Global School-based Student Health Survey (GSHS)

Data Analysis and Reporting Workshop

GSHS

04/2011

Workshop Objectives

- Following this workshop, you will be able to
  - understand and use your GSHS Data Summary
  - explain key findings from your GSHS and implications for policies and programs
  - install and use Epi Info to conduct analyses of your data
  - complete a site report and dissemination plan for your GSHS data

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Overview of the Agenda

Overview of the Workshop Materials

Review of Site Data Summaries and Data Analysis

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Table of Contents

1. 2003 GSHS Questionnaire
2. Survey Summary
3. Demographic Table
4. Summary Tables
5. Detail Tables
6. Graphs

7. Map Form
8. Codebook
9. Sample Description, Weighting Procedures, and Sample Statistics
10. CD-ROM Table of Contents

GSHS

Table of Contents

Report writing

1. GSHS Questionnaire
2. Survey Summary
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4. Summary Tables
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CDC

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Table of Contents

1. GSHS Questionnaire
2. Survey Summary
3. Demographic Table
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6. Graphs

Data analysis (Epi Info)

7. Map Form
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Tab 9
Sample Description and Weighting Procedures

- Sample description – school and class level
- Response rates
- Weighting procedures
- Use of weighted results

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China – Beijing
Sample Description and Weighting Procedures

Sample Description:

School Level - All regular schools in the Beijing region containing grades 1, 2, 3, or 4 were included in the sampling frame. Schools were selected systematically with probability proportional to enrollment in grades 1, 2, 3, or 4 using a random start. 25 schools were sampled.

Class Level - All classes with the majority of students in grades 1, 2, 3, or 4 were included in the sampling frame. Systematic equal probability sampling with a random start was used to select classes from each school that participated in the survey.

Response Rates:

Schools - 100% 25 of the 25 sampled schools participated.

Students - 99% 2,348 of the 2,382 sampled students completed usable questionnaires.

Overall response rate - 100% * 99% = 99%

Weighting:

A weight has been associated with each questionnaire to reflect the likelihood of sampling each student and to reduce bias by compensating for differing patterns of nonresponse. The weight used for estimation is given by:

$$W = W1 * W2 * f1 * f2 * f3$$

W1 = the inverse of the probability of selecting the school;

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f2 = a student-level nonresponse adjustment factor calculated by class.

f3 = a poststratification adjustment factor calculated by gender within grade.

Use of the Weighted Results:

The weighted results can be used to make important inferences about the priority health-risk behaviors and protective factors of all regular school students in grades 1, 2, 3, or 4.

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The GSHS Sample

- 2-stage cluster sample design
- 1st stage – selection of schools
  - selected with probability proportional to size
  - schools with grades that 13-15 year olds attend
  - selected at CDC using PCSample
- 2nd stage – selection of classrooms
  - selected randomly
  - selected by each site using output from PCSample

China – Beijing
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Calculating Response Rates

- **School response rate**

$$\frac{\text{\# of participating schools}}{\text{\# of sampled schools}}$$

- **Student response rate**

$$\frac{\text{\# of participating students}}{\text{\# of sampled students}}$$

- **Overall response rate**

School response rate X student response rate

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Calculating Response Rates

- **School response rate**

$$\frac{\text{\# of participating schools}}{\text{\# of sampled schools}} \qquad \frac{25}{25} = 100\%$$

- **Student response rate**

$$\frac{\text{\# of participating students}}{\text{\# of sampled students}} \qquad \frac{2918}{2977} = 98\%$$

- **Overall response rate**

School response rate X student response rate

$$100 \times 98 = 98\%$$

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Response Rate Exercise

25 schools were selected to participate
23 schools participated

1872 students were enrolled in sampled classrooms
1592 students completed a questionnaire

What is the school response rate? _____

What is the student response rate? _____

What is the overall response rate? _____

GSHS

Response Rate Exercise

25 schools were selected to participate
23 schools participated

1872 students were enrolled in sampled classrooms
1592 students completed a questionnaire

What is the school response rate? 92% $\frac{23}{25}$

What is the student response rate? _____

What is the overall response rate? _____

GSHS

Response Rate Exercise

25 schools were selected to participate
23 schools participated

1872 students were enrolled in sampled classrooms
1592 students completed a questionnaire

What is the school response rate? 92% $\frac{23}{25}$

What is the student response rate? 85% $\frac{1592}{1872}$

What is the overall response rate? _____

GSHS

Response Rate Exercise

25 schools were selected to participate
23 schools participated

1872 students were enrolled in sampled classrooms
1592 students completed a questionnaire

What is the school response rate? 92% $\frac{49}{50}$

What is the student response rate? 85% $\frac{1821}{1900}$

What is the overall response rate? 78% 92 X 85

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Response Rate Exercise

50 schools were selected to participate
49 schools participated

1900 students were enrolled in sampled classrooms
1821 students completed a questionnaire

What is the school response rate? _____

What is the student response rate? _____

What is the overall response rate? _____

GSHS

Response Rate Exercise

50 schools were selected to participate
49 schools participated

1900 students were enrolled in sampled classrooms
1821 students completed a questionnaire

What is the school response rate? __98%__ $\frac{49}{50}$

What is the student response rate? _____

What is the overall response rate? _____

GSHS

Response Rate Exercise

50 schools were selected to participate
49 schools participated

1900 students were enrolled in sampled classrooms
1821 students completed a questionnaire

What is the school response rate? 98% $\frac{49}{50}$

What is the student response rate? 96% $\frac{1821}{1900}$

What is the overall response rate? _____

GSHS

Response Rate Exercise

50 schools were selected to participate
49 schools participated

1900 students were enrolled in sampled classrooms
1821 students completed a questionnaire

What is the school response rate? 98% $\frac{49}{50}$

What is the student response rate? 96% $\frac{1821}{1900}$

What is the overall response rate? 94% 98 X 96

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China – Beijing
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Weighting

- Allows you to generalize your results to the entire population of students, not just those who took the survey
- Necessary for all sampled based surveys
- Requirements
  - Scientifically selected sample
  - Complete documentation
  - High overall response rate

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What does weighting do?

