

TECHNICAL REPORT

Washington State Survey of Adolescent Health Behaviors (1998)

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Acknowledgments

This report is one in a series from RMC Research Corporation that summarizes a major survey effort in the state of Washington. All of these reports and the planning and implementation of the 1998 Washington State Survey of Adolescent Health Behaviors itself are the result of a great deal of collaborative effort between the authors, the state survey policy committee, and local educators and health professionals throughout the state of Washington.

The planning of the survey effort through the survey policy committee ultimately included many professionals from various agencies and disciplines across the state. However, the following state staff were most consistently involved.

<i>Office of Superintendent of Public Instruction</i>	<i>Department of Social and Health Services</i>	<i>Department of Community, Trade and Economic Development</i>
Denise Fitch Martin Mueller	Steve Smothers Mary Ann LaFazia	Susan Roberts

Michael Arthur from the University of Washington's Social Development Research Group and John Pollard and Amy Lofquist of Developmental Research and Programs also assisted in the survey effort. Although all of these experts were very active and extremely influential in the methods and procedures that were used in the survey effort, the authors bear full responsibility for the content of this and companion reports.

We also thank the school administrators, parents, and local prevention and health professionals who encouraged and supported their schools' participation in the survey. This study would be of little use or consequence without the concern and interest of these individuals in addressing the key health behaviors and risk and protective factors at issue in this survey.

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Chapter 1: The Design and Planning Process

The 1998 Washington State Survey of Adolescent Health Behaviors (WSSAHB) was the fifth biennial survey of the health-related attitudes and behaviors of Washington's public school students in Grades 6, 8, 10, and 12 across the state. In this chapter, the authors describe the goals and objectives of the survey, the history of this survey effort since 1988, the collaborative process involving several state agency and university staff during instrument development and throughout the implementation of the project, and, finally, the information needs of the state and localities in Washington that the results are designed to meet. (See Appendix A for the 1998 survey.)

Goals and Objectives of the Survey

The basic goals and objectives of the WSSAHB were to:

- ♦ Obtain empirical needs assessment data necessary for program planning.
- ♦ Assess the status of priority adolescent health behaviors.
- ♦ Continue the study of trends over time of student alcohol, tobacco, and other drug use and abuse and other adolescent health behavior topics.
- ♦ Comprehensively assess risk and protective factors related to poor school performance, substance abuse, and violent behavior.
- ♦ Collaborate with the policy committee in the development and enhancement of the survey instrument.

History of Washington's State Survey Efforts

The 1998 WSSAHB was the fifth in a series of biennial surveys of health risk behaviors among Washington's students conducted since 1988. In 1992 the state survey effort took on new content from its predecessors (e.g., Deck and Nickel, 1989; Gabriel, 1991) by incorporating a broader spectrum of health risk behaviors. Whereas the 1988 and 1990 surveys focused on alcohol, tobacco, and other drug (ATOD) use and attendant risk factors, the 1992 survey also addressed such health risk behaviors as interpersonal violence and weapon carrying, suicide

ideation, sexual activity, physical exercise and nutrition, and access to health care (Einspruch and Pollard, 1993). Survey items covering these additional areas were taken primarily from a national survey sponsored by the federal Centers for Disease Control and Prevention (CDC), the Youth Risk Behavior Survey (YRBS). The length of the survey grew from 77 items in the 1990 survey to 120 items in 1992. As usual, a shorter version was developed for sixth graders.

The added content in the 1992 survey was the result of a state-level policy decision at the Office of Superintendent of Public Instruction (OSPI) to consolidate two surveys—the Student Alcohol and Drug Use Survey and the Youth Risk Behavior Survey—already administered in alternate years by separate offices within OSPI. Because of the additional programmatic implications pertaining to a broader range of adolescent health behaviors represented in the YRBS, personnel from the state Department of Health (DOH) joined the planning team for the 1992 survey effort.

In 1995 the content was further expanded to include more comprehensive coverage of risk and protective factors using instrumentation developed by the University of Washington's Social Development Research Group (SDRG). Based on the highly regarded and widely implemented work of the SDRG team (e.g., Hawkins, Catalano, and Miller, 1992), a comprehensive self-report instrument had been developed and the state of Washington had agreed to participate in a federally funded six-state consortium that would use this tool as part of a standardized and comprehensive needs assessment plan. The state's Division of Alcohol and Substance Abuse (DASA) of the Department of Social and Health Services (DSHS) served as the liaison for the SDRG assessment and joined the planning team for the WSSAHB on this basis.

The 1998 WSSAHB was once again focused on alcohol and other drug use, violence, and related risk and protective factors. Several of the content areas based on the YRBS that had been included in 1992 and 1995 were not included in 1998. The risk and protective factor items were updated based on current work by SDRG and Developmental Research and Programs (DRP) (Arthur, Hawkins, Catalano, and Pollard, 1998). The revised 1998 survey contained 122 items. Only one form of the survey similar in content and length to the sixth grade version of the 1995 survey was administered to students.

The Collaboration Team

The development and implementation of the 1998 Washington State Survey of Adolescent Health Behaviors was truly a collaborative effort. The following agencies composed the state's survey policy committee and worked closely with RMC Research Corporation throughout the planning stages of instrument development and sampling design:

- ♦ Office of Superintendent of Public Instruction (OSPI).
- ♦ Department of Social and Health Services, Division of Alcohol and Substance Abuse (DASA).
- ♦ Department of Community, Trade and Economic Development (CTED).

These agencies, often represented by two or more staff, formed the survey policy committee. The committee met four times to discuss survey content, the sampling plan, school recruitment, survey administration, and dissemination of the survey results. Representatives of other stakeholder agencies, including SDRG, the Family Policy Council, and the Department of Health, were also present at these meetings. Committee members also interacted on a regular basis via telephone, fax, and electronic mail. A larger survey advisory board met on three occasions to discuss these topics as well. This board included members of the broader community, such as school district personnel and DASA county prevention coordinators. Board members provided the perspective of individuals who work directly with local communities.

Survey Development Process

The Washington State Survey Policy Committee took an active role in identifying the content coverage of the survey. Survey items were selected to cover the following topical areas:

- ♦ Demographic and background characteristics of the students.
- ♦ Alcohol, tobacco, and other drug use.
- ♦ Risk and protective factors.
- ♦ Fighting, weapon carrying, gang membership, and depression.
- ♦ Intentional injury behaviors.
- ♦ Activities, both in and out of school, available to the students.

Very few new survey items were written through this process. Rather, items were selected and occasionally refined from standardized, validated surveys such as the National Institute on Drug Abuse (NIDA)-sponsored Monitoring the Future survey, the CDC-sponsored Youth Risk Behavior Survey, the DASA Adolescent Household Survey, the SDRG Risk and Protective Factor Assessment tool, and other items appearing on previous WSSAHB instruments.

Through a series of meetings and several telephone conferences, the survey content was finalized. The committee balanced the competing demands for maximizing the content coverage of the survey while minimizing the length of the survey and eliminating the complexity of multiple forms. The goal of the committee was to develop a single survey instrument that most students in Grades 6 through 12 could finish within a 45-minute class period. The final pool of 122 items met this goal. The committee also gave considerable thought to the school recruitment process and approved a recruitment plan prepared by RMC Research.

Information Needs Met by the Survey

Within the initial goals and objectives of the survey and through the collaborative planning process, it became apparent that the results of this survey could address a wider variety of information and assessment needs than initially intended, such as:

- ◆ Progress of drug education programs funded under the federal Drug-Free Schools and Communities Act and the state Omnibus Prevention Act.
- ◆ Progress in the state's attainment of the national public health objectives contained in Healthy People 2000 (Public Health Service, 1990).
- ◆ Progress on a variety of CDC-funded health initiatives and programs such as the tobacco prevention program and the injury prevention program.
- ◆ Status and progress indicators for programs implemented pursuant to the state's recent Violence Reduction Programs Act (E2SHB 2319).
- ◆ Data for the state's comprehensive, cross-agency database on youth violence under development by DOH, DASA, and DSHS.
- ◆ Data that can contribute information to local community profiles.
- ◆ Data for planning prevention and treatment services based on prevalence estimates on key target populations and geographic areas within the state.
- ◆ Data on risk and protective factors that can be used by local school and community members as they plan or refine school- and community-based prevention and intervention programs.

HRRB Clearance

The survey and the accompanying administration instructions and support materials were submitted to the Human Research Review Board (HRRB) clearance process of Washington's Department of Social and Health Services and Department of Health. Initial approval was conditional, pending minor changes to the support materials. Final approval was granted when these changes were made. A copy of the approval from the HRRB is included as Appendix B.

Chapter 2: Sampling Design

The objectives for the sampling design for the 1998 WSSAHB were to provide precise estimates of health risk behaviors and attendant risk and protective factors at both statewide and regional levels for all four grade levels included in the survey.

The sample for the WSSAHB was selected using a stratified cluster sampling procedure with replacement. Schools were the primary sampling unit (PSU). The sample for the survey consisted of three separate samples: one of sixth grades, one of eighth grades, and one sample of high schools. This procedure was generally consistent with those of previous state surveys.

