or sports?
  - P4wks, h/o parents eat meals with you?
  - P4wks, h/o run hard when played/did sports?
- **Risk Avoidance**
  - L4wks in school, h/o get in trouble at school?
  - P4wks, h/o did you pick on other kids?
  - H/o do you break rules just to get away with it?
- **Achievement**
  - L4wks in school, how did you do in reading?
  - L4wks in school, h/o finish all of your homework?
  - How many friends do you have?
- **Satisfaction**
  - How is your health?
  - H/o do you feel happy?
  - H/o are you really proud of yourself?

Sample CHIP question

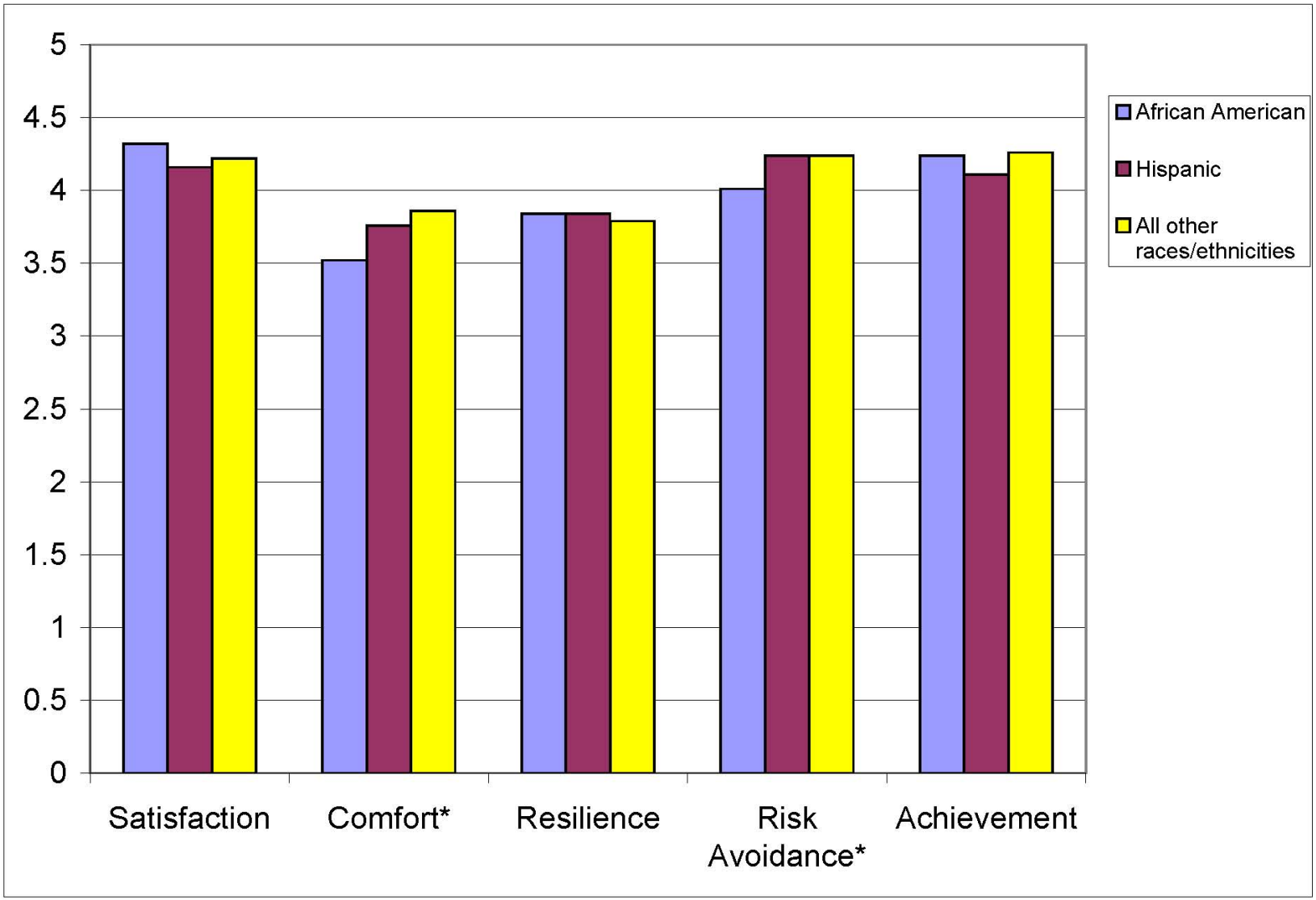


Differences in CHIP Domains

- Satisfaction
  - Grade
- Comfort
  - Race/ethnicity
  - Gender
  - Grade
- Resilience
  - None
- Risk Avoidance
  - Race/ethnicity
  - Gender
  - Grade
  - FRL status
- Achievement
  - Grade