- It accounts for
  - the probability of selection of schools and classrooms
  - non-responding schools and students
  - distribution of the population by grade and sex
- It allows one student to represent many other students like he or she

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Weighting Formula
W = W1 * W2 * f1 * f2 * f3

- W1 = the inverse of the probability of selecting the school
- W2 = the inverse of the probability of selecting classrooms
- f1 = a school-level nonresponse adjustment factor
- f2 = a student-level nonresponse adjustment factor calculated by classroom
- f3 = a post stratification adjustment factor calculated by sex within grade

GSHS

Weighting Formula
W = W1 * W2 * f1 * f2 * f3

Base weight

- W1 = the inverse of the probability of selecting the school
- W2 = the inverse of the probability of selecting classrooms
- f1 = a school-level nonresponse adjustment factor
- f2 = a student-level nonresponse adjustment factor calculated by classroom
- f3 = a post stratification adjustment factor calculated by sex within grade

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Weighting Formula
W = W1 * W2 * f1 * f2 * f3

Nonresponse adjustment

- W1 = the inverse of the probability of selecting the school
- W2 = the inverse of the probability of selecting classrooms
- f1 = a school-level nonresponse adjustment factor
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W = W1 * W2 * f1 * f2 * f3

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Post stratification adjustment

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Output from the weighting process - 3 new variables for every record

- Weight (W)
- Stratum – Each stratum usually consists of 1 or 2 schools – based on enrollment
- Primary Sampling Unit (PSU) – Each PSU usually consists of 1 or multiple classes within a school

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Output from the weighting process - 3 new variables for every record

- Weight (W)
- Stratum Number – Each stratum usually consists of 1 or 2 schools – based on enrollment
- Primary Sampling Unit (PSU) Number – Each PSU usually consists of 1 or multiple classes within a school

Describe the complex sample design

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School Weight	School	Classes	Stratum	PSU
1.0	A	1	1	1
		3	1	2
		6	1	3
1.0	B	2	2	4
		4	2	5
		6	2	6
1.0	C	1	3	7
		3	3	8
		4	3	9
		6	3	10
1.0	D	2	4	11
		4	4	12
		6	4	13
		9	4	14
1.27	E	1	5	15
		2	5	15
		3	5	15
1.38	F	1	5	16
		3	5	16
		5	5	16
1.79	G	2	6	17
		4	6	17
		6	6	17
		8	6	17
1.83	H	1	6	18
		3	6	18
		5	6	18
1.90	I	3	7	19
		6	7	19
		9	7	19
2.1	J	2	7	20
		4	7	20
		6	7	20

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1.0	A	1	1	1
		3	1	2
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		4	2	5
		6	2	6
1.0	C	1	3	7
		3	3	8
		4	3	9
		6	3	10
1.0	D	2	4	11
		4	4	12
		6	4	13
		9	4	14
1.27	E	1	5	15
		2	5	15
		3	5	15
1.38	F	1	5	16
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		5	5	16
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		4	7	20
		6	7	20

Larger schools – selected with certainty

GSHS

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		6	1	3
1.0	B	2	2	4
		4	2	5
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		4	6	17
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		8	6	17
1.83	H	1	6	18
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		5	6	18
1.90	I	3	7	19
		6	7	19
		9	7	19
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Smaller schools

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Tab 1
GSHS Questionnaire

- Languages
  - Local language
  - English
- 3 types of questions
  - Core module questions
  - Core-expanded questions
  - Country-specific questions

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Tab 2
Survey Summary

- Number of participating students
- Number of participating schools
- School response rate
- Student response rate
- Overall response rate
- Weighted demographics
  - Sex
  - Grade
- Number of questions on GSHS questionnaire

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2006 GLOBAL SCHOOL-BASED STUDENT HEALTH SURVEY RESULTS

Tajikistan Survey
Survey Summary

The Global School-Based Student Health Survey (GSHS) was completed by 9,714 students in 99 schools in Tajikistan during 2006. The school response rate was 99%, the student response rate was 81%, and the overall response rate was 80%. The results are representative of all students in the grades listed below. The weighted demographic characteristics of the sample are as follows:

Males	55.0%	7 form	33.0%
Females	45.0%	8 form	33.3%
		9 form	32.7%
		Other	0.9%

Students completed a self-administered, anonymous, 79-item questionnaire. Survey procedures were designed to protect the privacy of students by allowing for anonymous and voluntary participation.

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Tab 3
Demographic Table

- Number and weighted percentages in demographic subgroups
  - total sample
  - sex
  - age
  - grade
- Number of missing responses to the demographic questions

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2006 GLOBAL SCHOOL-BASED STUDENT HEALTH SURVEY RESULTS

Tajikistan Survey

Demographic Table

		Total		Sex				
				Male		Female		Missing
		N	Weighted Percentage	N	Weighted Percentage	N	Weighted Percentage	
	Total	9,714	100.0	4,805	55.0	4,796	45.0	113
Age								
	12 or younger	175	1.7	61	0.8	95	0.7	19
	13-15	7,395	76.3	3,629	41.3	3,694	35.0	72
	16 or older	2,091	22.0	1,089	12.8	993	9.4	9
	Missing	53		26		14		13
Grade								
	7 form	3,229	33.0	1,597	17.7	1,610	15.3	22
	8 form	3,222	33.3	1,608	18.6	1,586	14.7	28
	9 form	3,056	32.7	1,507	18.1	1,534	14.8	15
	Other	88	0.9	53	0.6	27	0.3	8
	Missing	119		40		39		40

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Tab 4
Summary Tables

- One table for every question or combination of questions
- Describes the “response of interest” – a combination of response options expressed in a YES/NO (binary or dichotomous) format
- Provides data for the total sample and by subgroup
  - percentage
  - confidence interval
  - N = sample size for that subgroup

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Lebanon Survey

Summary Table - Weighted Data

QN34: Percentage of students who had at least one drink containing alcohol on one or more days during the past 30 days

	Total			Males			Females		
	Percentage	95% confidence interval	N	Percentage	95% confidence interval	N	Percentage	95% confidence interval	N
Total	19.5	(15.6 - 23.4)	4,968	27.8	(22.1 - 33.4)	2,229	12.2	(8.9 - 15.5)	2,733
12 or younger	16.2	(11.0 - 21.4)	782	22.1	(15.3 - 28.9)	300	11.8	(5.9 - 17.8)	478
13-15	20.0	(15.8 - 24.2)	3,663	28.5	(22.5 - 34.6)	1,676	12.3	(8.9 - 15.7)	1,985
16 or older	21.1	(15.0 - 27.2)	502	30.0	(20.6 - 39.4)	243	12.3	(6.4 - 18.2)	259
de									
7th Grade	18.7	(13.8 - 23.6)	1,919	27.7	(20.4 - 35.0)	846	10.5	(6.5 - 14.4)	1,070
8th Grade	19.9	(15.4 - 24.3)	1,530	26.6	(20.0 - 33.1)	658	14.0	(9.5 - 18.6)	870
9th Grade	20.1	(14.4 - 25.9)	1,511	29.1	(21.4 - 36.8)	721	12.6	(7.3 - 17.8)	789

es:
147 students did not provide usable data for Q34.
N = Number of students.
- = Fewer than 100 students.
This question is part of a GSHS core questionnaire module.