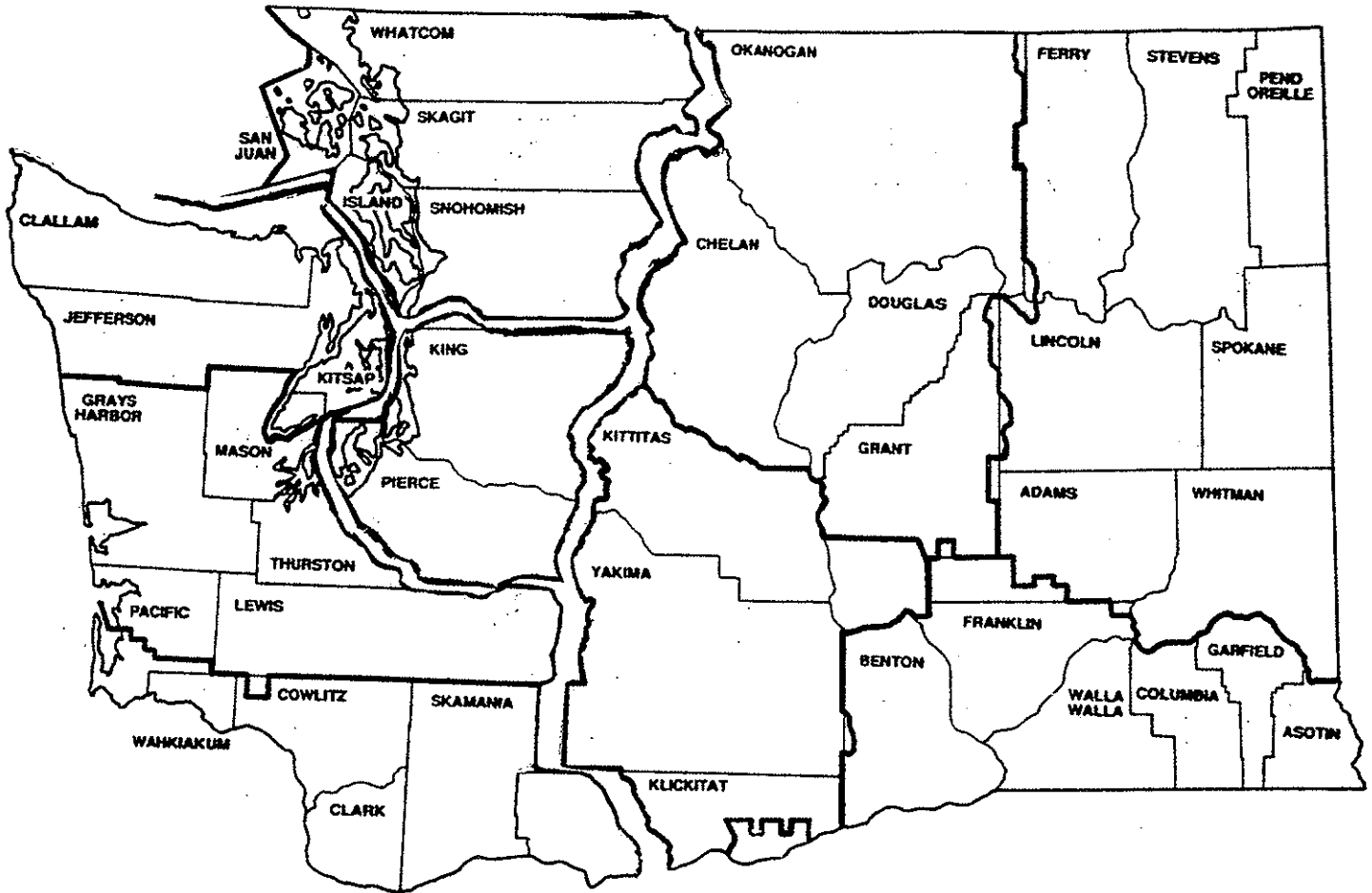
Sampling Design Strata

The sampling plan consisted of two primary strata for each grade level: geographic region and school size. Within the sampling design, the urbanicity/rurality of the school district was employed as a check on the representativeness of the sample. All of these factors are discussed in greater detail in this section.

Geographic Region

As shown in Exhibit 2-1, the state of Washington was divided into four geographic regions. The highly rural eastern region consisted of 19 counties and included approximately 25 percent of the student population in the state. The southwest consisted of 13 counties and approximately 22 percent of the student population. The heavily populated Puget Sound region consisted of two counties and approximately 38 percent of the student population. The northwest region consisted of five counties and approximately 15 percent of the state's student population.

Exhibit 2-1
Map of Geographic Region



School Size

Within cells of the sampling design, schools were designated as large or small, depending on their enrollment relative to the average school in that region for that grade level. This stratum was included primarily for its advantage to the sampling error calculation in the cluster sampling procedure employed in this study. Further details of its influence are discussed later in this chapter.

A depiction of the stratified sampling design used in the 1998 WSSAHB at each of the four grade levels is shown in Exhibit 2-2.

Exhibit 2-2
Number of Schools Available for Sample

Geographic Region	School Size	Grade 6	Grade 8	Grades 10 and 12
Eastern	Large	63	61	44
	Small	120	74	89
Southwest	Large	58	50	35
	Small	114	57	69
Puget Sound	Large	73	77	55
	Small	178	46	47
Northwest	Large	32	34	24
	Small	73	32	28

Urbanicity

Three levels of rurality/urbanicity were used in the replacement procedure accompanying the sampling design: urban, suburban/large town, and small town/rural. The areas identified as urban included the four major cities in Washington and smaller cities still urban in nature but with more modest population size, such as Bremerton, Bellingham, and the Tri-Cities. Schools in these locales included about 26 percent of the state's student population. Suburban/large town areas included the smaller cities of the state, such as Issaquah, and areas adjacent to larger cities—areas that typically have higher socioeconomic characteristics than their urban neighbors. These areas include 37 percent of the state's students. Finally, the rural areas were those with low population density, including half of the schools but only about 37 percent of the student population.

Racial/Ethnic Minority Representation

Washington, like many of the states in the Pacific Northwest, is made up of primarily white (not of Hispanic origin) students. Among high school seniors, for example, student enrollment is approximately 79 percent white, 7 percent Asian or Pacific Islander, 7 percent Hispanic, 5 percent black or African American (not of Hispanic origin), and 3 percent American Indian or Alaskan Native. Furthermore, members of racial/ethnic minorities are often concentrated in

particular regions of the state, as shown in Exhibits 2-3 and 2-4. For example, more than half of the Hispanic students live within the eastern region of the sampling design described above, most within one or two counties. Similarly, two-thirds of the state's Asian or Pacific Islander high school seniors and three-fourths of the black or African-American high school seniors live in the Puget Sound region.

Exhibit 2-3
Racial/Ethnic Distribution of Students by Geographic Region (Grade 6)

Region	White	Asian or Pacific Islander	Hispanic	Black	American Indian	Total
Eastern	13,782	328	3,745	294	675	18,824
Southwest	14,066	837	625	417	512	16,457
Puget Sound	20,210	3,090	1,189	2,520	577	27,586
Northwest	10,165	677	572	206	326	11,946
Total	58,223	4,932	6,131	3,437	2,090	74,813

Source: Form SPI P-105A for 10/1/96.

Exhibit 2-4
Racial/Ethnic Distribution of Students by Geographic Region (Grade 12)

Region	White	Asian	Hispanic	Black	American Indian	Total
Eastern	12,368	318	1,945	218	421	15,270
Southwest	11,847	700	432	280	362	13,621
Puget Sound	17,057	2,960	903	1,906	370	23,196
Northwest	7,535	495	304	155	143	8,632
Total	48,807	4,473	3,584	2,559	1,296	60,719

Source: Form SPI P-105A for 10/1/96.

In the 1995 survey summary there was an attempt to sample in such a way as to provide estimates of health risk behaviors for each racial/ethnic group. That approach proved

unworkable in part due to the clustering of some racial groups in specific parts of the state—in some instances certain minority groups may be found primarily in a only a few schools.

Sampling Procedure: Replacement Schools

Prior experience with surveys of this nature has shown that not all schools are willing to participate. Issues of intrusive content on this particular survey and the amount of school time any survey takes away from learning are reasons often cited by local schools or districts that refused to participate. For some schools this survey was an unnecessary duplication of effort because they had conducted their own substance use survey within the past year.

To ensure a sufficient sample size at each grade, a pool of replacement schools was selected as part of the sampling process. These schools were selected using the same procedures and design described. However, these schools were held in reserve pending the initial schools' decisions to participate. When a given school selected for the initial sample refused to participate, another school from that region with the same school size and urbanicity was added to take its place. This is a procedure frequently used by standardized achievement test publishers in the test norming process. Details as to the number of schools asked to participate, their acceptance rate, and number of replacement schools invoked are provided in Chapter 4.

The replacement school procedure used is one often applied in large-scale national surveys, such as the Monitoring the Future Survey conducted by Johnston, O'Malley, and Bachman (1993). In considering the use of replacements schools for that survey, the authors noted:

The selection of replacement schools almost entirely removes problems of bias in region, urbanicity, and the like, that might result from certain schools refusing to participate. Other potential biases could be more subtle, however. If, for example, it turned out that most schools with "drug problems" refused to participate, that would seriously bias the sample. And if any other single factor were dominant in most refusals, that also might suggest a source of serious bias. In fact, however, the reasons for a school refusing to participate are varied and are often a function of happenstance events specific to that particular year; only a very small proportion specifically object to the drug content of the survey. Thus we feel quite confident that school refusals have not seriously biased the surveys. (pp. 30–31)

It should be noted here that at the end of the sampling process some high schools declined to participate. Then, after conducting the survey it was discovered that two sampled high schools did not survey seniors. One of these was a new school that might not have had any seniors

enrolled. Losing these schools from the sample left three sampling cells with fewer than two schools each. The three cells were the large southwest schools, the small Puget Sound schools, and the large northwest schools. To assure representativeness, four piggybacking schools were added to the sample. In each case the piggyback school closest to the top of the list of potential replacements in that cell was selected.

The Selected Sample

The initial sample consisted of nearly 26,000 students and 120 schools. Its distribution across regions and grade levels is shown in Exhibit 2-5. This sample was selected to meet all the requirements of the state survey policy committee and was much larger in size—both in comparison to previous state surveys and in terms of what was needed for precision of the estimates—due to the need to oversample racial/ethnic minorities. The initial sample is presented here because it serves as the target against which the obtained sample is compared.

Exhibit 2-5
Number of Schools and Students by Region and Grade in the Initial Sample

Region	Grade 6		Grade 8		Grade 10	
	Schools	Students	Schools	Students	Schools	Students
Eastern	14	1,770	12	1,931	9	2,861
Southwest	13	1,334	9	1,370	7	2,758
Puget Sound	18	2,528	10	2,503	10	5,654
Northwest	7	878	6	923	4	1,828
Total	52	6,510	37	6,727	30	13,082

Precision of Survey Estimates

Two paramount concerns in the methodology of survey research are achieving a scientifically representative sample and obtaining sufficiently precise estimates of the constructs being assessed—in this case, student attitudes, values, and behaviors. The size and design of the sample have direct influence on both of these factors.

The vast majority of the results of the WSSAHB are reported in terms of prevalence estimates (i.e., the *proportion* of students who exhibit a certain attitude or behavior). The precision of a survey's estimate of a proportion is generally represented by the *standard error of the estimate* which is typically used to form a *confidence interval* around the obtained estimates. For example, if the survey indicated that 25 percent of high school seniors carried a weapon to school in the past month, a 95 percent confidence interval would be constructed by adding and subtracting nearly two standard errors to this estimate. If the standard error of this estimate were 1 percent, the use of the confidence interval would yield an interpretation something like: "We are 95 percent certain that between 23 percent and 27 percent of high school seniors carried a weapon in the past month." The magnitude of the standard error of estimate is very much a function of the size and design of the survey sample. The reader should also keep in mind that the standard error varies in relation to the size of the proportion. A result of 5 percent (as in "Five percent of eighth graders have tried cocaine") has a much smaller standard error than a result of 50 percent.

The most straightforward case of measuring standard error is represented by a simple random sample of n independent observations taken from a population of size N . The standard error of the estimated proportion, p , is given by Equation 1:

$$(1) \quad S_p = \sqrt{\frac{(N-n)}{N} \frac{(pq)}{n}} \quad \text{where } \begin{array}{l} s_p = \text{standard error} \\ p = \text{sample proportion} \\ q = (1-p) \\ n = \text{size of sample} \\ N = \text{size of population} \end{array}$$

In this simplest of cases, the standard error of estimate is influenced by the size of the sample and its relation to the size of the population (termed the *sampling fraction*) as well as the actual value of the proportion itself. In general, the larger the sample size n and the more closely it approaches the population size N , the lower will be the standard error of the estimate. At its limit, that is, when the sample size n actually equals the population size N the standard error is zero. This reflects the fact that when we have sampled the entire population, we are no longer estimating at all—we have the actual population value.