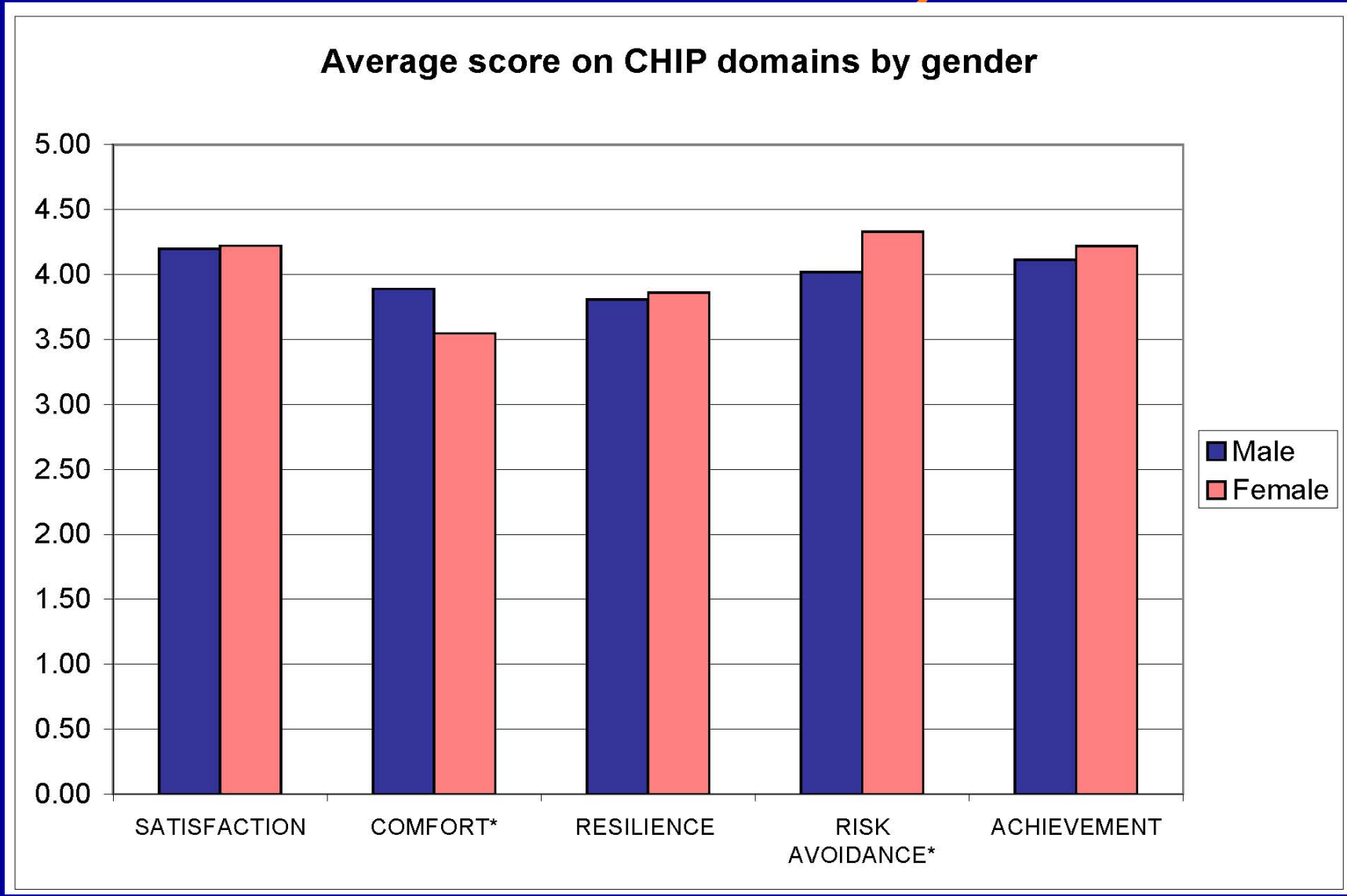
All significant at the p<.05 level

Mean CHIP scores by Race/Ethnicity



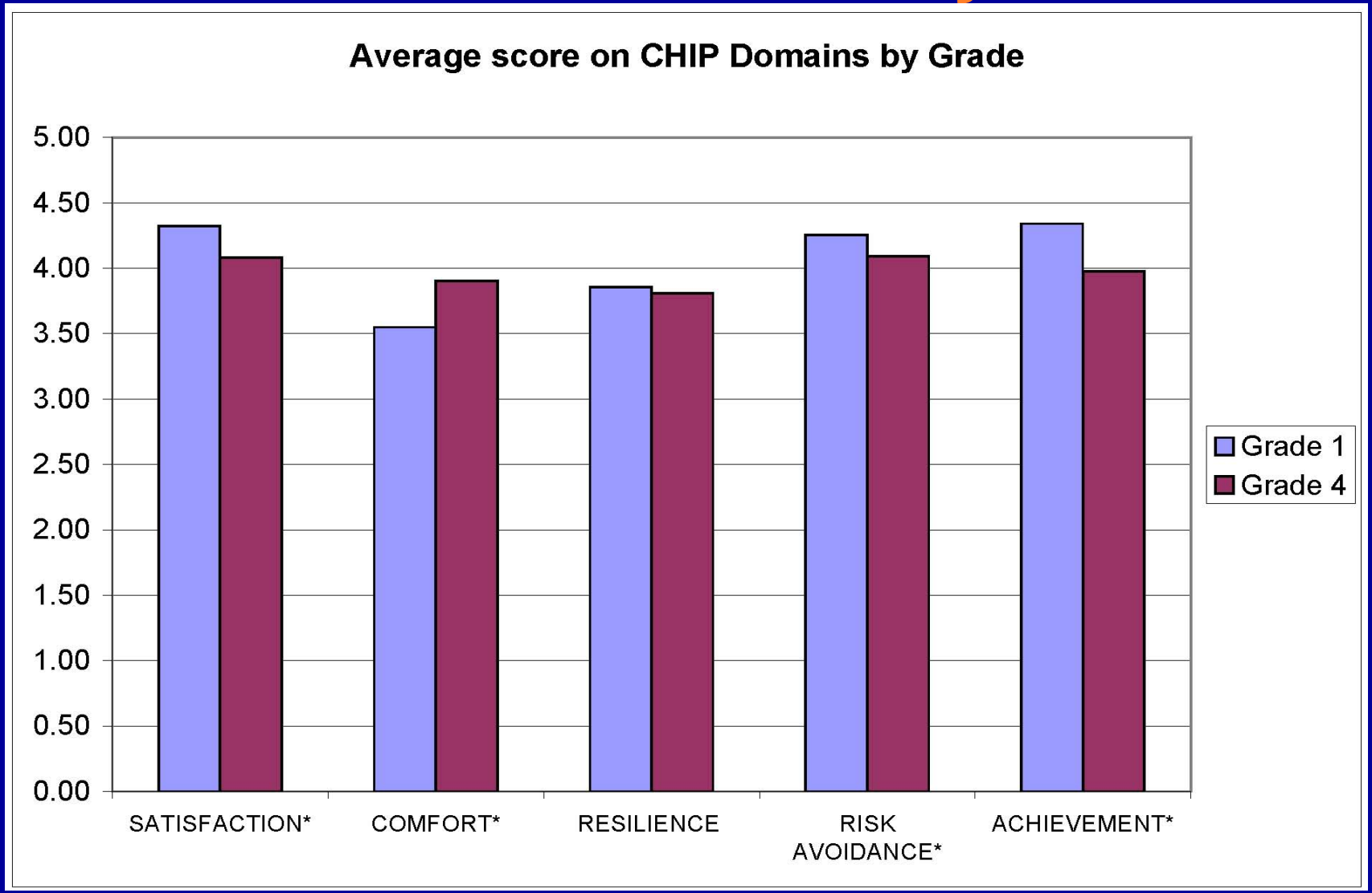
*Statistically significant difference at p<.05