Confidence Intervals

- Measure of precision
- Method for testing subgroup differences

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Confidence Intervals - A Measure of Precision

- The more precise your results, the more confidence you can have in them
- All sample-based surveys lack some amount of precision due to non-sampling error and sampling error
- A measure of sampling error is called standard error for a particular percentage or variable.
- Precision is measured by standard error and illustrated with confidence intervals

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Standard Error

- Square root of the variance of a percentage or variable across all possible samples of equal size and design
- Calculated by Epi Info which takes into account the two-stage cluster sample design
- Used to calculate confidence intervals

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Confidence Intervals (CI)

- Calculated by multiplying the standard error (SE) by 1.96
  CI = SE * 1.96
- Expressed as a range around the percent -

  42% (40% - 44%) ←

  42% (±2%)
- The range contains the average value of the percent which would result if all possible samples were used
- A 95% CI suggests that if 100 samples were drawn the average value of the percent would be contained in 95 of the 100 CI's

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Confidence Intervals - Method for Testing for Subgroup Differences

- Possible subgroups
  - Males and Females
  - Grade 1, Grade 2, and Grade 3
  - Students who smoke and students who drink alcohol
  - Two countries, two regions, two cities

Question – Are they different?

Answer – Look at the 95% confidence intervals (CI's)

If the CI's overlap – they are not statistically different

If the CI's do not overlap – they are statistically different

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Are they different?

- Students who are overweight

  Males - 6.4% (4.5-8.2)

  Females – 2.6% (1.4-3.7)

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Are they different?

- Students who are overweight

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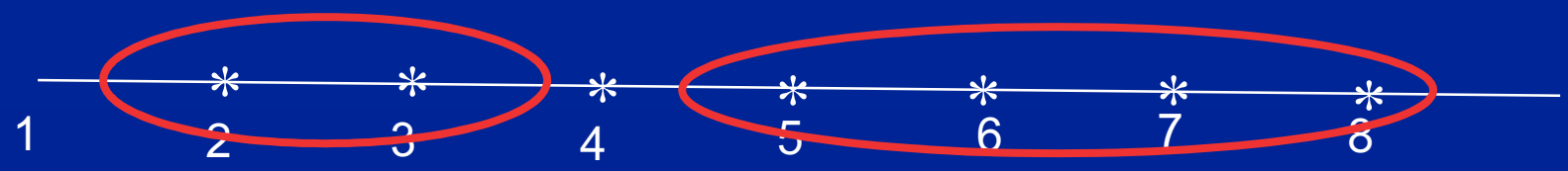

GSHS

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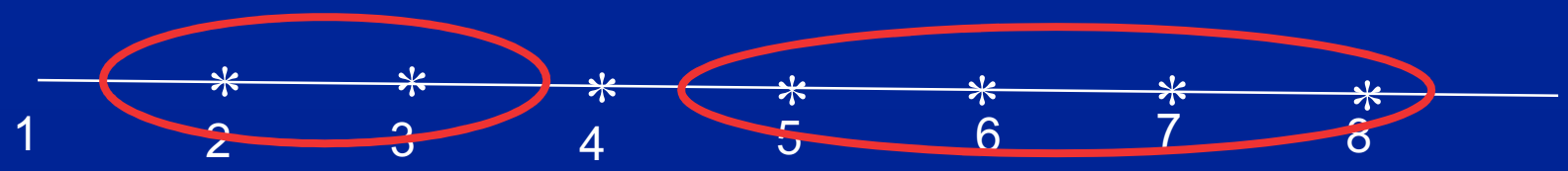

Confidence intervals do <u>not</u> overlap = results are different

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Are they different?

- Students who were in a physical fight during the past 12 months

  Males – 13.4% (10.7-16.0)

  Females – 8.9% (6.7-11.1)

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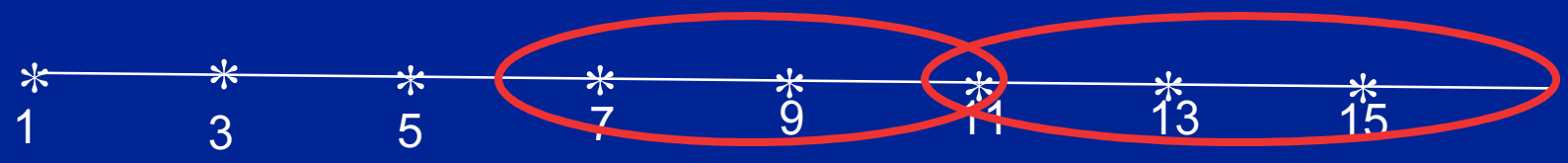

Are they different?

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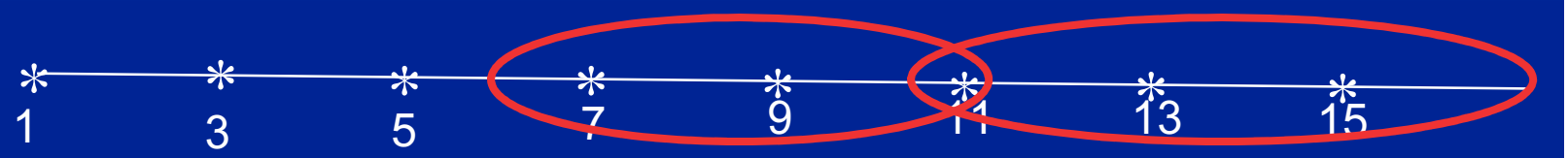