The value of the estimated proportion p also influences the size of the standard error. When $p = .50$ (i.e., when 50 percent of the sample exhibit a certain behavior or attitude), the standard error is at its maximum. As the proportion moves toward its limits of 0.00 or 1.00, the standard error decreases.

Exhibit 2-6 is a display of the standard error of a proportion s_p for illustrative values of $p = .50$ and $p = .90$, and sample sizes ranging from 20 to 600. It shows the decrease in standard error with increasing sample size and the comparative standard errors when estimating proportions near .50 or near .90 (equivalently .10).

Exhibit 2-6
Standard Error of a Proportion, p as a Function of Sample Size and P

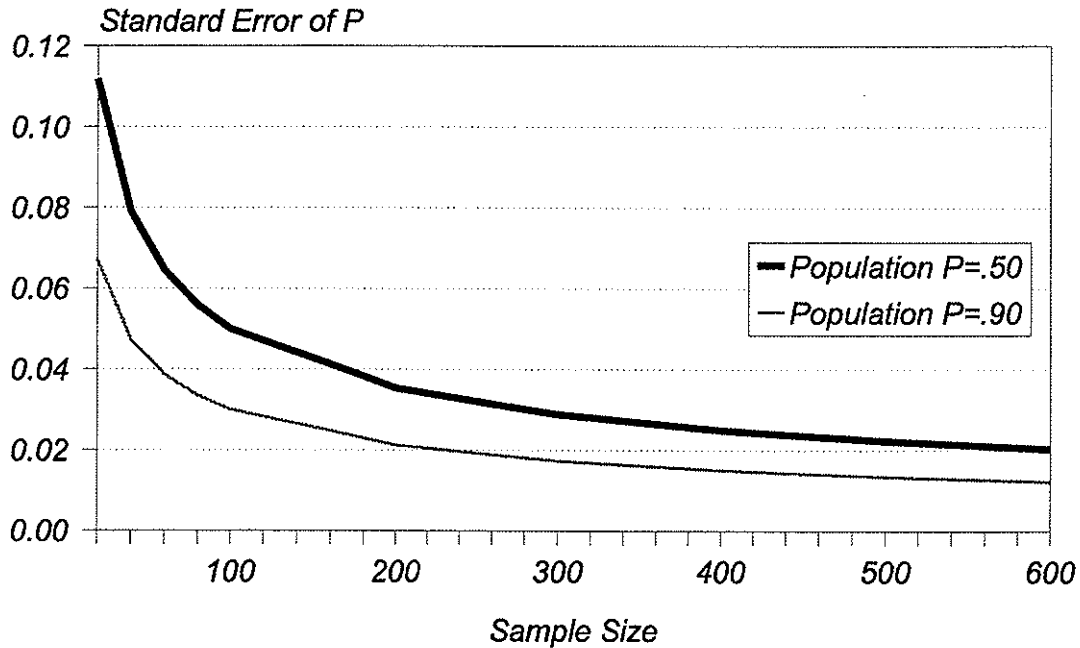


Exhibit 2-7 shows illustrative calculations of standard error for sample sizes likely to be encountered in the WSSAHB (e.g., statewide totals or totals for subpopulations such as racial groups or genders) and taken from a statewide grade-level population of approximately 60,000.

Exhibit 2-7
 Illustrative Standard Errors of Estimate for $p = .5$ and $p = .9$
 Simple Random Sampling^a

Sample Size	Illustrative Values of p	
	p = 0.5	p = 0.9
1,000	0.0157	0.0094
2,000	0.0110	0.0066
3,000	0.0089	0.0054
4,000	0.0076	0.0045
5,000	0.0069	0.0042
6,000	0.0062	0.0037

^a Assumes a population of 60,000

These standard errors, as noted, apply only when a simple, random sample is taken from the entire population. The sampling design used in this survey was far more complex. First, it was stratified on two factors: geographic region and school size. Secondly, it was a cluster sample. Schools, rather than individual students, were the sampling unit.

In general, the influence of stratification has less impact on standard error than does the cluster sampling strategy. Sampling strata are typically employed when they represent important features of the population along which survey estimates will be compared or when the variance of estimates can be reduced by the more homogeneous groupings that strata represent (Kish, 1965). The former is clearly true for geographic region and urbanicity. School size is included as a sampling stratum primarily for its utility in the cluster sampling scheme.

Cluster sampling has important effects on the standard error of survey estimates. For example, if we sample 1,000 students from 50 schools, we must consider the number of independent observations in our sample as 50, rather than 1,000. It is likely that the attitudes or behaviors of 20 students from the same school would bear some relationship to each other. Hence, they cannot be viewed as independent (as they would be if they were 20 individual students selected from the full list of 60,000 students across the state at that grade level). To the extent that their responses are intercorrelated within a school, then, our sample size shrinks from a maximum of 1,000 to a minimum of 50. The degree to which this sample size shrinks from the number of students to the number of primary sampling units (PSUs) depends upon the intercorrelation or homogeneity of the responses of individual students within the PSUs (i.e., schools). The

influence of the cluster sampling process on standard error estimates (termed the sampling *design effect*) such as those calculated in Exhibit 2-6, shown in Equation 2:

$$(2) \quad \text{Design Effect} = (1 + \rho(a-1)) \quad \text{where } \rho = \text{intraclass correlation} \\ a = \text{average cluster size}$$

Sudman (1976) has provided helpful estimates of these interrelationships, termed *intraclass correlations* or *homogeneity coefficients*. In practice, they range from values of .40 for highly similar indicators such as economic or employment data within neighborhoods to .05 for more individualized behaviors such as health practices. Pollard (1995) calculated estimates for the recent statewide alcohol, tobacco, and other drug use survey in Oregon schools. For these behaviors, the intraclass correlations ranged from .00 to .03 with a modal value of .01. Using this modal value, the cluster sampling design effect is approximately 1.26 for small elementary schools (averaging 60 students at a grade level) and 2.00 for large high schools (averaging 300 students at a grade level). Applying this to the illustrative standard errors calculated above yields the range of values for varying sample sizes and values of p , shown in Exhibit 2-8.

Exhibit 2-8
Illustrative Standard Errors of Estimate for $p = .5$ and $p = .9$
Cluster Sampling Under WSSAHB Sampling Design^a

Sample Size	Illustrative Values of p			
	<i>Small Schools</i>		<i>Large Schools</i>	
	$p = 0.5$	$p = 0.9$	$p = 0.5$	$p = 0.9$
1,000	0.0198	0.0118	0.0314	0.0188
2,000	0.0136	0.0083	0.022	0.0132
3,000	0.0112	0.0068	0.0178	0.0108
4,000	0.0096	0.0057	0.0152	0.009
5,000	0.0087	0.0053	0.0138	0.0084
6,000	0.0078	0.0047	0.0124	0.0074

^a Assumes population $N = 60,000$

These values range from a high of approximately 3 percent to less than .5 percent, depending upon sample size, cluster size, and whether these are high/low prevalence behaviors ($p = .10$ or $.90$, that is, 10 percent or 90 percent agreement with a question) or those exhibited by about half of the students ($p = .5$, or 50 percent). These estimates are based on a theoretical formulation

that does not account for such applied concerns as response rate and response bias. The magnitude of these influences in the 1998 survey are discussed in subsequent chapters.

These estimated standard errors suggest that when sample sizes are in the 3,000 or higher range, such as for statewide estimates at each grade, the standard errors will be .5 to 1 percent. As results are disaggregated by student or school characteristics within the state, these sample sizes may become smaller and standard errors larger still.

The actual method for calculating rho was given by Sudman (1976) in the formula shown in Equation 3:

$$(3) \quad \rho = \frac{S^2_{CLS} - S^2_{SRS}}{(a-1) S^2_{SRS}} \quad \text{where} \quad \begin{array}{l} a = \text{average cluster size} \\ S^2_{CLS} = \text{the variance due to cluster sampling} \\ S^2_{SRS} = \text{the variance calculated as if it was a simple random sample} \end{array}$$

The term S^2_{CLS} is the mean squared variation obtained in an analysis of variance (ANOVA) procedure. Similarly, S^2_{SRS} is the residual variance in an ANOVA. When the formula for rho in Equation 3 is combined with the formula for the design effect (Equation 2) the terms may be reduced to the formula shown as Equation 4:

$$(4) \quad \text{Design Effect} = \frac{S^2_{CLS}}{S^2_{SRS}}$$

Equation 4 is the formula for the F ratio determined from ANOVA. Consequently, the design effect for any item or scale in the 1998 WSSAHB could be estimated easily from an ANOVA.

It should be noted that Winer (1962) used a more conservative estimate than Sudman. His approach creates a slightly lower value for ρ and, consequently, a slightly lower estimate of the design effect. In comparing the two approaches, Winer's formula resulted in design effects approximately 2 to 6 percent smaller than Sudman's formula, not a remarkable difference.

To determine an overall estimate of design effect, several items and scales were selected at random and the design effect for each grade was calculated. Additionally, the design effect was calculated for the key indicators of alcohol and other drug use and delinquent behaviors. The results of these calculations are shown in Exhibit 2-9. A good overall estimate of the design effect is 5.0. Thus, when calculating a confidence interval around any result of the WSSAHB,

the number to use for the sample size should be one-fifth of the actual weighted sample, resulting in a larger confidence interval. The effective size of the eighth grade sample, for example, would be about 800 to 1,000 rather than 4,000.

Exhibit 2-9
Design Effect WSSAHB Cluster Sampling Design
Calculated for Selected Variables

Variable	Grade 6	Grade 8	Grade 10	Grade 12	Avg. Across Grades	
Randomly Selected Items						
I009	Hours worked part-time	2.45	2.45	6.27	3.80	3.74
I013A	Neighborhood has crime and drugs	4.51	7.27	8.70	10.87	7.84
I033	Neighborhood people encourage me	2.21	3.33	4.06	6.49	4.02
I034	People in neighborhood are proud of me	1.97	2.77	5.06	6.97	4.19
I057	Times used meth in past 30 days	0.66	3.15	5.14	1.32	2.57
I060	Where get cigarettes	3.33	3.41	3.76	6.17	4.17
I076	Learning is important for my later life	4.06	4.56	3.81	4.23	4.17
I088A	Times suspended in past 12 months	3.05	2.95	9.96	6.04	5.50
I097	See how much I can get away with	3.64	2.81	1.51	1.93	2.47
I103A	How wrong is taking handgun to school	2.06	1.82	2.81	6.56	3.31
I106B	Tried alcohol? 4 best friends (12 months)	4.38	6.00	6.17	2.94	4.87
I108A	Are you cool if you smoke cigarettes?	2.57	3.45	3.50	3.87	3.35
	Mean of randomly selected items	2.91	3.66	5.06	5.10	4.18
Selected Scales						
Risk15	Perceived drug availability in community	3.42	4.16	6.88	7.35	5.45
Risk33	Opportunities for positive involvement	4.92	4.96	4.29	7.79	5.49
Risk47	Friends' use of drugs	4.81	6.93	13.96	8.33	8.51
Ntotal	Total resiliency (all risk and protective)	3.66	4.65	7.84	7.19	5.83
Delinq1	Violent behavior scale	2.24	2.80	7.38	4.83	4.31
Delinq2	Other delinquent behavior scale	4.07	4.58	9.64	13.76	8.01
Toba30	Tobacco - 30 day use	1.73	3.89	8.70	7.52	5.46
Alco	Alcohol use scale	2.91	4.62	4.67	7.55	4.94
Drug	Drug use scale	2.58	6.80	11.25	10.67	7.83
WeapSc	Carried any weapon to school	2.45	1.73	4.93	1.74	2.71
	Mean of selected scales	3.28	4.51	7.95	7.67	5.85
	Mean of all selected items and scales	3.08	4.05	6.38	6.27	4.94

Chapter 3: Data Collection Protocol

Following the design of the survey tool and the sampling process, the next step was to communicate with the field—to solicit the cooperation of the sampled schools, to make the survey available to other volunteer schools that wished to participate because they valued the results, to send instructional and administration materials to participating schools, and to coordinate the statewide administration of the survey. This chapter describes the materials sent to local administrators and the permission process for participating in this voluntary survey.