Mean CHIP scores by Gender



*Statistically significant difference at p<.05

Mean CHIP scores by Grade



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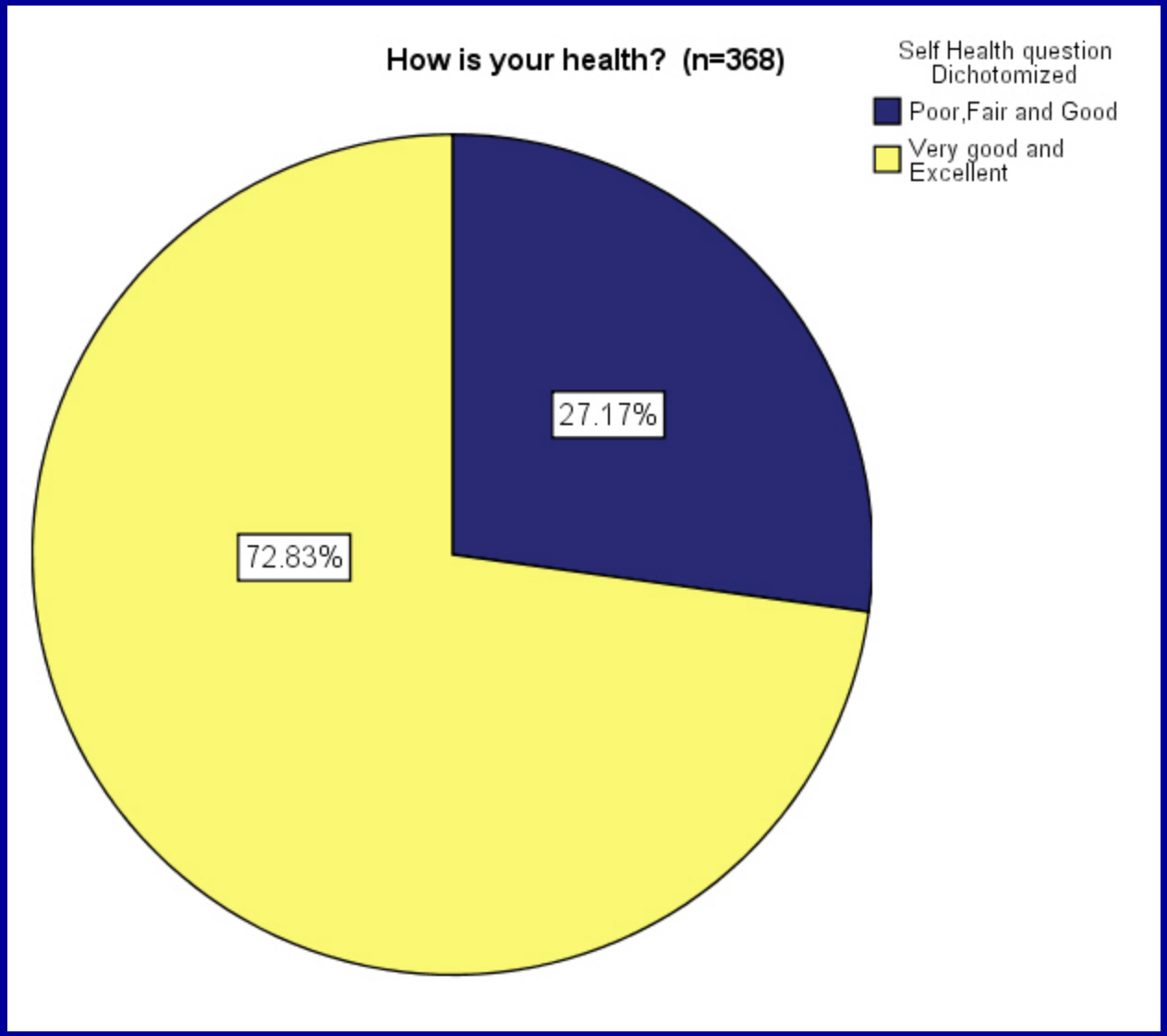
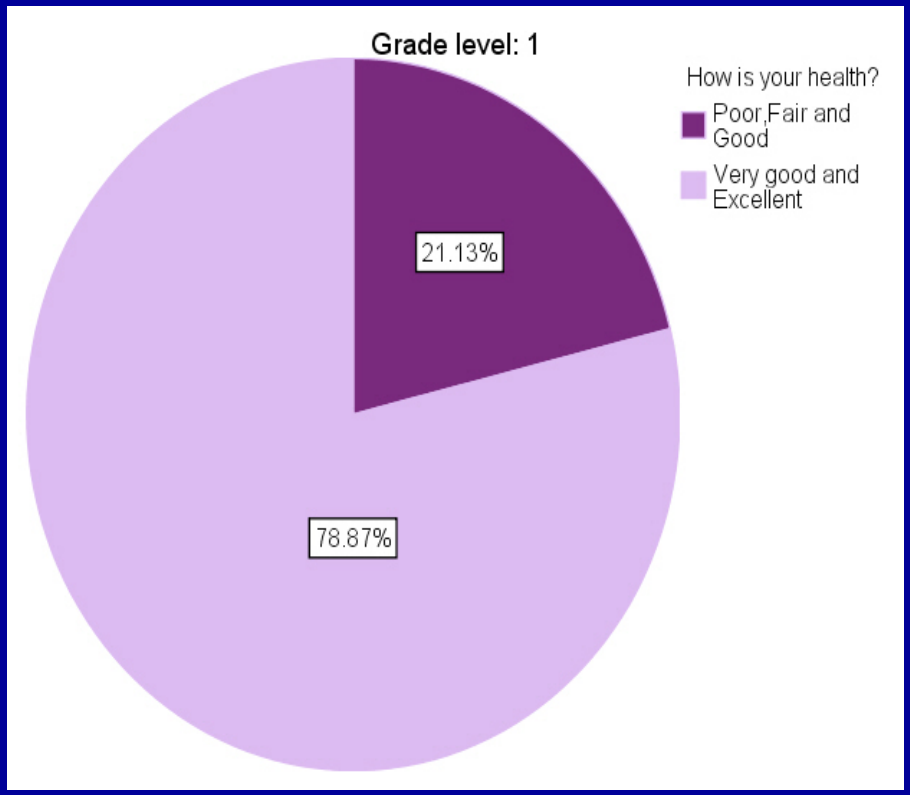
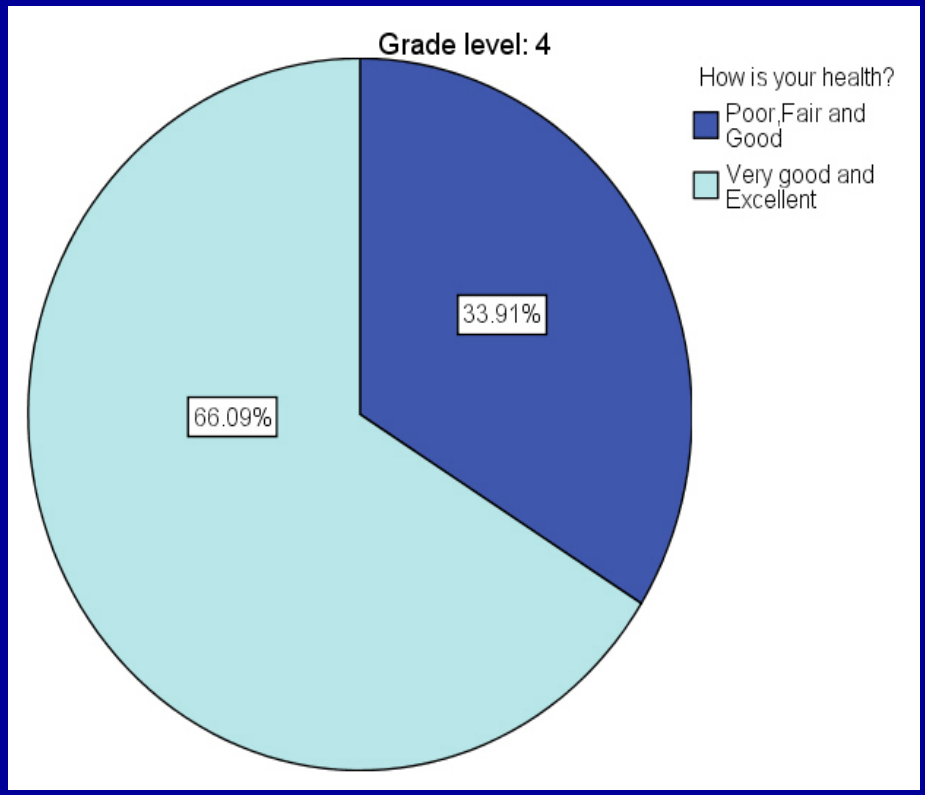