Confidence intervals overlap = results are <u>not</u> different

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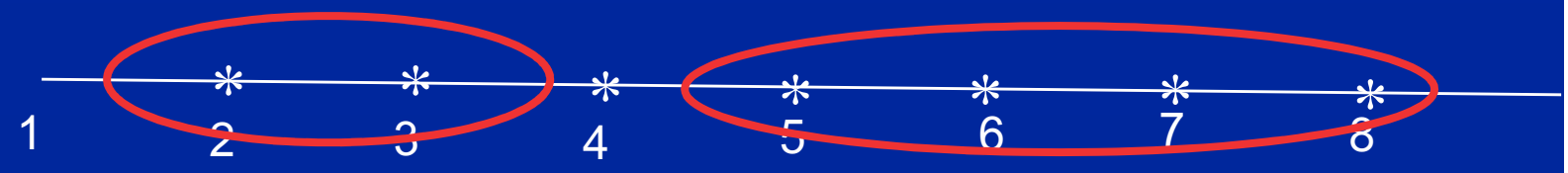
Summary



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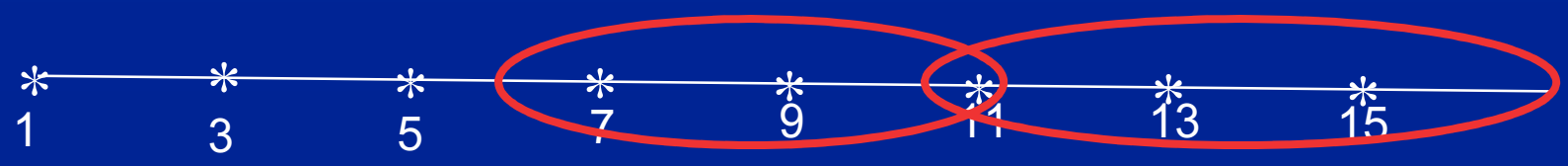

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Confidence Interval Exercise

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Lebanon Survey
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12 or younger	16.2	(11.0 - 21.4)	782	22.1	(15.3 - 28.9)	300	11.8	(5.9 - 17.8)	478
13-15	20.0	(15.8 - 24.2)	3,663	28.5	(22.5 - 34.6)	1,676	12.3	(8.9 - 15.7)	1,985
16 or older	21.1	(15.0 - 27.2)	502	30.0	(20.6 - 39.4)	243	12.3	(6.4 - 18.2)	259
Grade									
7th Grade	18.7	(13.8 - 23.6)	1,919	27.7	(20.4 - 35.0)	846	10.5	(6.5 - 14.4)	1,070
8th Grade	19.9	(15.4 - 24.3)	1,530	26.6	(20.0 - 33.1)	658	14.0	(9.5 - 18.6)	870
9th Grade	20.1	(14.4 - 25.9)	1,511	29.1	(21.4 - 36.8)	721	12.6	(7.3 - 17.8)	789

Notes:
147 students did not provide usable data for Q34.
N = Number of students.
- = Fewer than 100 students.
This question is part of a GSHS core questionnaire module.

GSHS

Lebanon Survey

Summary Table - Weighted Data

QN14: Percentage of students who were in a physical fight one or more times during the past 12 months

	Total			Males			Females		
	Percentage	95% confidence interval	N	Percentage	95% confidence interval	N	Percentage	95% confidence interval	N
Total	46.0	(43.9 - 48.1)	5,058	64.6	(62.1 - 67.0)	2,311	29.0	(26.9 - 31.0)	2,741
Age									
12 or younger	46.1	(42.7 - 49.6)	811	60.3	(55.0 - 65.5)	321	35.8	(31.3 - 40.2)	486
13-15	45.9	(43.6 - 48.2)	3,712	65.2	(62.3 - 68.2)	1,729	27.6	(25.4 - 29.8)	1,981
16 or older	46.4	(40.6 - 52.1)	514	66.3	(59.1 - 73.5)	251	26.4	(21.5 - 31.2)	263
Grade									
7th Grade	48.5	(45.5 - 51.5)	1,963	63.3	(59.7 - 66.8)	883	34.2	(31.3 - 37.2)	1,077
8th Grade	45.7	(42.3 - 49.1)	1,564	65.0	(60.6 - 69.3)	687	28.1	(24.7 - 31.5)	875
9th Grade	43.1	(39.6 - 46.5)	1,522	66.1	(62.5 - 69.6)	736	23.4	(19.6 - 27.3)	785

Notes:
57 students did not provide usable data for Q14.
N = Number of students.
- = Fewer than 100 students.
This question is part of a GSHS core questionnaire module.

GSHS

Chile (Metropolitan Mun with Intervention) Survey

Summary Table - Weighted Data

QN40: Percentage of students who have ever had sexual intercourse

	Total			Males			Females		
	Percentage	95% confidence interval	N	Percentage	95% confidence interval	N	Percentage	95% confidence interval	N
Total	11.7	(9.5 - 13.8)	1,472	16.4	(12.9 - 20.0)	715	7.2	(4.6 - 9.9)	754
Age									
12 or younger	5.2	(2.8 - 7.6)	336	8.3	(4.4 - 12.1)	154	2.6	(0.5 - 4.8)	181
13-15	12.8	(10.4 - 15.1)	1,106	18.2	(14.3 - 22.2)	546	7.6	(4.6 - 10.6)	558
16 or older	-	-	27	-	-	12	-	-	15
Grade									
7° primary	8.0	(5.6 - 10.3)	665	12.9	(8.7 - 17.0)	315	3.5	(1.1 - 5.9)	349
8° primary	13.9	(10.3 - 17.6)	720	18.7	(13.8 - 23.6)	362	9.4	(4.7 - 14.1)	356
1° secondary	-	-	72	-	-	31	-	-	41

Notes:

300 students did not provide usable data for Q40.
N = Number of students.
- = Fewer than 100 students.
This question is part of a GSHS core questionnaire module.

GSHS

Tab 5
Detail Tables

- Three tables for every question or combination of questions – total, males, and females
- Provides all the response options
- Provides data for the total sample and by subgroup
  - percentage
  - N = number of students in that subgroup

GSHS

China (Beijing) Survey

Detail Table - Weighted Data

Q53. During the past 30 days, on how many days did you have at least one drink containing alcohol?