School Recruitment Materials

In December 1997 RMC Research Corporation staff mailed to all school district superintendents in the state a package describing the survey. The materials included a rationale and description of the survey content, a survey fact sheet, a list of the survey questions, and a list of sampled schools from the districts to assist local administrators, school boards, and interested parents in making a decision about participation in the study. Study staff mailed a similar package, without the list of sampled schools, to the principals of all public schools in the state with students in Grades 6, 8, 10, or 12. (See Appendix C for recruitment materials.)

A return letter was included in the superintendents' packages to solicit the districts' decisions about participation and to identify a local survey coordinator in each participating school. In January 1998 a reminder letter was sent to those superintendents who had not responded and to local coordinators for safe and drug-free schools funds and the Prevention and Intervention Services programs.

Materials Sent to Local Coordinators

In February 1998 RMC Research staff mailed a package to the local contact persons designated to coordinate survey administration in participating schools. The coordinator materials contained a sample letter for parents and a list of the HRRB requirements for the parent letter, survey coordinator guidelines, survey administration instructions, the fact sheet, and the content rationale. In addition, local survey coordinators received a copy of the information on file at RMC Research regarding their school (e.g., the name of the contact person, the mailing address, the number of participating students, etc.). Local coordinators were asked to inform RMC Research of any necessary corrections to these data. Also included in the mailing were draft copies of the survey coordinator guidelines, survey administration instructions, and a list of

resource telephone numbers. In March 1998 survey coordinators received a mailing that included a copy of the survey instrument, a Spanish version of the parent letter, and information about the status of the survey administration. Final copies of the administration instructions were included with the actual surveys when they were distributed in late March.

Finally, survey coordinators were informed that a Spanish language version of the survey was available and that they could obtain a copy for duplicating by informing RMC Research of their need. The coordinator for Educational Service District 123's Prevention and Intervention Services Program, an OSPI-funded program that supports school-based intervention specialists, took the lead in preparing the Spanish translation of the survey materials with assistance from the local Center for Successful Families.

Coordinators were also encouraged to make a decision regarding what alternative activity would be provided to those students in attendance who elected not to participate in the survey.

Rationale and Description of Survey Content

This three-page document provided information about why the survey was being administered and what questions were included on the survey. The sponsoring state agencies were identified and mention was made that the survey was based on four previous statewide survey efforts. The content of the survey was described under five major headings, along with the importance of and rationale for including those components: student background information; alcohol, tobacco, and other drug use; risk and protective factors; violent behaviors; and access to school-based services.

Fact Sheet

The four-page fact sheet detailed answers to commonly asked questions about the survey. Topics covered in the fact sheet included the purpose and focus of the survey, sampling of schools and opportunities for nonsampled schools to participate, the anonymous and voluntary nature of the survey, the time line and time requirements for survey administration, the nature of the questions, the honesty of student responses, and how one could go review a copy of the survey. Finally, the fact sheet provided several important examples of how the survey results will be used.

Sample Letter to Parents

Parents and students were notified of the survey at least two weeks prior to its administration. The sample letter to parents, which could be modified to suit the needs of a given school as long as the HRRB requirements were met, was intended to inform parents of all pertinent details of the survey administration. The letter, to have been signed by the school principal or district superintendent, was brief but complete. Parents were informed of the importance of the survey, as well as who the sponsoring agencies were. The content of the survey was described, and parents were invited to view a copy of the survey in the principal's or district superintendent's office. Parents were informed that the survey was being administered under contract with RMC Research, and the name and telephone number of the project director were provided. Parents were also informed that the survey was completely anonymous and voluntary, and that any students who chose not to participate would be provided with an alternative activity. Parents were informed that results would be presented in aggregate form only, and that these results would serve important program planning and evaluation purposes. Finally, parents were asked to notify the person who had sent the letter (i.e., the principal or superintendent) if they did **not** wish to have their son or daughter participate. This represented what is termed a passive permission protocol.

Administration Instructions

Survey Coordinator Guidelines

The survey coordinator guidelines, for use by local contact persons, detailed the steps necessary to administer the survey. Before the survey, coordinators were to announce the survey, select a date for administration, prepare materials, and train those teachers who would be administering the survey. On the day of the survey administration, coordinators were to distribute the survey materials, collect the materials following the administration, and then package and return the materials to the contractor. (See Appendix D for administration packet.)

Survey Administration Instructions

These instructions were prepared for use by teachers or other school staff administering the survey in the classroom. The instructions began with an introduction to the survey and a reminder that student participation was voluntary and that student responses were completely anonymous. Teachers were informed of the scheduling requirements of the survey administration. They were asked to check the materials received and were reminded of the need to emphasize the importance of the survey to participating students. Teachers were informed of

the opportunity for students to participate in an alternative activity if they chose not to participate in the survey administration. Instructions to be read verbatim to the class by the survey administrator were also provided. The purpose of these instructions was to ensure a standardized survey administration.

Student Assent Form

Students received an assent form that introduced the survey and its purpose. Students were informed that the survey was voluntary and anonymous and were provided with information about the survey content. Students were also informed that if they had questions about the survey they could ask the survey coordinator or call the project director.

If I Need Help

This sheet was provided for use by students who, after completing the survey, might have had questions or feelings about which they would like to seek help. Students were encouraged to contact a trusted adult in their school, family, or community, or to call one of the resource numbers provided for information on where to seek further help. Telephone numbers for 14 resources addressing a variety of problems were included.

Chapter 4: Results of Survey Administration

Results of School Recruitment

Schools were drawn at random within the cells of the design to be included in the statewide sample. At the same time, a review copy of the survey was distributed to members of the survey advisory committee (including educational service district alcohol education coordinators, Drug-Free Schools and Communities Act program coordinators, community mobilization program coordinators, county prevention coordinators, members of the Washington Interagency Network Against Substance Abuse, school nurses, and school health education coordinators). In response, a few individuals submitted constructive recommendations that were incorporated in the final version of the instrument.

Exhibit 4-1 details, by region within grade, the number of schools targeted, the number of schools asked to participate (i.e., sampled plus replacement schools), and the number that ultimately did participate. (A list of participating schools is included in Appendix E.) The school response rate (the number that participated divided by the number asked) and cell completion rate (the number that participated divided by the number targeted) are also provided.

Exhibit 4-1
Number and Percent of Schools That Agreed to Participate in Statewide Sample
Grade 6

Region	Target Schools	Asked to Participate	Agreed to Participate	School Response Rate	Cell Completion Rate
Eastern	13	18	12	67%	92%
Southwest	12	26	8	31%	67%
Puget Sound	18	29	16	55%	89%
Northwest	7	8	7	88%	100%
Total	50	81	43	53%	86%

Exhibit 4-1, continued

Grade 8

Region	Target Schools	Asked to Participate	Agreed to Participate	School Response Rate	Cell Completion Rate
Eastern	11	16	9	56%	82%
Southwest	9	12	9	75%	100%
Puget Sound	10	15	11	73%	110% ^a
Northwest	6	10	4	40%	67%
Total	36	53	33	62%	92%

^aOne school initially declined and then later decided to participate after a replacement school had been obtained.

Grades 10 and 12

Region	Target Schools	Asked to Participate	Agreed to Participate	School Response Rate	Cell Completion Rate
Eastern	9	9	7	78%	78%
Southwest	7	10	5	50%	71%
Puget Sound	10	11	6	55%	60%
Northwest	4	5	4	80%	100%
Total	30	35	22	63%	73%

The response rate reflects the willingness of schools to participate in the study. As may be seen from these tables, the response rate was 53 percent for Grade 6, 62 percent for Grade 8, and 63 percent for Grades 10 and 12. Grades 10 and 12 are considered together, as selected high schools contained both grades and were therefore asked to survey them both, thus reducing the sampling burden. These response rates are higher than those of the 1995 survey, reflecting a greater willingness by school staff to commit to the survey. In fact, several schools initially declined to participate in this study but later changed their positions.

Most of the response rates range between 50 and 75 percent. At each grade level a different region had the lowest response rate. At the elementary level only 31 percent of the southwest schools recruited agreed to participate. Among middle schools the four out of ten northwest

schools agreed to participate. Only half of the southwest high schools asked agreed to participate.

The cell completion rate reflects our level of success in completing the sampling scheme. It disregards whether a school was initially designated as sample or replacement, viewing them interchangeably as they contribute to obtaining the target sample size. Thus, the cell completion rate better reflects progress in completing the sampling plan but ignores possible selection bias when there is a high refusal rate. This index was generally very promising: 86 percent for Grade 6, 92 percent for Grade 8, and 73 percent for Grades 10 and 12. As with response rates, there was variation in completion rates among regions but a different region had the lowest completion rate at each grade.

Note that these response and completion rates are slightly higher than those reported in the analytic report (Einspruch, Gabriel, Deck, and Nickel, 1998) because several corrections were made to the status of participating schools since that report was written. For example, three elementary schools and one middle school were selected as replacements too late for notification to occur but had initially been marked as refusing. In addition, the HRRB raised the minimum class size from ten to 15 early in the recruitment process, thus reducing the universe of schools and the number of target schools needed.

Ultimately, in examining response rates or cell completion rates, the issue of paramount concern is the representativeness of the sample to the population from which it was drawn. Most simply, representativeness is assured by having a high level of response from a randomly selected sample. In the absence of a high response rate, however, it is necessary to investigate whether or not those students who responded are similar to those who did not, as Lessler and Kalsbeek (1992) noted:

It is important to remember that while a rate tells us the extent of nonresponse, it does not explicitly indicate the impact of the nonresponse on survey estimates. Low response rates point only to a potential for severely affected estimates . . . In fact, the ultimate effect of nonresponse in a survey with a 90 percent response rate but a large respondent-nonrespondent difference may be more severe than a survey with an 80 percent response rate but small respondent-nonrespondent differences. Another factor to consider is how good the rate is in light of past experience with similar surveys. (p. 116)

In 1995 the cell completion rates were 66, 53, and 68 percent respectively—somewhat lower than those presented here. Recall that a full spectrum of health behaviors was included in the survey that year. In 1992 the cell completion rate of the WSSAHB was approximately 45

percent (Einspruch and Pollard, 1993). Data are not available on the response rate index as it is defined here. In previous years, when the content concerned only alcohol, tobacco, and other drug use behaviors, the completion rates were 60–70 percent (Deck and Nickel, 1989) and 70–80 percent (Gabriel, 1991).