How is your health? Grade 1 vs. Grade 4





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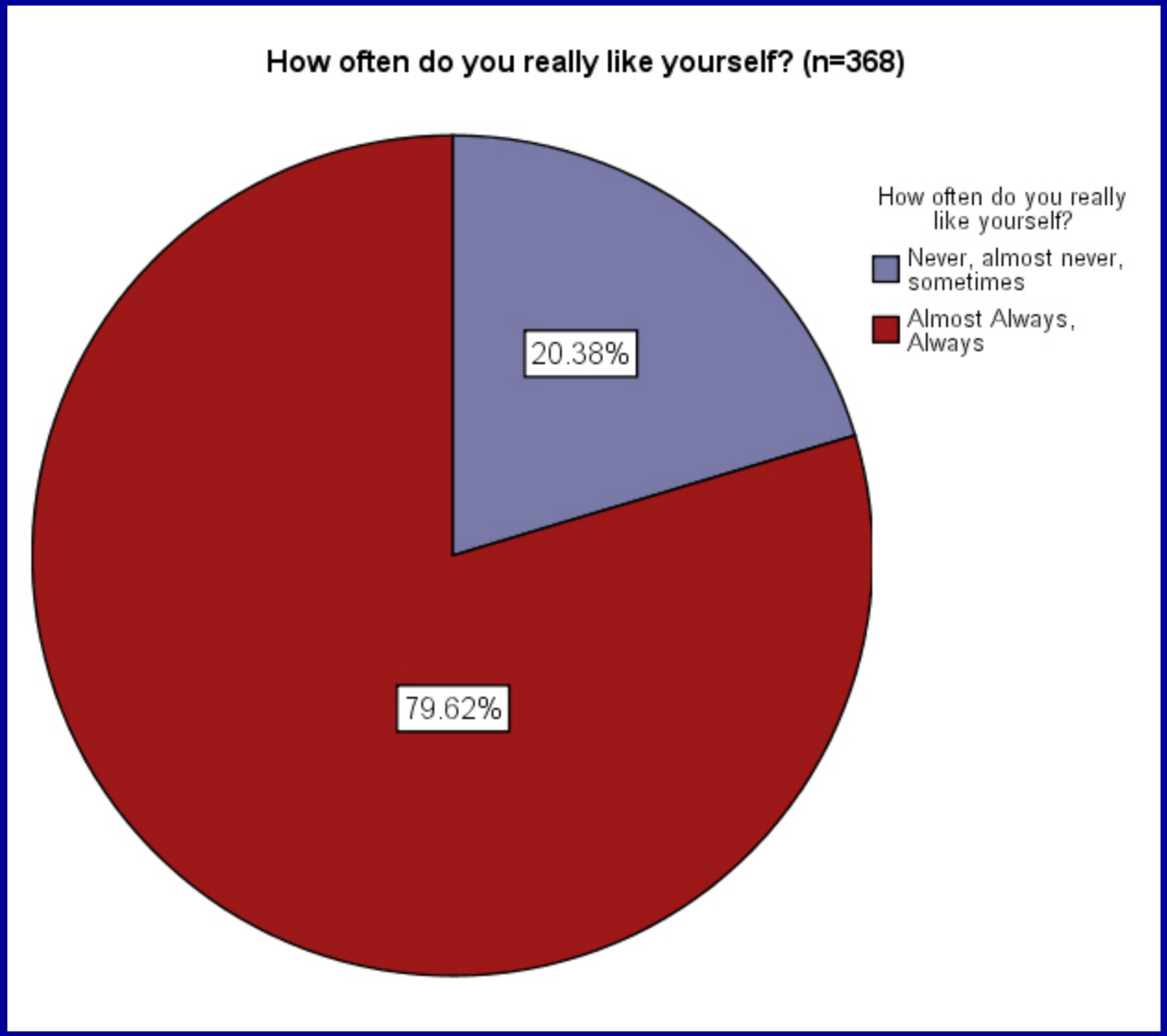
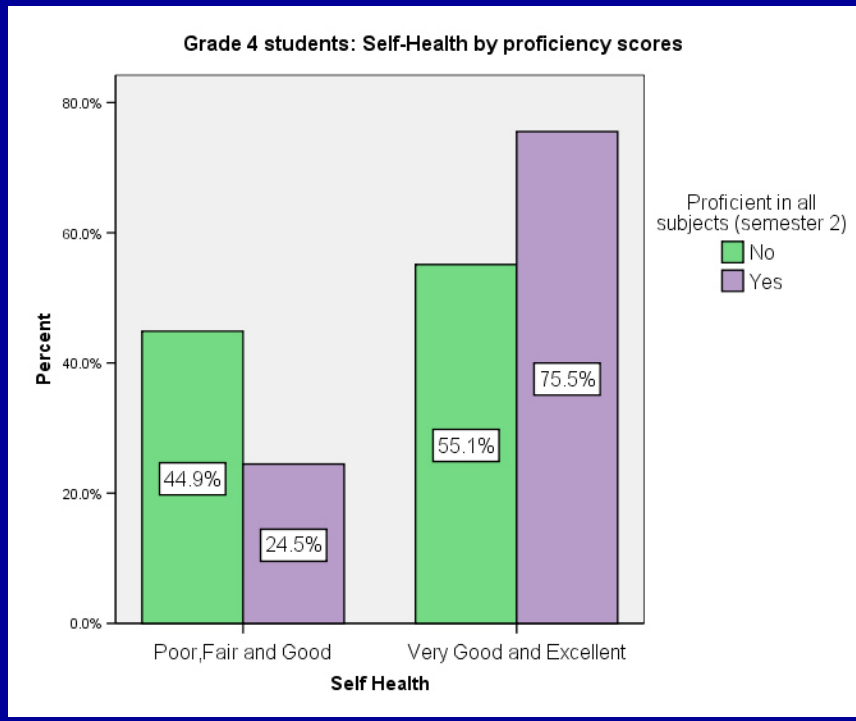