Overall		Overall	Age			Grade			
			12 or younger	13-15	16 or older	Grade 1	Grade 2	Grade 3	Grade 4
0 days	%	87.1	92.7	87.0	76.6	92.2	88.9	81.5	-
	N	1,917	248	1,570	97	563	700	646	7
1 or 2 days	%	8.0	6.1	8.1	10.9	5.6	7.9	10.1	-
	N	174	16	145	13	34	62	77	1
3 to 5 days	%	2.1	0.4	2.1	5.1	0.8	1.5	3.6	-
	N	45	1	38	6	5	12	27	0
6 to 9 days	%	1.0	0.0	1.0	3.3	0.3	0.8	1.6	-
	N	21	0	17	4	2	6	12	1
10 to 19 days	%	1.0	0.8	0.9	2.5	0.5	0.4	1.9	-
	N	21	2	16	3	3	3	14	1
20 to 29 days	%	0.3	0.0	0.3	0.9	0.3	0.1	0.4	-
	N	6	0	5	1	2	1	3	0
All 30 days	%	0.5	0.0	0.6	0.8	0.2	0.4	0.9	-
	N	11	0	10	1	1	3	7	0
Total	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-
	N	2,195	267	1,801	125	610	787	786	10

China (Beijing) Survey
Detail Table - Weighted Data

Q53. During the past 30 days, on how many days did you have at least one drink containing alcohol?

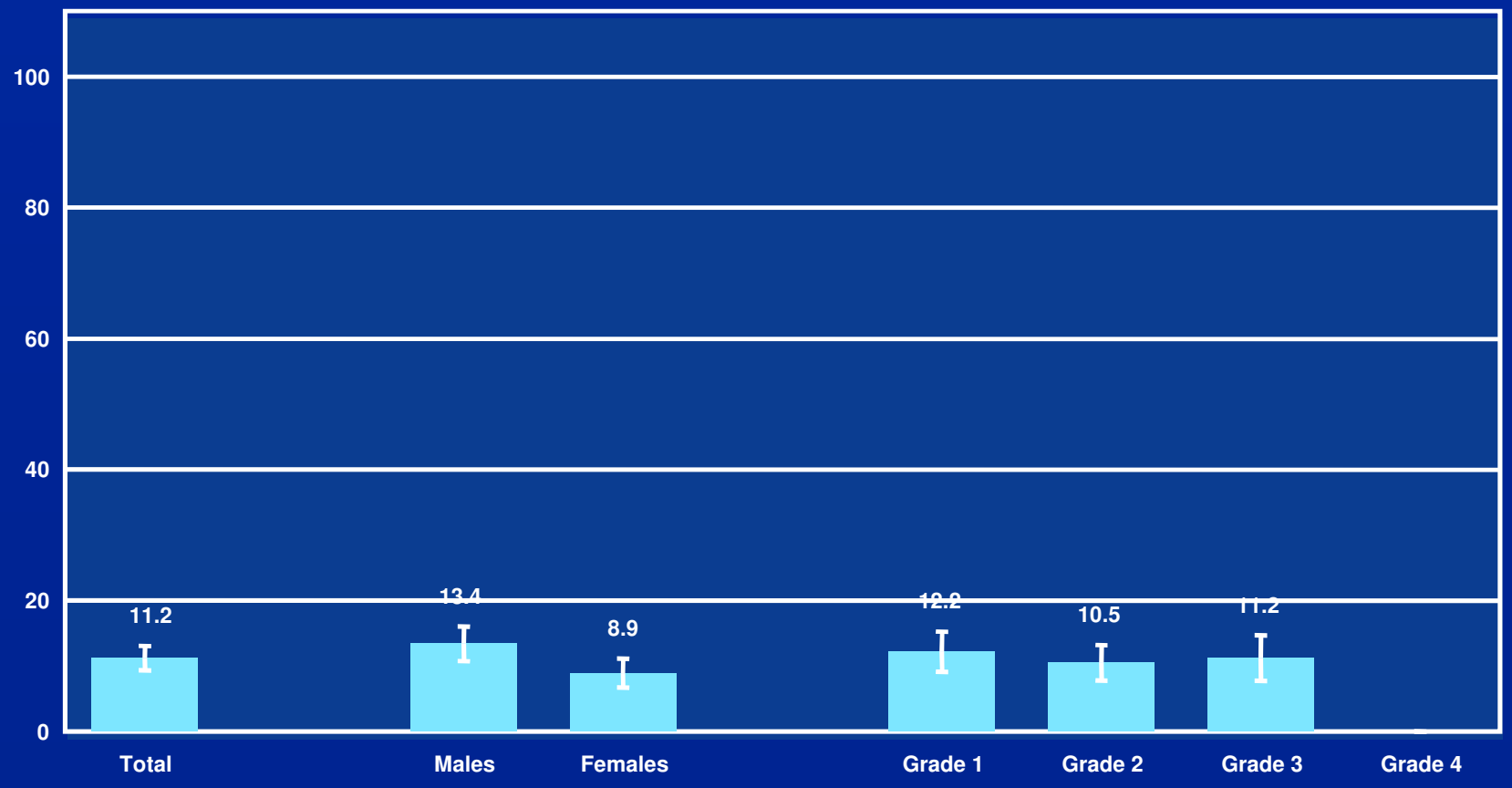
Females		All females	Age			Grade			
			12 or younger	13-15	16 or older	Grade 1	Grade 2	Grade 3	Grade 4
0 days	%	92.2	94.9	91.4	-	95.2	91.6	90.5	-
	N	1,056	132	873	49	298	370	382	6
1 or 2 days	%	5.3	4.4	5.6	-	4.5	5.7	5.7	-
	N	61	6	54	1	14	23	24	0
3 to 5 days	%	1.3	0.0	1.6	-	0.3	1.2	1.9	-
	N	15	0	15	0	1	5	8	0
6 to 9 days	%	0.4	0.0	0.5	-	0.0	0.5	0.7	-
	N	5	0	5	0	0	2	3	0
10 to 19 days	%	0.4	0.7	0.4	-	0.0	0.3	0.7	-
	N	5	1	4	0	0	1	3	1
20 to 29 days	%	0.1	0.0	0.1	-	0.0	0.2	0.0	-
	N	1	0	1	0	0	1	0	0
All 30 days	%	0.3	0.0	0.4	-	0.0	0.5	0.5	-
	N	4	0	4	0	0	2	2	0
Total	%	100.0	100.0	100.0	-	100.0	100.0	100.0	-
	N	1,147	139	956	50	313	404	422	7

Tab 6
Graphs

- Provide a graphic representation of your data
- Available in a PowerPoint file on your CD Rom – best way to look at them!
- Present data for total, by sex, and by grade
- Confidence intervals shown with “I” bars on top of the big bars
- Great for adding to reports and fact sheets and for oral presentations