Survey Returns

Exhibit 4-2 details the number and percentage of students who participated in the survey. Two columns are included in the exhibit to distinguish between sample schools—those that provided data for the state and regional estimates—and volunteer or piggyback schools—those that wished to participate in order to obtain valid, objective data on the incidence and prevalence of these health behaviors among the students in their schools.

As shown in the Exhibit 4-2, 19,965 surveys were mailed to sample schools. A total of 13,039 students were enrolled in classrooms that submitted participation data on a class header sheet. Of those students, approximately 11 percent were absent the day of administration, nearly 7 percent elected to participate in the alternative activity rather than the survey, and just over 1 percent were unable to participate for other reasons. According to the class header sheets, a total of 10,552 students (81 percent of students enrolled) completed the survey.

Through the actual processing of individual survey booklets, a total of 15,477 surveys were returned to RMC Research from the sampled schools. Of these surveys, about 3 percent could not be processed due to missing information, and 3 percent were discarded due to inconsistent or dishonest responses. The total number of surveys processed was larger than reported on class header sheets due to missing header sheets. It is not clear whether local survey coordinators failed to distribute the missing sheets or teachers ignored the packing instructions—or a combination of both.

Exhibit 4-2
Number and Percent of Students That Participated in Survey

Distribution of Survey Booklets	Sample	Piggyback
1997–98 Public school enrollment at Grades 6, 8, 10, and 12		296,234
Number of surveys mailed to participating schools (Percent of statewide enrollment)	19,965 (6.7)	57,587 (19.4)
Information from Class Header Sheets	Sample	Piggyback
Number of students enrolled in participating classrooms where teachers completed the class header sheet	13,039	38,610
Students absent when survey was administered (Percent of students enrolled)	1,396 (10.7)	4,463 (11.6)
Students electing alternative activity (Percent of students enrolled)	897 (6.9)	2,245 (5.8)
Students unable to participate for other reasons (Percent of students enrolled)	194 (1.5)	366 (0.9)
Students completing the survey (Percent of students enrolled)	10,552 (80.9)	31,536 (81.7)
Survey Booklets Processed	Sample	Piggyback
Number of surveys returned	15,477	40,654
Surveys that could not be processed due to missing information or wrong grade level (Percent of surveys returned)	412 (2.7)	1,703 (4.2)
Surveys discarded due to dishonesty or inconsistent responses (Percent of surveys returned)	464 (3.0)	1,220 (3.0)
Valid surveys included in the analysis from sample schools (Percent of surveys returned)	14,601 (94.3)	37,731 (92.8)

About 3 percent of the surveys could not be used because students left out key information (such as their grade) or because they were enrolled in a grade other than 6, 8, 10, or 12. To ensure that prevalence estimates were based only on valid responses, several criteria were used to exclude an additional 3 percent of the surveys with dishonest or inconsistent responses:

- ◆ Student admitted answering dishonestly.
- ◆ Student admitted answering somewhat honestly and claims use of a fictitious drug.
- ◆ Student responded inconsistently to three or more pairs of related items (e.g., claimed 30-day use of a substance on one item and no use in lifetime on another item).

In the end, 14,601 surveys were valid for inclusion in the statewide analysis of sample schools. An additional 37,715 valid surveys were received from nonsampled schools that chose to survey their students (so-called piggyback schools).

Sample Sizes: Weighted and Unweighted

Exhibit 4-3 details the number of students in each grade from sampled schools in each region that completed the survey. This exhibit shows both the unweighted and weighted sample sizes. The sampling procedure used in this survey required us to use a weighting procedure to adjust the resultant estimates to reflect these students' actual occurrence in the population. In discussing the statistical aspects of weighting, Kish (1965) warned survey researchers:

Before introducing unequal weights, we should consider the several factors that it may involve: (1) reduction of some biases; (2) possible introduction of other biases; (3) increase of the variance; (4) complication of computations . . . On the one hand, large or potentially large biases should be avoided. But the elimination of a small bias should not be bought at the cost of a greater increase in the variance. (p. 426)

Regional results were weighted to reflect their actual proportion of the overall state population. For example, if the eastern region includes only 15 percent of the state's student enrollment, but its participating schools account for a much larger proportion of the obtained survey sample, its results would be weighted downward to avoid a disproportionate influence on the statewide estimates.

As may be observed, the number of respondents decreased as grade level increased. Whereas close to 4,000 sixth grade students completed the survey, only about 2,600 twelfth grade students completed the survey. As foreshadowed by the cell completion rate statistics reported earlier, the number of respondents in either the grade or the region strata was somewhat less than the number targeted.

Exhibit 4-3
Sample Size by Region and Grade

Region	Unweighted				Weighted			
	6	8	10	12	6	8	10	12
Eastern	1,248	942	821	428	968	1,025	988	659
Southwest	494	911	678	452	856	873	911	597
Puget Sound	1,472	1,763	1,486	1,081	1,496	1,520	1,502	971
Northwest	731	445	999	650	625	643	584	384
Total	3,945	4,061	3,984	2,611	3,945	4,061	3,985	2,611

Representativeness

As mentioned, an important issue under consideration with regard to the number of surveys completed and the participant response rate is how well the sample represents the population from which it was drawn on demographic characteristics—although there may be other unmeasured differences between participating and nonparticipating schools. To address this issue, demographic characteristics of the sample can be compared with those of the population. Such comparisons are displayed in Exhibit 4-4 along the key dimensions of gender, racial/ethnic group, region, and community type. These comparisons are made for each of the four grades surveyed. Although there is some variation across grades, in general:

- ♦ There was a close match (within a difference of 3 percentage points) between the gender distribution of respondents and of students statewide.
- ♦ Students identifying as white, not Hispanic, were underrepresented at Grade 6 and Grade 8.
- ♦ The regional distribution of the sample nearly exactly matched the regional distribution of the student population as a result of the weights applied.
- ♦ Students in urban areas at Grade 10 and in rural areas at Grade 12 were somewhat overrepresented, whereas suburban areas were underrepresented.

Exhibit 4-4
Representativeness of Sample by Grade

Characteristic	Actual Sample	Weighted Sample	State	Difference (wtd - state)
<i>Grade 6 (N = 3,945)</i>				
Gender				
Female	51.1	50.2	48.6	1.6
Male	48.9	49.8	51.4	-1.6
Racial/ethnic group				
American Indian	5.9	6.8	2.8	4.0
Asian	8.3	8.3	6.7	1.6
Hispanic	15.4	10.6	8.1	2.5
Black	5.6	5.5	4.8	0.7
White	64.8	68.8	77.6	-8.8
Region				
Eastern	31.6	24.5	24.5	0
Southwest	12.5	21.7	21.4	0.3
Puget Sound	37.3	37.9	38.5	-0.6
Northwest	18.5	15.8	15.6	0.2
Community				
Urban	32.2	36.6	34.9	5.0
Suburban	32.8	25.9	27.4	-1.7
Rural	35.0	12.3	19.5	-3.2
<i>Grade 8 (N = 4,061)</i>				
Gender				
Female	50.7	50.4	48.1	3.3
Male	49.3	49.6	51.9	-3.3
Racial/ethnic group				
American Indian	4.2	3.1	2.6	2.3
Asian	8.1	5.0	6.8	0.7
Hispanic	11.4	9.9	7.4	5.1
Black	4.4	4.0	6.8	-2.7
White	71.9	78.0	78.5	-7.5
Region				
East	23.2	25.7	25.2	0.0
Southwest	22.4	22.0	21.5	0.0
Puget Sound	43.4	37.0	37.7	-0.3
Northwest	11.0	15.4	15.6	0.2
Community				
Urban	24.4	24.4	25.4	-1.0
Suburban	43.1	35.8	37.0	-1.2
Rural	31.6	39.8	37.6	2.2

Characteristic	Actual Sample	Weighted Sample	State	Difference (wtd - state)
<i>Grade 10 (N = 3,984)</i>				
Gender				
Female	50.6	51.2	48.6	2.6
Male	49.4	48.8	51.4	-2.6
Racial/ethnic group				
American Indian	2.5	2.7	2.5	0.2
Asian	7.8	7.9	7.2	0.7
Hispanic	8.1	8.4	7.0	1.4
Black	4.3	4.2	4.5	-0.3
White	77.3	76.9	78.9	-2.0
Region				
Eastern	20.6	24.8	24.8	0.0
Southwest	17.0	22.9	22.9	0.0
Puget Sound	37.3	37.7	37.2	0.5
Northwest	25.1	14.7	15.1	-0.6
Community				
Urban	31.3	32.3	26.0	6.3
Suburban	28.8	30.2	37.8	-7.6
Rural	39.9	37.5	36.3	1.2
<i>Grade 12 (N = 2,611)</i>				
Gender				
Female	49.8	50.8	48.7	2.1
Male	50.2	49.2	51.3	-2.1
Racial/ethnic group				
American Indian	1.5	1.7	2.2	-0.5
Asian	8.3	7.6	7.4	0.2
Hispanic	4.5	4.9	5.9	-1.0
Black	3.1	3.5	4.4	-0.9
White	82.7	82.3	80.2	2.1
Region				
Eastern	16.4	25.2	24.7	0.5
Southwest	17.3	22.9	23.2	-0.3
Puget Sound	41.4	37.2	38.3	-1.1
Northwest	24.9	14.7	13.8	0.9
Community				
Urban	28.9	29.7	26.9	2.8
Suburban	28.9	29.2	38.0	-8.8
Rural	42.2	41.7	35.1	6.0

Impact of Missing Data

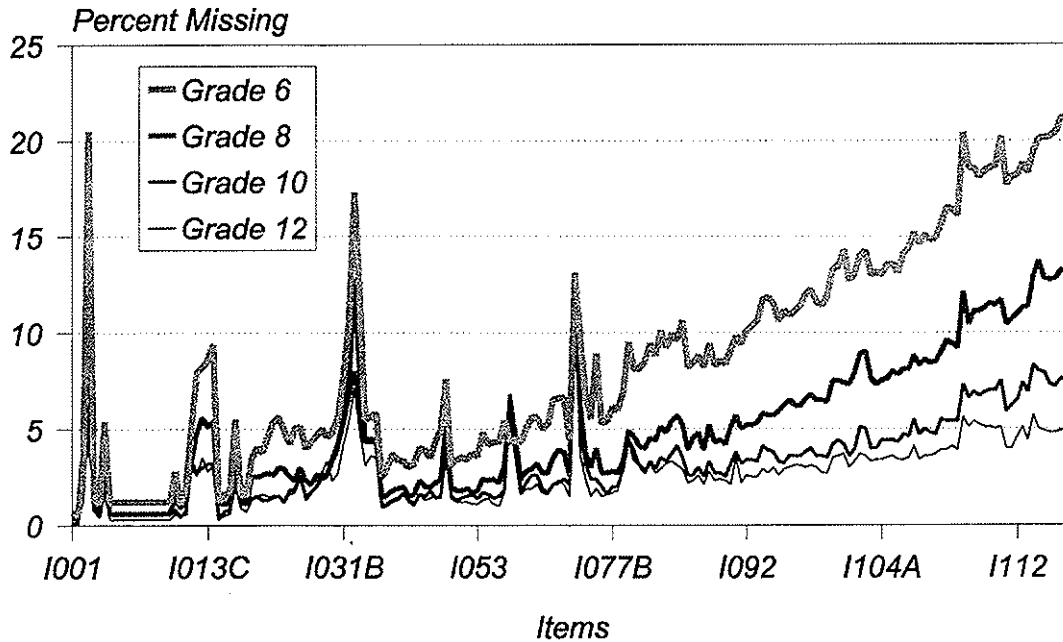
Although missing data is always a concern in this type of project, it was of particular interest in the current survey due to its length. That is, it was possible that the survey was so long that only the most efficient students would be able to complete it, and there existed the possibility that these students would have different characteristics than those students who were unable to complete the survey.