Relationship between self-reported health and MPS Achievement data- Grade 4

			Self Health		
			Poor,Fair and Good	Very good and Excellent	Total
Grade 4 Proficient in all subjects (semester 2)	No	Count	35	43	78
		%	44.9%	55.1%	100.0%
	Yes	Count	23	71	94
		%	24.5%	75.5%	100.0%

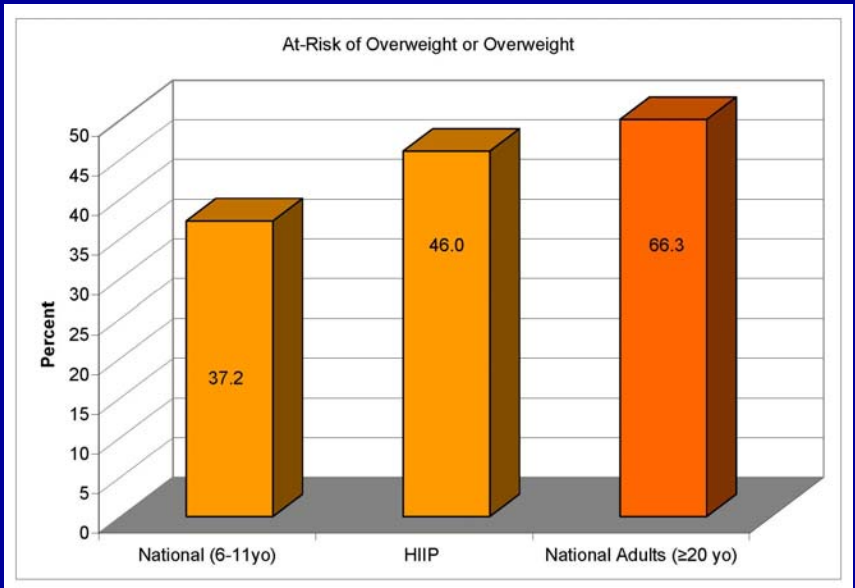


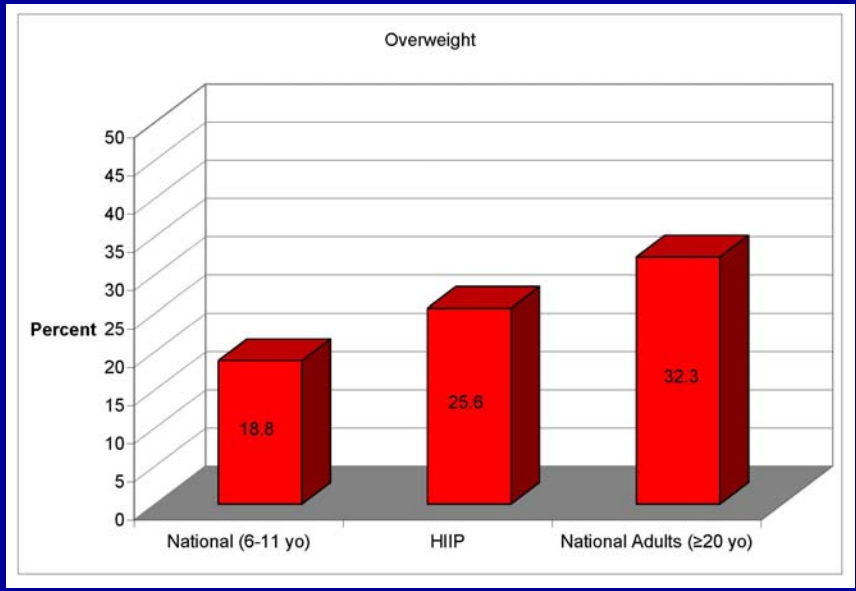
*Significant at p<.05

BIOMETRICS

- BMI percentiles for age and gender
  - CDC guidelines:
    - Greater than 85th Percentile and less than 95th= at-risk of overweight
    - 95th percentile or above= overweight
- Blood Pressure percentiles for age, height and gender (only one screening measurement taken)
  - NHLBI guidelines:
    - Either systolic or diastolic over 90th =elevated blood pressure