China (Beijing) Survey

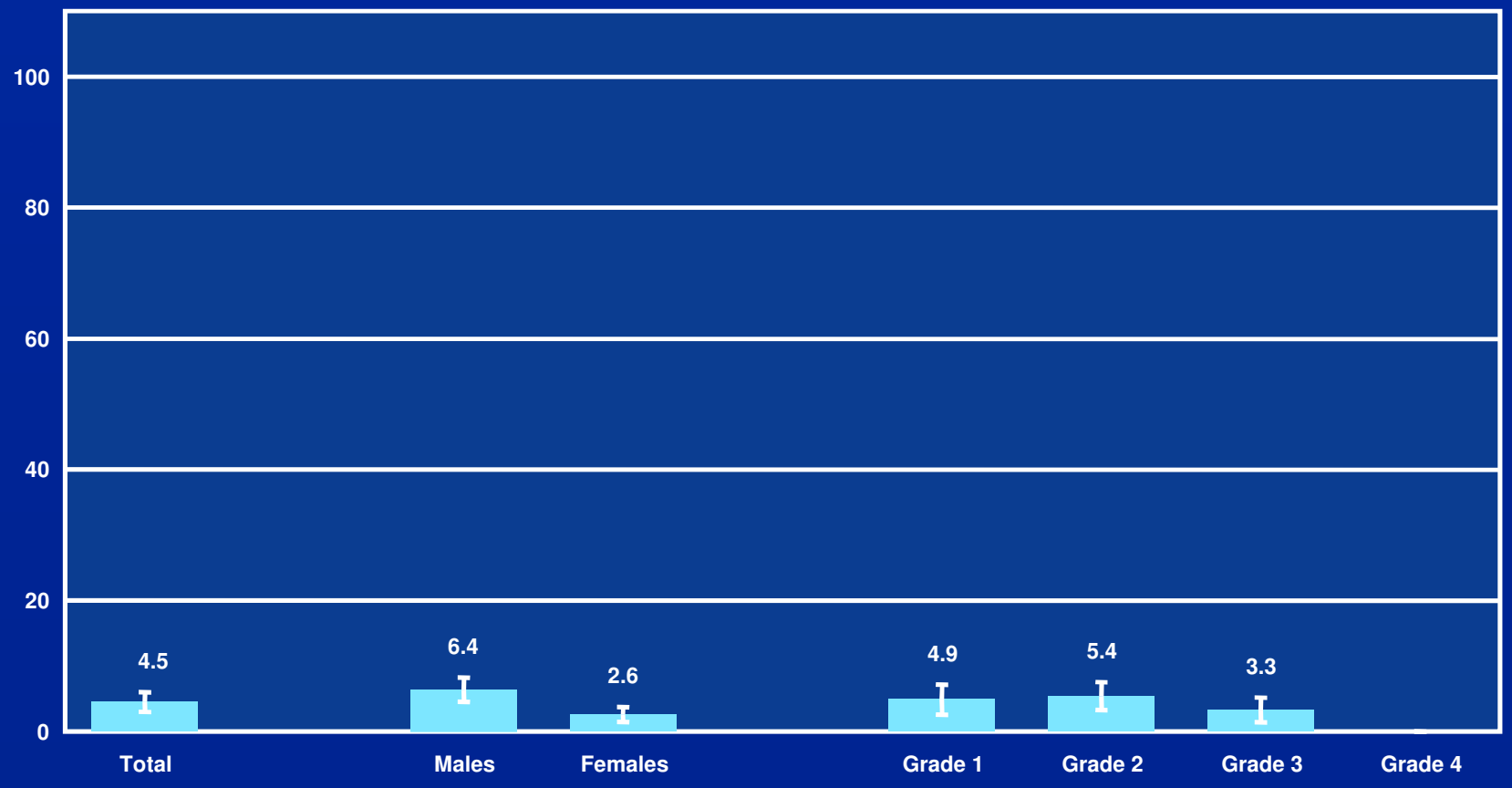
M1. Percentage of students who are at risk for becoming overweight



See corresponding summary table for detailed explanation of data.
Missing bars indicate less than 100 respondents in the subgroup.

China (Beijing) Survey

M2. Percentage of students who are overweight



See corresponding summary table for detailed explanation of data.
Missing bars indicate less than 100 respondents in the subgroup.

Tab 7
Map Form

- Purpose
  - Compare your GSHS questionnaire numbers to the core GSHS questionnaire numbers
  - Identify standard question numbers needed for data analysis
- Numbering system
  - Core module questions are numbered 1-58 (set)
  - All core-expanded and country-specific questions are numbered starting with 58-99 (variable)
  - The standard question numbers are on your data set

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Map Form

- 2 columns
  - Standard question number
  - Country question number

GSHS

Pakistan Map Form
Without Question Text

Standard Question Number	Country Question Number	Standard Question Number	Country Question Number	Standard Question Number	Country Question Number	Standard Question Number	Country Question Number
Q1	Q1	Q16	Q22	Q31	Q44	Q46	
Q2	Q2	Q17	Q23	Q32	Q47	Q47	
Q3	Q3	Q18		Q33	Q48	Q48	
Q4	Q4	Q19		Q34		Q49	Q50
Q5	Q5	Q20	Q28	Q35		Q50	Q56
Q6	Q8	Q21	Q29	Q36		Q51	Q52
Q7	Q10	Q22	Q32	Q37		Q52	Q55
Q8	Q11	Q23	Q33	Q38		Q53	Q58
Q9	Q12	Q24	Q35	Q39		Q54	Q59
Q10	Q13	Q25	Q36	Q40		Q55	Q60
Q11	Q14	Q26		Q41		Q56	Q61
Q12	Q15	Q27	Q38	Q42		Q57	Q62
Q13	Q16	Q28	Q40	Q43		Q58	
Q14	Q17	Q29	Q41	Q44			
Q15	Q21	Q30	Q43	Q45			