Exhibit 4-5 illustrates the extent of missing data in the survey results. The percentage of sixth, eighth, tenth, and twelfth grade students who did not answer any given question on the survey is shown. As may be observed, all four grades show similar patterns, although sixth grade students had a higher percentage of missing data. Overall, the level of missing data was rather low, remaining less than 5 percent for most items in the first two-thirds of the survey. Most students in Grade 10 and Grade 12 who began the survey also completed it. Students appeared to become more tired in the final third of the survey and that is where the level of missing data began to rise. Even so, the general level rose above 10 percent only for the last few items for eighth grade students.

Most eighth graders completed the first two-thirds of the survey but the percent of data missing increased to about 13 percent by the end of the survey. Sixth graders had more trouble with the survey and the percent of data missing reached 20 percent by the end of the survey for those students. These findings are not too surprising. Although there were only 122 survey items, some items had more than one part so students had to make a total of 186 responses to complete the survey.

A few items seemed to have more missing data than would be suggested by the general trend, including zip code (I004), ethnicity (I007), characteristics of the neighborhood (I013), activities available in the community (I031), cigarettes smoked in the past 30 days (I047), and where to go to get information about different topics (I071).

Exhibit 4-5
Percent of Data Missing by Grade



To determine whether students who failed to complete the survey were systematically different from those who completed the survey, the percentage of students at each grade who did not complete the last item was computed by gender and ethnicity. Exhibit 4-6 shows that boys were less likely than girls to finish the survey. Students identifying themselves as African American or Hispanic were also less likely to finish. Despite attempts to keep the survey at a reading level appropriate for sixth graders, the length of the survey put students with weak English reading skills at a disadvantage.

Exhibit 4-6
Percent That Did Not Respond to Last Item by Grade

Characteristic	Grade 6	Grade 8	Grade 10	Grade 12
Gender				
Female	17.1	10.3	6.3	2.9
Male	21.8	13.5	7.3	6.3
Racial/ethnic group				
American Indian	17.4	16.0	8.4	2.6
Asian	18.5	12.1	4.9	6.9
Hispanic	34.2	22.3	27.6	8.7
Black	33.2	17.3	14.8	13.9
White	13.2	9.9	4.6	3.4

In summary, it does not appear that the survey was too long for tenth and twelfth grade students. However, sixth grade students and some eighth graders might have found the survey to be a bit long. Boys and students identified as African American or Hispanic are underrepresented in the results for items in the last third of the survey, at least for Grades 6 and 8. All in all, though, the extent of the missing data is reasonable and would be expected to have minimal impact on the survey results.

Chapter 5: Validity of Survey Results

The notion of validity in measurement is classically defined as the extent to which an instrument or procedure measures what it is intended to measure. In its Standards for Educational and Psychological Testing, the American Psychological Association, American Educational Research Association, and National Council on Measurement in Education (APA/AERA/NCME, 1985) acknowledged validity as the “most important consideration” in assessment and defined it globally as:

The appropriateness, meaningfulness, and usefulness of the specific inferences made from test scores. (p. 9)

Validity of Self-Report Surveys

It is of interest whether the incidence and prevalence estimates obtained via the 1998 WSSAHB are accurate reflections of the health risk behaviors, attitudes, and risk/protective factors of students across the state of Washington.

Validity has many facets and can be considered in a number of different ways—such as content, construct, or concurrent validation. The National Institute on Drug Abuse (NIDA), for example, has done extensive study of the validity of its household survey of drug use. The institute has examined the cognitive demands placed on respondents by some of the rather complex questions inherent in this topical area to determine whether the accuracy of people’s responses jeopardized because they have difficulty understanding what is being asked. NIDA has also investigated the burden placed on respondents by the length and occasionally intrusive content of these kinds of questions—that is whether people are hesitant to answer accurately because they simply do not want to disclose this information about themselves. Finally, NIDA has also examined the correspondence of estimates of the same behaviors obtained by different methods of questioning (face-to-face interviews vs. telephone interviews versus paper and pencil surveys). Typically, when administered under conditions of assured confidentiality the results across methods correspond fairly well, although written survey methods yield uniformly higher estimates of these behaviors than do face-to-face interviews (NIDA, 1992).

When presenting results of surveys of these types of attitudes and behaviors, however, the most frequently asked question relating to validity is simply, “How can we be sure the students are answering honestly?” As in most such surveys, the current authors have no foolproof, direct methods of assuring perfect accuracy in the WSSAHB. It is not practical, or perhaps ethical, to

incorporate physiological measures of substance use (e.g., urinalysis, hair samples) to go along with the self-report surveys. Yet, as authors of the NIDA-sponsored Monitoring the Future survey suggested, there is considerable inferential evidence which indicates that the estimates presented here are largely valid indicators of the incidence and prevalence of the health risk behaviors and attitudes under study (Johnston et al., 1993).

Perhaps the greatest assurance of validity is in the careful conditions of administration that are set for the WSSAHB:

- ◆ Students are assured that their responses will remain confidential.
- ◆ Students are instructed to not write their names on the survey forms.
- ◆ Participation in the survey is voluntary and students may elect an alternative activity such as study hall.
- ◆ Survey administrators are instructed to not circulate around the room during the survey so as not to give the impression that they are looking at how individual students respond to the items.
- ◆ When finished, students insert the completed survey booklet into an envelope at the front of the classroom, placing it in any order among the other surveys.

Additional details about the administration conditions of the WSSAHB were given in Chapter 3.

In addition to these administration conditions and data collection protocols, a number of analytical checks were made on the resultant data to ensure the accuracy of the WSSAHB results.

1. First, the WSSAHB has many internal consistency checks that yield strong evidence of reliability, a necessary condition for validity. For example, students are asked directly if they have ever tried marijuana. Later in the survey, they are asked how often they have used marijuana in the past 30 days. If a student answers “no” to the first question (lifetime prevalence), but answers “once or twice” to the second, there is evidence of inaccuracy. Students who reported several inconsistent responses of this type were removed from the data set. In the 1998 survey, only about 1 percent of the students reported in such inconsistent ways (see Chapter 4 for a more detailed discussion).

2. Over the many years of this and other health risk behavior surveys, researchers have found that these behaviors correlate in consistent ways with student characteristics, risk factors, and school characteristics. When these patterns of interrelationships persist in a given survey sample, it is again suggestive that the data collected are accurate.
3. Patterns of missing data examined in this survey do not suggest any sudden volatility (and departure from honest responses) of item content. That is, there are few spikes in the missing data distributions described in Chapter 4. If students are answering haphazardly or dishonestly, they are likely to do so throughout the instrument, and this would be detected by the internal consistency checks described earlier.
4. The survey contains a question that asks about students' use of a fictitious drug. Those who indicate having used this drug are also discarded from the survey sample. Again, these number fewer than 1 percent.
5. The vast majority of students (over 97 percent), when asked, indicated that they answered the survey honestly.

A careful reading of these analytical steps taken to remove inconsistent responses leads to the conclusion that these steps all represent ways to discard overreporting students, but not underreporting students. Yet, the magnitude of the prevalence estimates contained in this and previous surveys of Washington students' health risk behaviors—conservative though they may be—raise concern among our policymakers and citizens. That these estimates might indeed be conservative only heightens these concerns.

Exclusion Criteria

To assess the impact of the exclusion criteria, a comparison was made of the lifetime and 30-day use rates for five key indicators between all survey respondents and only the valid respondents. The results of this comparison are presented in Exhibit 5-1. As may be observed, the impact of the exclusion criteria are only slight for most indicators, typically lowering the use rates by less than a percentage point.

Exhibit 5-1
Impact of Exclusion Criteria on Selected Indicators

Indicator	<i>All Respondents</i>				<i>Valid Respondents Only</i>			
	6	8	10	12	6	8	10	12
<i>Number of students</i>	4,049	4,183	4,087	2,684	3,446	4,061	3,984	2,611
Tobacco								
Lifetime	27.4	50.1	65.2	70.4	26.9	49.6	64.9	69.9
30-day use	6.7	18.3	26.4	34.2	6.0	17.1	25.4	32.9
Alcohol								
Lifetime	40.2	62.9	79.7	84.2	39.8	62.7	79.7	84.2
30-day use	14.6	31.7	45.6	52.7	13.8	31.0	44.9	52.0
Marijuana								
Lifetime	7.5	29.0	50.0	55.8	7.0	28.2	49.5	55.1
30-day use	4.1	17.6	27.5	29.9	3.5	16.5	26.6	28.7
Cocaine								
Lifetime	2.8	6.1	10.4	11.1	2.3	5.2	9.4	9.7
30-day use	1.8	3.6	4.5	4.5	1.0	2.5	3.2	2.6
Weapon carrying								
30-day use	10.3	15.1	12.3	11.0	9.3	13.9	11.2	9.4

Note: Indicators reduced by more than 1 percent by exclusion criteria are indicated in bold type.

The exceptions where the exclusion criteria resulted in more than a 1 percentage point decrease are 30-day tobacco use for eighth and tenth grade students only and 30-day cocaine use or weapon carrying for eighth, tenth, and twelfth grade students. Reductions were small for sixth grade students.

It is not surprising that the exclusion criteria would have a large impact with low prevalence behaviors such as cocaine use or weapon carrying. The very exaggerated pattern of substance use and other inappropriate behavior reported by a small number of students produces inflated prevalence estimates unless exclusion criteria are used.

Chapter 6: Scale Construction

The assessment of adolescent health behaviors and related risk and protective factors involves asking a number of questions about the same behavior. For example, in determining the extent to which students use illicit drugs, questions are asked about both the recency and frequency of the use of several substances. Although there is much interest in the findings of these specific questions, local schools and health professionals often need a more global expression of the extent of illicit drug use among their students. To accomplish this, the authors developed a number of composite scales—guided by empirical literature and the results of this survey—for use in this and other reports of the 1998 WSSAHB results.

Two sets of composite scales are provided to aid in the interpretation of the survey results: health behavior scales and risk or protective factor scales. Health behavior scales estimate the prevalence of health-related behaviors that pose a health risk among adolescents. Risk and protective factor scales estimate the prevalence of attitudes, values, or behaviors that have been shown to predict substance use and other health risk behavior.