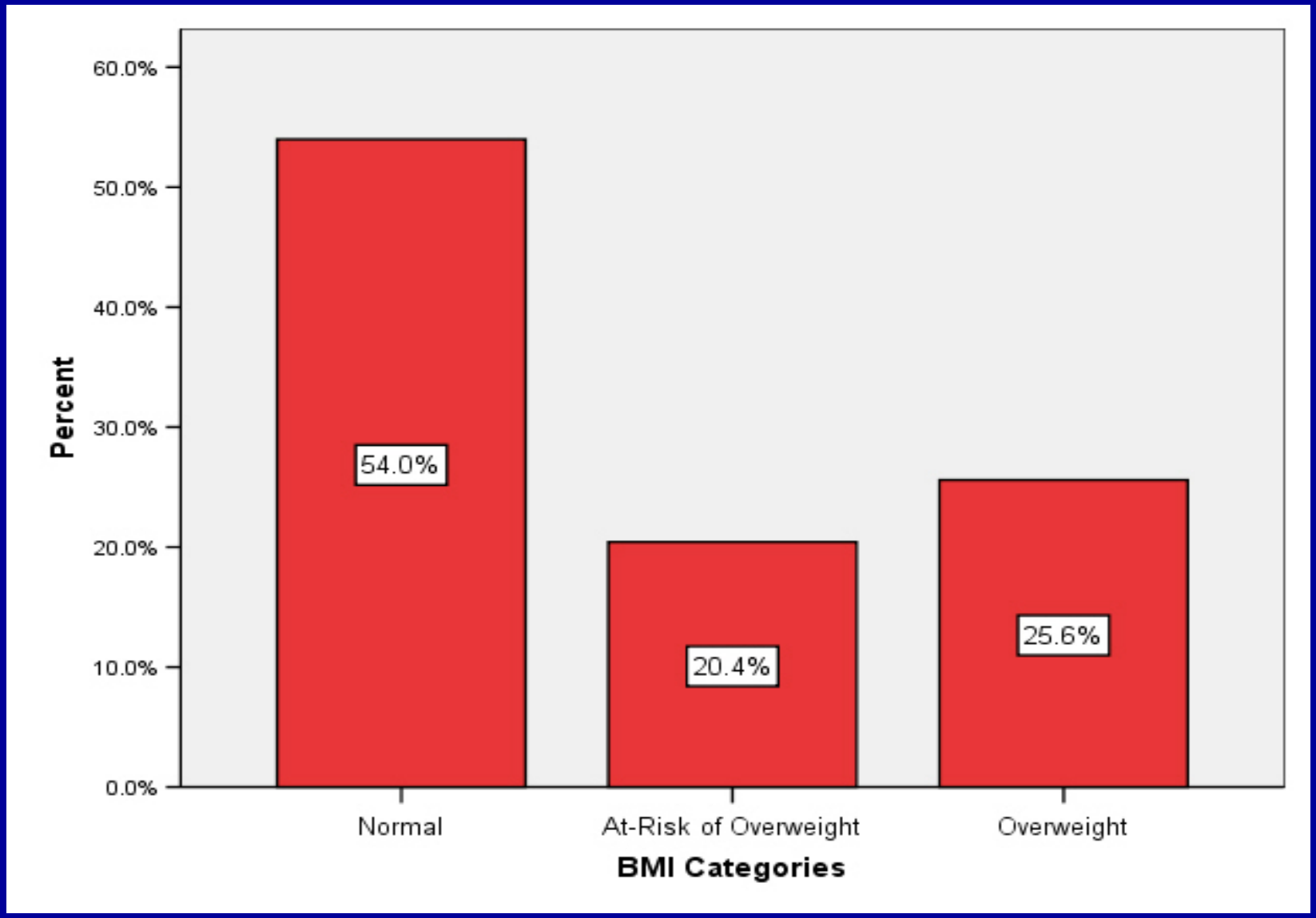
Overweight prevalence





Source for national data: Ogden et al. 2006.

HIIP BMI Categories (n=465)