GSHS

Pakistan Map Form
Without Question Text

Standard Question Number	Country Question Number	Standard Question Number	Country Question Number	Standard Question Number	Country Question Number	Standard Question Number	Country Question Number
Q59	Q6	Q79	Q53	Q99		Q119	
Q60	Q7	Q80	Q54	Q100		Q120	
Q61	Q9	Q81	Q57	Q101		Q121	
Q62	Q18	Q82		Q102		Q122	
Q63	Q19	Q83		Q103		Q123	
Q64	Q20	Q84		Q104		Q124	
Q65	Q24	Q85		Q105		Q125	
Q66	Q25	Q86		Q106		Q126	
Q67	Q26	Q87		Q107		Q127	
Q68	Q27	Q88		Q108		Q128	
Q69	Q30	Q89		Q109		Q129	
Q70	Q31	Q90		Q110		Q130	
Q71	Q34	Q91		Q111		Q131	
Q72	Q37	Q92		Q112		Q132	
Q73	Q39	Q93		Q113		Q133	
Q74	Q42	Q94		Q114		Q134	
Q75	Q45	Q95		Q115		Q135	
Q76	Q46	Q96		Q116		Q136	
Q77	Q49	Q97		Q117		Q137	
Q78	Q51	Q98		Q118		Q138	

Tab 8
Codebook

- Purpose – provide additional information about the data files on your CD-ROM
- Columns
  - Data location – will not use for Epi Info
  - Standard variable name – 4 kinds
  - Country question number
  - Question, code, and label – actual text of variable and code for each response option
  - Unweighted frequency
  - Weighted percent

GSHS

Variable Names – 4 Kinds

1. Core module questions – Q1-Q58
2. Core expanded and country-specific questions – Q59-Q99
3. Dichotomous variables – describe the "response of interest" for all the questions and are labeled QN6-QN99 – used in summary tables
4. Calculated variables – formed by combining 2 or more questions – labels have lots of letters
   - QNROWGT
   - QNFRVG

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Guyana Survey
Codebook

Data Location	Standard Variable Name	Country Question Number	Question Code and Label		Unweighted Frequency	Weighted Percent
1-3	SITE		Site Code			
4-13	SCHOOL		School Codes			
14-16	CLASS		Class Codes			
17-17	Q1	Q1	How old are you?			
			1	11 years old or younger	6	0.5
			2	12 years old	18	1.6
			3	13 years old	281	23.7
			4	14 years old	382	30.3
			5	15 years old	389	32.5
			6	16 years old or older	131	11.3
				Missing	5	
18-18	Q2	Q2	What is your sex?			
			1	Male	504	49.0
			2	Female	693	51.0
				Missing	15	
19-19	Q3	Q3	In what grade are you?			
			1	Form 2	439	37.3
			2	Form 3	414	32.6
			3	Form 4	341	29.6
			4	Other form	8	0.5
				Missing	10	
20-23	Q4	Q4	How tall are you without your shoes on? (Note: Data are in meters.)			
24-29	Q5	Q5	How much do you weigh without your shoes on? (Note: Data are in kilograms.)			
30-30	Q6	Q7	During the past 30 days, how often did you go hungry because there was not enough food in your home?			
			1	Never	704	57.8
			2	Rarely	145	12.1
			3	Sometimes	264	22.3
			4	Most of the time	43	3.9
			5	Always	43	3.9
				Missing	13	

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Guyana Survey
Codebook

Data Location	Standard Variable Name	Country Question Number	Question Code and Label		Unweighted Frequency	Weighted Percent
186-186	QNROVWGT		Percentage of students who are at risk for becoming overweight			
			1	Yes	20	11.4
			2	No	160	88.6
				Missing	1,032	
187-187	QNOVWGT		Percentage of students who are overweight			
			1	Yes	15	8.9
			2	No	165	91.1
				Missing	1,032	
189-189	QNFRVGG		Percentage of students who ate five or more fruits and vegetables per day during the past 30 days			
			1	Yes	303	26.5
			2	No	884	73.5
				Missing	25	
190-190	QNANYTOB		Percentage of students who used any form of tobacco during the past 30 days			
			1	Yes	100	9.6
			2	No	1,062	90.4
				Missing	50	
191-191	QNMINPAG		Percentage of students who participated in physical activity for a total of at least 60 minutes per day on 5 or fewer days on average			
			1	Yes	967	81.3
			2	No	221	18.7
				Missing	24	
192-192	QNWKRD		Percentage of students who walked or bicycled to and from school for a total of 150 minutes or more during the past 7 days			
			1	Yes	1,043	90.1
			2	No	119	9.9
				Missing	50	
358-369	Weight		Weight			
370-374	PSU		Primary Sampling Unit			
375-383	Stratum		Stratum			

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Tab 9
Sample Description and Weighting Procedures

- Sample statistics for each question
  - percent
  - standard error
  - 95% confidence interval
  - number of valid responses
  - design effect

GSHS

Pakistan Survey

Sample Statistics

Question	Percentage	Standard Error	95% Confidence Interval	N	Design Effect*
Q6. Percentage of students who went hungry most of the time or always because there was not enough food in their home during the past 30 days	5.8	0.62	(4.6 - 7.2)	5,134	1.9
Q7. Percentage of students who usually ate fruit two or more times per day during the past 30 days	21.2	1.67	(17.9 - 24.8)	5,171	2.9
Q8. Percentage of students who usually ate vegetables three or more times per day during the past 30 days	19.4	1.82	(15.9 - 23.4)	5,176	3.3
Q9. Percentage of students who usually drank carbonated soft drinks one or more times per day during the past 30 days	36.3	3.18	(30.0 - 43.1)	5,159	4.7
Q10. Percentage of students who ate food from a fast food restaurant on three or more days during the past 7 days	3.2	0.40	(2.5 - 4.1)	5,175	1.6
Q11. Percentage of students who usually cleaned or brushed their teeth less than one time per day during the past 30 days	16.4	1.84	(12.9 - 20.6)	5,165	3.6
Q12. Percentage of students who never or rarely washed their hands before eating during the past 30 days	3.5	0.43	(2.7 - 4.5)	5,158	1.7
Q13. Percentage of students who never or rarely washed their hands after using the toilet or latrine during the past 30 days	3.3	0.51	(2.4 - 4.6)	5,148	2.1
Q14. Percentage of students who never or rarely used soap when washing their hands during the past 30 days	8.0	1.00	(6.2 - 10.3)	5,138	2.6

*The average design effect across all items for this survey is 3.1.