Construction of Health Behavior Scales

Because the survey contains several related items that portray specific aspects of substance use, violence, or other health behaviors, it is often difficult to determine the severity of the overall problem from any individual item. The authors developed four special scales in consultation with the survey policy committee to facilitate the interpretation of the survey results: alcohol use, drug use, violent behavior, and other delinquent behavior. Each scale portrays a continuum of health risk based on the frequency and severity of the behaviors as measured by the items that compose the scale. Each level of the composite scale is defined by specific, concrete patterns of behavior to make interpretation easier.

It is important to note that due to changes to the 1995 survey (e.g., the deletion of items, changes in the wording of items, changes in the response options of items, etc.), the alcohol use and drug use scales currently in use are no longer comparable with those composite scales from previous survey administrations. Only those individual items with similar wording and similar response options should be compared across years. For example, before 1995 students were asked how often had they used each of several drugs, and for each drug (e.g., smoking tobacco, beer, cocaine, etc.) students were to indicate “never,” “some,” “monthly,” “weekly,” or “daily” (each of these response options was defined for the student). In the two most recent surveys (1995 and 1998), students were asked whether they had ever used any of the listed drugs and were given

“yes” and “no” as their only response options. A second set of questions asked how many times each substance had been used in the past 30 days. In addition, in 1998 four substances were added to the list in place of a more general other drug category.

Alcohol Use Scale

The alcohol use scale is based on the recency, frequency, and quantity of alcohol consumption. This scale follows the theoretical framework of other researchers in quantifying the drinking habits of adults (e.g, Jessor and Jessor, 1978), but has been adapted for adolescents. Four levels of alcohol use are defined as:

- 1. Never used** *Never used in lifetime.*
- 2. Prior use** *Used in lifetime but not in the last 30 days.*
- 3. Recent use** *Used at least once in the last 30 days.*
- 4. Frequent use** *Used ten or more times in the last 30 days or binge drinking three or more times in the last two weeks.*

These levels of use are determined from the responses to three items that were included in all four survey forms:

- ◆ Lifetime use of alcohol (I037).
- ◆ Use of alcohol in last 30 days (I049).
- ◆ Times binge drinking in last two weeks (I058).

This alcohol use scale is not equivalent to the scale used in Washington State surveys prior to 1995, therefore, the scale results should not be compared to those of past years. The wording of the items has changed and slightly different criteria were used to define the levels.

Drug Use Scale

The drug use scale is based on the frequency of use and the severity of the drug used. Addictive drugs such as cocaine are generally thought to pose a greater health risk. Four levels of drug use are defined as:

1. **Never used** *Reported never having used any of the illicit drugs in lifetime.*
2. **Prior use** *Used in lifetime but not in last 30 days.*
3. **Recent use** *Used at least one drug in last 30 days.*
4. **Frequent use** *Used any illicit drug ten or more times in the last 30 days, or used cocaine three or more times in the last 30 days.*

These levels are determined by lifetime and 30-day use of seven substances:

- ♦ Marijuana (I038, I050).
- ♦ Cocaine (I039, I051).
- ♦ Inhalants (I040, I052).
- ♦ Hallucinogens (I041, I053).
- ♦ Heroin (I044, I055).
- ♦ Amphetamines or methamphetamines (I045, I046, I056, I057).
- ♦ Steroids (I043).

Tobacco and over-the-counter drugs were not considered in constructing the scale. Alcohol use was treated separately in the alcohol use scale.

This drug use scale differs somewhat from the 1995 survey in that specific questions were asked about heroin, amphetamines, methamphetamines, and steroid use in place of a general question about use of other drugs. These changes should have a relatively minor impact on the scale results because these drugs are usually used in combination with other drugs, especially marijuana, but caution is urged in making comparisons with 1995 results.

This scale differs substantially, however, from the drug use scale used in Washington State surveys prior to 1995; therefore, the scale results should not be compared to those earlier surveys. The wording of the items has changed, more substances are included under other drugs, and different criteria were used to define the levels of the composite scales.

Violent Behavior Scale

In light of recent concerns over youth violence in Washington and in the nation as a whole, this survey includes questions about the frequency of fighting and weapon carrying. The violent behavior scale focuses on delinquent behaviors that inflict harm or have direct potential for inflicting harm on another person.

Three levels of violent behavior are defined as:

- 1. None** *No violent behaviors reported in the last 12 months.*
- 2. Infrequent** *Engaged in one or two violent behaviors reported in the last 12 months.*
- 3. Frequent** *Engaged in three or more violent behaviors or in at least one behavior ten or more times in the last 12 months.*

These levels are determined from three items:

- ◆ Times carried weapon in the past 30 days (I091).
- ◆ Times carried handgun in the past year (I088b).
- ◆ Times attacked someone in the past year (I088f).

Delinquent Behavior Scale

Whereas violent behavior is highly visible and has increasingly focused state and national attention, other delinquent behaviors also pose risks for adolescents and can disrupt the educational climate of school.

Three levels of the delinquent behavior scale are defined as:

- 1. None** *No delinquent behaviors reported in the last 12 months.*
- 2. Infrequent** *Engaged in one or two delinquent behaviors reported in the last 12 months.*
- 3. Frequent** *Engaged in three or more delinquent behaviors or in at least one behavior ten or more times in the last 12 months.*

The levels are determined from the responses to four items:

- ◆ Member of gang or posse (I089).
- ◆ Times suspended from school in the past 12 months (I088a).
- ◆ Times sold drugs in the past 12 months (I088c).
- ◆ Times arrested in the past 12 months (I088e).

Weapon Carrying in School Settings Scale

Because weapon carrying has become a widely used indicator of violent behavior, a decision was made to develop scales focusing on this more narrowly defined construct. Furthermore, it seemed appropriate to distinguish between weapon carrying at school in contrast to nonschool settings due to the policy implications for public schools.

The levels of weapon carrying in school settings are defined as:

1. **Never** *Never carried a weapon to school.*
2. **Lifetime** *Carried a weapon to school at least once but not in the last 12 months.*
3. **Past year** *Carried a weapon to school at least once in the past 12 months but not in the last month.*
4. **Past month** *Carried a weapon to school at least once in the last 30 days.*

Three items not used in the violent behavior scale are used to define the recency of weapon carrying in school settings:

- ◆ Last time carried a gun to school (I092).
- ◆ Last time carried a knife or razor to school (I093).
- ◆ Last time carried a club, stick, pipe, or other weapon to school (I094).

Reliability of Health Behavior Scales

Using the empirical data from this survey effort, the internal consistency measure of reliability (coefficient alpha) of these five composite scales of health-related behaviors were calculated. The results are shown in Exhibit 6-1.

Exhibit 6-1
Characteristics of Health Behavior Scales

Scale	Name	N	Items	Alpha
Alcohol use	alco	14,041	3	0.75
Drug use	drug	13,591	15	0.84
Violent behavior	delinq1	13,797	3	0.69
Delinquent behavior	delinq2	13,610	4	0.60
Weapon carrying—school settings	weapsch	13,789	3	0.70

The reliabilities indicated are exceptionally high, particularly for scales composed of so few items. They give us strong confidence in the consistency of the constructs measured by these scales and in their interpretive use in the reports to come.

Relationships Among the Health Behavior Scales

Although each scale measures a different construct, abundant research evidence documents the relationships among these constructs (e.g., Bensley and Van Eenwyle, 1995; Einspruch, 1993; Hawkins et al., 1992). Exhibit 6-2 contains the intercorrelations among the five behavioral scales. Consistent with expectations, there are moderate correlations among the scales. All of these intercorrelations are statistically significant ($p < .0001$).

Interestingly, the correlations between drug use and delinquent behavior are somewhat larger than those with the violent behavior scale. More work will be needed with an expanded set of violent behaviors to explore these relationships.

Exhibit 6-2
Intercorrelations Among Health Behavior Scales

	Alcohol Use	Drug Use	Violent Behavior	Delinquent Behavior
Drug use	.63			
Violent behavior	.33	.36		
Delinquent behavior	.39	.53	.46	
Weapon carrying—school settings	.26	.30	.61	.38

Scales Measuring Risk and Protective Factors

Empirical research over the past two decades has clearly shown that adolescent health risk behaviors such as violence; alcohol, tobacco, and other drug use; and delinquency are associated with characteristics of individuals, families, schools, and communities that have come to be known as risk factors (e.g., Hawkins et al., 1992). Substantial evidence indicates that young people who experience many of these risk factors are more likely to develop serious problems with any of these health risk behaviors. In addition to these risk factors, research has also identified a number of protective factors in the lives of young people that reduce the likelihood of problem behaviors even in the face of high risk (e.g., Benard, 1991; Werner and Smith, 1992). These positive influences that relate to health development in young lives can be translated into effective prevention efforts for all youth.

The WSSAHB included substantial coverage of risk and protective factors using instrumentation developed by the Social Development Research Group at the University of Washington (Pollard, Hawkins, Catalano, and Goff, 1994). In all, 28 risk or protective factors were assessed and organized into the three domains of community, school, and peer/individual. Scales from the family domain were not included in the 1998 instrument. Brief descriptions of each of these scales and their psychometric characteristics follow.

Community Domain

In this framework, the community in which a student lives is an important influence on behavior. In the community domain, six risk and two protective factors are assessed:

- ◆ **Low neighborhood attachment** (I010–I012)—Attachment refers to the extent to which students feel a part of the neighborhood in which they live and whether what they do there makes a difference in their lives.
- ◆ **Community disorganization** (I013–I014)—Another community factor is the extent to which people in the community take part in important decisions or processes that affect their lives.
- ◆ **Personal transition and mobility** (I015–I018)—This scale assesses the extent to which survey respondents have a history of mobility.
- ◆ **Community transition and mobility** (I019)—This scale focuses on the degree of mobility observed in the neighborhood. Communities that experience high rates of mobility in their populations frequently experience higher rates of problem behaviors.
- ◆ **Laws and norms favorable to drug use** (I020–I024)—The attitudes and policies a community holds in relation to health and problem behaviors are communicated in a variety of ways—such as laws, social practices, and expectations—and these laws and norms have an important influence on health and problem behaviors.
- ◆ **Perceived availability of drugs and firearms** (I025–I029)—The perception of availability or access to alcohol, tobacco, and other drugs, or firearms can increase the likelihood of engaging in these behaviors with serious consequences.
- ◆ **Opportunities for prosocial involvement** (I030–I031)—This scale measures the perception of the availability of positive activities such as sports, scouting, or clubs for youth in the community.
- ◆ **Rewards for prosocial involvement** (I032, I033, I034)—When young people are rewarded for positive participation in activities that are important in their development, it is less likely that they will engage in high-risk health behaviors.