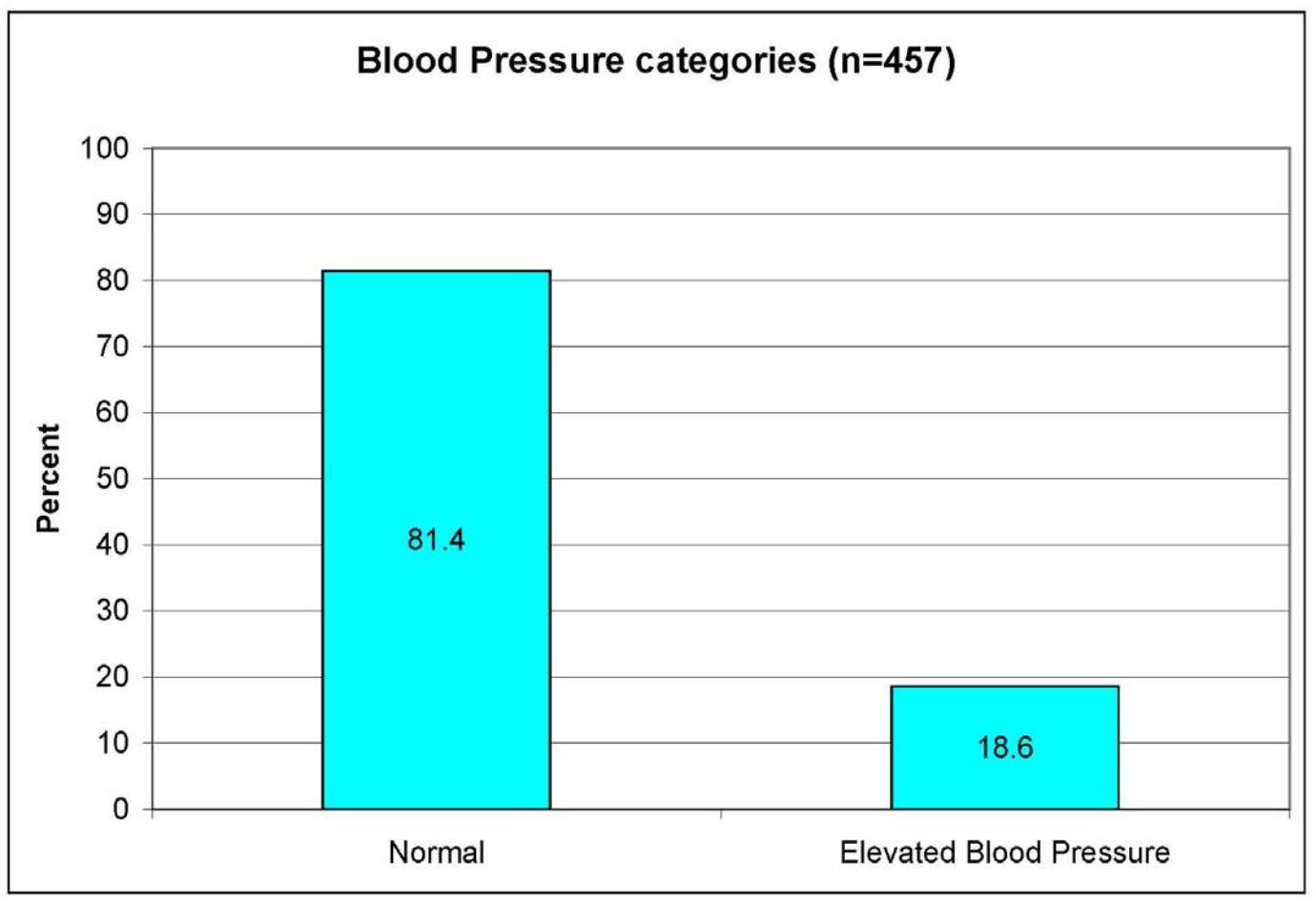
Neighborhood characteristics and odds of being at-risk of overweight or overweight

- Students living in areas with lower household incomes were 2.4 times more likely when compared to those living in areas of higher incomes
- Students living in areas with the highest percentage of under-educated adults were 2.4 times more likely than those living in areas with lower percentages of under-educated adults
- Students living more than 2.5 miles away from a large grocery store were 1.76 times more likely compared to students who lived less than 1 mile from the store
- African-American females were 2.6 times and Hispanic males 2.4 times more likely when compared to white females

Source: Partington, et al. Unpublished document 2007.

Blood pressure categories

(based on one measurement)



Children with Special Health Care Needs Screener (Bethell et all, 2002)

- 5-item parent survey-based tool
- Non-condition specific
- Identifies current functional limitations or service based needs that are the result of an on-going physical, emotional, behavioral developmental or other health condition

CSHCN screener

- Percent of children identified as having one or more special healthcare need
  - Nationally: 12.8%*
  - Wisconsin: 13.4%*
  - Milwaukee: 23.5%*
  - HIIP: 23% (of students whose parents/guardians who completed a telephone interview)

(*Partington, Cisler and Blair, 2006)

Electronic Student Information System (eSIS) data

- Developed for managing student's data
- Wide variability in how/when health data is entered

Limitations of Data

- Representativeness of sample
- Small sample size
  - Possible bias because of consent process
  - May not generalize to all 1st and 4th graders
- 1st graders may not have understood CHIP questions or response choices

Preliminary Conclusions

- Childhood obesity in this sample of MPS children is higher than national levels
  - But a high percentage of children report themselves as healthy
- Compared to state and national data, CSHCN screener results show higher proportion of children in Milwaukee with special health needs

Preliminary Recommendations

- Nutrition environment improvements and community and school-based interventions to encourage healthy eating and physical activity
- Parent education on consequences of obesity is important piece of influencing child health
- Still under discussion and seeking consensus among partners: BMI screening on all children at beginning of school year and using CSHCN screener as a screening tool in the schools to identify high need children

Lessons Learned

- Project implementation
- Benefits and challenges of an academic-school district partnership
- Program & policy interventions and sustainability issues

» Thank you!