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Design Effects

- Ratio of the variance of the prevalence estimate under the actual sample design to the variance of the prevalence estimate assuming a simple random sample
- Increased by
  - Multi-stage, cluster sampling
  - Greater variance across clusters
- Different for every question – average is more useful
- Increases the size of confidence intervals
- Used to calculate sample size – the bigger the design effect – the bigger the sample

Tab 10
CD-ROM Table of Contents

- Site questionnaire (pdf)
- Survey Summary (pdf)
- Demographic Table (pdf)
- Summary Tables (pdf)
- Detail Tables (pdf)
- Graphs (pptx)
- Map Form (pdf)
- Codebook (pdf)
- Sample Description (pdf)
- Sample Statistics Document (pdf)
- Data Files (dat, mdb, sas7bdat, sav)
- Fact Sheet (pdf)

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Tab 10
CD-ROM Table of Contents

- Site questionnaire
- Survey Summary
- Demographic Table
- Summary Tables
- Detail Tables
- Graphs
- Map Form
- Codebook
- Sample Description
- Sample Statistics Document
- **Data Files**
- **Fact Sheet**

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Report Preparation and Data Dissemination

Draft Report Outline

- Acknowledgements
- Executive summary
- Introduction
- Methods
- Results
- Conclusions and recommendations
- References
- Appendix

GSHS

Draft Report Outline

- Acknowledgements
- Executive summary
- **Introduction**
- **Methods**
- **Results**
- **Conclusions and recommendations**
- **References**
- Appendix

Scientific journal articles

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Acknowledgements

- Identify and thank persons who contributed to the success of your GSHS
- Acknowledge participation of schools and students

GSHS

Executive Summary

- Summarize entire report in only 1 to 2 pages
- Briefly describe purpose, methodology, key results, and recommendations
- Write this section <u>last</u>

Introduction

- Background of GSHS
- Purpose of GSHS
- Brief description of GSHS
- Other relevant surveys
- School health and youth health policies and programs

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Methods

- Sampling
- Survey administration
- GSHS questionnaire
  - Core module
  - Core-expanded and country-specific questions

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Results

- Organize by core modules
- Start with a short overview or rationale for each section – Use country-specific data if possible
- Create at least one table or chart for each section – including demographics
- Summarize overall results and key subgroup differences based on confidence interval comparisons

Conclusions and Recommendations

- What are the most important results?
- How do your results compare to other surveys?
- What are the implications for school health and youth health programs and policies?
- Call for more surveys in the future to track changes

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References

Appendix

- Copy of your questionnaire
- Details about sample selection and weighting
- Other “extra” information

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Data Dissemination

- Getting started
- How to develop written materials
- How to develop presentations
- 10 guiding principles

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Getting Started

- Who is the audience?
- What is the purpose of disseminating your data?
- What resources do you have for data dissemination?
- How will you assure the data you disseminate is accurate?

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Getting Started

- Who is the audience?
  - Key decision makers
  - General public
  - Parents and families
  - Scientists
- What is the purpose of disseminating your data?
  - What do you want your audience to do as a result of your data?

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Getting Started

- What resources do you have for data dissemination?
  - People
  - Skills
  - Time
  - Money
- How will you assure the data you disseminate is accurate?
  - Proofreading
  - Rehearsals

How to Develop Written Materials

- Determine the type of written material
- Write for your audience
- Design for readability and interest

GSHS

Determine the type of written material

- Full report ✓
- Fact sheet ✓
- Brochure
- Scientific journal article
- Popular press article
- Internet website
- Press release

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Write for Your Audience

- Level of interest
- Knowledge
- Support
- Amount of time they will spend

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Design for readability and interest

- Visually appealing
- Easy to read
- Consider creating a “standard format” for all your GSHS materials
- Consider type size, format, margins, headings, color, graphics, and cost

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Graphics

- Keep them clear and simple
- Accurately portray your data
- Ways to display data
  - table
  - bar chart
  - pie chart
  - line chart

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How to Develop Presentations

- Determine type of presentation
- Determine content of presentation

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Determine Type of Presentation

- Length
- Formality
- Media
  - Slides or PowerPoint
  - Overhead transparencies
  - Internet website
  - Handouts

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Determine Content of Presentation

- What is your purpose?
- What does the audience want to hear?
- How much time do you have?
- What media is available?
- Who else is making a presentation?
- What are you most comfortable with?

GSHS

10 Guiding Principles

- Keep your audience and the purpose of your report in mind at all times
- Fact sheets are a great way to summarize a report.
- Sometimes bar charts or pie charts work better than a table for illustrating data
- Make sure your data are accurate
- Stick to the question wording

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10 Guiding Principles

- Do not try to use all your data at one time
- Do not describe subgroup differences that are not real
- Use the response options and data that tell the story you want to tell
- Consider which subgroups are most meaningful
- Make sure to lead your audience to action!

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Data Dissemination Plan

- Use the template
- Prepare a 15 to 20 minute presentation
- Consider including some of your most interesting data
- Use whatever visuals you would like
- May have one or more speakers

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Data Dissemination Plan Template

- Reason for disseminating your GSHS data
- Audience
- Product
- Topic or focus
- Timeline
- Tasks/persons responsible/due date
- Budget

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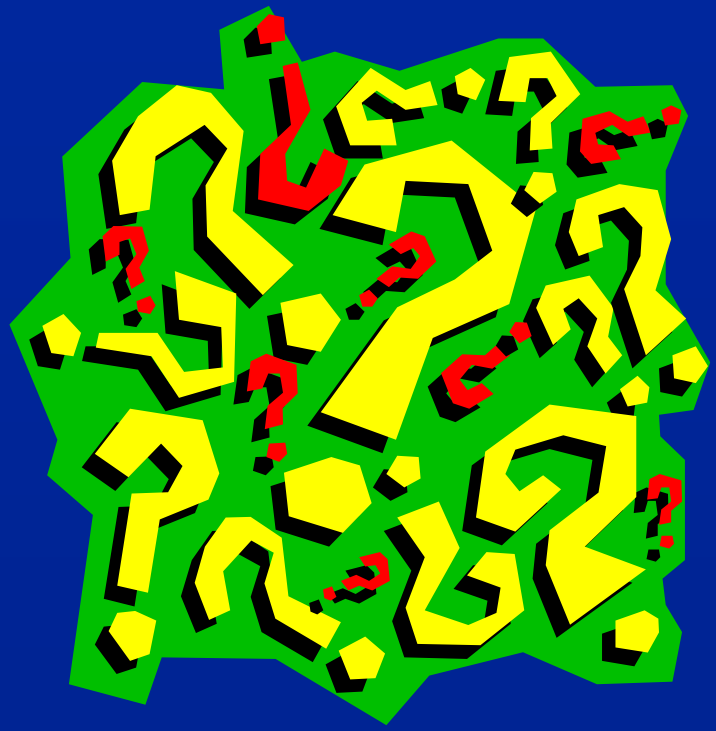

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