School Domain

Along with the community and family, schools are an important influence in the lives of adolescents. In the school domain, the WSSAHB assessed two risk and two protective factors:

no—
20, 22, 23, 24
(not 21)
#21 is
part of
family history
& only
behavior

- ◆ **Academic failure (I072–I073)**—Children fail in school for many reasons, but research indicates that the very experience of failure—not necessarily linked to a student’s ability—places him or her at higher risk.
- ◆ **Little commitment to school (I074–I078)**—When young people cease to see the role of the school as a viable one, they are at higher risk of engaging in the health risk behaviors under study. This scale includes all new items compared to the 1995 survey.
- ◆ **Opportunities for prosocial involvement (I079–I083)**—When young people are given more opportunities to participate meaningfully in important activities at school, they are less likely to engage in problem behaviors. This scale includes three new items compared to the 1995 survey.
- ◆ **Rewards for prosocial involvement (I084–I087)**—As in the community and family domains, when young people are recognized and rewarded for their contributions, they are less likely to get involved in health risk behaviors. This scale includes one new item in 1998.

Peer/Individual Domain

Clearly the attitudes and skills that an individual brings to a situation are key factors that shape behavior. For adolescents, the behaviors and attitudes of peers are also important. In the peer/individual domain, the WSSAHB assessed 11 risk factors and three protective factors:

- ✓ ◆ **Rebelliousness (I095–I097)**—Young people who feel they are not part of society or are not bound by rules are at higher risk of engaging in problem behaviors.
- ✓ ◆ **Early initiation of antisocial behavior (I098)**—Whether it is alcohol, tobacco, or other drug use or violent behavior, research clearly shows that the earlier an individual begins participating in these behaviors, the more likely he or she is to develop problems with antisocial behavior in adolescence.
- ◆ **Impulsiveness (I099–I102)**—Young people who are prone to acting impulsively without considering the consequences of their actions are at higher risk.
- ✓ ◆ **Antisocial behavior (I088)**—Young people who engage in generally antisocial behavior are at higher risk for engaging in health risk behaviors as well.

- ◆ **Attitudes favorable toward antisocial behavior (I103)**—When young people have accepting or condoning attitudes toward antisocial behavior, it is more likely they will engage in health risk behaviors.
- ✓ ◆ **Attitudes favorable toward drug use (I104)**—When young people have positive or accepting attitudes toward drug use in particular, they are more likely to engage in a variety of health risk behaviors.
- ◆ **Perceived risk from drug use (I061–I063, I065)**—*of harm* Young people who do not perceive risks associated with the use of alcohol, tobacco, and other drugs are more likely to engage in such behaviors.
- ◆ **Interaction with antisocial peers (I105)**—Young people who associate with peers who engage in health risk behaviors are far more likely to engage in those behaviors themselves.
- ✓ ◆ **Friends' use of drugs (I106)**—When their friends use drugs, it is far more likely that young people will engage in health risk behaviors.
- ✓ ◆ **Sensation seeking (I107)**—Young people who seek out opportunities for dangerous risk behavior in general are also at higher risk for participating in health risk behaviors.
- ◆ **Peer rewards for antisocial involvement (I108)**—As in the other domains, when young people are rewarded in their peer group for positive involvement, it is less likely they will participate in health risk behaviors.
- ◆ **Belief in the moral order (I110–I113)**—Young people who generally prescribe to a belief in what is right or wrong are at lower risk of engaging in problem behaviors.
- ◆ **Social skills (I114–I117)**—Young people who are socially competent and engage in positive interpersonal relations with their peers are less likely to participate in negative health risk behaviors.
- ◆ **Religiosity (I109)**—Young people who attend participate in religious activities are less likely to participate in negative health risk behaviors.

In addition to these risk and protective factors, the Social Development Research Group contributed another outcome scale to the survey:

- ◆ **Depression (I118–I121)**—The extent to which the respondent is experiencing symptoms of depression.

Scale Construction

The risk and protective scales were constructed using standard Likert scaling practices. Where possible, scale construction followed guidelines provided by Developmental Research and Programs staff. The response options of some items were recoded or reordered to provide a continuum from low to high appropriate for the scale. For risk scale items, a high value reflects an undesirable attitude or condition. For protective scale items, a high value reflects a desirable attitude or condition. The length and internal consistency reliabilities (coefficient alpha) for all risk and protective factor scales in all four domains are shown in Exhibit 6-3.

In general, the scales were quite reliable, often reaching .80–.90, considering the small number of items contained in most of them. One exception was impulsiveness (in the peer/individual domain). In addition, internal consistency reliabilities could not be calculated for those scales composed of only one item, namely community transition and mobility (community domain) and religiosity (peer/individual domain). Missing data were handled by computing the average response to those items on the scale to which the student responded. A scale score was computed only if a student responded to a minimum of two-thirds of the items on that scale. For most scales, 80–90 percent of the students answered all items.

Exhibit 6-3
Characteristics of Risk and Protective Factor Scales

Community Factors

Scale	Name	Type	No. of Items	Alpha	Status
Low neighborhood attachment	risk11	Risk	3	.82	same
Community disorganization	risk12	Risk	5	.79	same
Personal transition and mobility	risk13	Risk	4	.69	revised
Community transition and mobility	risk17	Risk	1	na	new
Laws and norms favorable to drug use	risk14	Risk	6	.81	same
Perceived availability of drugs and firearms	risk15	Risk	5	.86	new
Opportunities for prosocial involvement	risk18	Protective	6	.68	new
Rewards for prosocial involvement	risk16	Protective	3	.90	same

School Factors

Scale	Name	Type	# of Items	Alpha	Status
Academic failure	risk31	Risk	2	.71	same
Little commitment to school	risk32	Risk	9	.77	revised
Opportunities for prosocial involvement	risk33	Protective	5	.70	revised
Rewards for prosocial involvement	risk34	Protective	4	.74	revised

Exhibit 6-3, continued

Peer/Individual Factors

Scale	Name	Type	No. of Items	Alpha	Status
✓ Rebelliousness	risk41	Risk	3	.79	same
✓ Early initiation of problem behavior	risk42	Risk	8	.81	revised
Impulsiveness	risk52	Risk	4	.47	new
✓ Antisocial behavior	risk43	Risk	8	.81	same
Attitudes favorable toward antisocial behavior	risk44	Risk	4	.80	same
✓ Attitudes favorable toward drug use	risk45	Risk	4	.88	same
Perceived risk of drug use	risk53	Risk	4	.73	new
Interaction with antisocial peers	risk46	Risk	6	.84	same
✓ Friends' use of drugs	risk47	Risk	4	.87	same
✓ Sensation seeking	risk48	Risk	3	.77	same
Peer rewards for antisocial involvement	risk49	Protective	4	.87	same
Belief in the moral order	risk50	Protective	4	.62	same
Social skills	risk51	Protective	4	.65	same
Religiosity	risk54	Protective	1	na	new
Depression	risk55	Outcome	4	.84	new

Relationships Among the Scales

Exhibit 6-4 details the correlations among the 27 risk and protective factor scales. The results grouped within triangles in this correlation matrix are correlations among factors within a single domain. The results grouped in rectangles in the matrix are correlations among factors in different domains. Similar to a multitrait, multimethod approach to validation, one would expect the intradomain correlations to be higher than the interdomain correlations. In reading this table, one should note that only those correlations with an absolute value of .2 or greater are presented. Correlations with an absolute value between .10 and .19 are simply indicated by their sign.

Although there are many details of interest in this correlation matrix, the following highlights are presented as key findings:

- ◆ The correlations generally exceeded .2 in absolute value and range as high as .8 in magnitude.
- ◆ Within domain, the correlations were strongest for peer/individual factors (both in terms of their individual strengths and in terms of the number of strong correlations). Community factors showed the weakest correlations.
- ◆ Across domains, the strongest correlations were between school factors and peer/individual factors. The weakest correlations were between community factors and factors in the other two domains.
- ◆ Certain factors correlated weakly with other factors, even in the same domain. These included personal transition and mobility, community transition and mobility, and religiosity. Two of these were assessed by single-item scales, which suggests low reliability.
- ◆ The correlations among some of the peer/individual factors were approaching a near perfect relationship given the reliability of the two scales. For example, a correlation of .64 between two scales with reliabilities of .80 is equivalent to a correlation of 1.0 after correcting for attenuation.

Exhibit 6-4
Correlations Among the Risk and Protective Factor Scales

	11	12	13	17	14	15	18	16	31	32	33	34	41	42	52	43	44	45	53	46	47	48	49	54	51	50	
12	.36																										
13	.20	+																									
17	.20	.34																									
14	.29	.36		+																							
15	.24	.26			.60																						
18	-.23	-.20	-		-																						
16	-.38	-	-	-	-.35	-.29	.28																				
31	+	+	+		+	+	-.20	-																			
32	.27	.21			.42	.45	-	-.34	.36																		
33	-.22	-			-.29	-.24	.24	.33	-.21	-.45																	
34	-.23	-			-.32	-.29	.20	.35	-.20	-.47	.61																
41	.22	.24	+	+	.34	.37	-	-.22	.24	.46	-.26	-.28															
42	.23	.29	.20	+	.46	.53	-	-.23	.35	.44	-.26	-.26	.48														
52	+	.20	+	+	.21	.21	-	-	.24	.34	-.21	-.23	.47	.32													
43	+	.26	+		.33	.35	-	-	.24	.35	-.22	-.22	.36	.58	.25												
44	.21	.25	+	+	.40	.40	-.20	-.25	.25	.44	-.28	-.29	.53	.57	.39	.48											
45	.22	.20	+		.54	.59	-	-.28	.26	.50	-.29	-.30	.48	.63	.31	.46	.64										
53	+	+			.35	.33	-	-	.24	.34	-.23	-.21	.29	.41	.22	.31	.39	.53									
46	+	.29	+	+	.35	.38	-	-	.28	.35	-.22	-.21	.38	.59	.27	.63	.48	.48	.30								
47	.22	.22	+		.50	.61	-	-.25	.28	.45	-.24	-.25	.40	.65	.26	.44	.47	.71	.42	.59							
48	+	+			.39	.46	-	-	+	.42	-.21	-.24	.51	.53	.35	.41	.50	.54	.32	.42	.50						
49	+	+			.26	.30	-	-		.25	-	-	.28	.32	.22	.26	.32	.33	+	.29	.33	.31					
54					-	-	+	+	-	-	+		-	-	-	-	-.22	-.23	-	-	-						
51	-.22	-.23	-		-.42	-.46	.20	.26	-.32	-.47	.29	.29	-.50	-.60	-.38	-.43	-.58	-.62	-.44	-.46	-.56	-.50	-.28	.23			
50	-.23	-.23		-	-.42	-.44	+	.29	-.25	-.51	.32	.34	-.56	-.52	-.42	-.37	-.64	-.59	-.39	-.41	-.49	-.51	-.31	+	.62		
55	.22	.21	+	+	+	.16	-	-	.24	.28	-.22	-.26	.27	.24	.30	+	.23	.20	+	+	.20	.21	+		-	-.24	
	11	12	13	17	14	15	18	16	31	32	33	34	41	42	52	43	44	45	53	46	47	48	49	54	51	50	
	Community								School				Peer/Individual														

Note: - = correlations $-.01$ through $-.19$; + = correlations $.01$ through $.19$

Relationship to Other Scales

Because the purpose of assessing risk and protective factors is to predict prevalence of other health risk behaviors, the relationships between the risk and protective factor scales with the health behavior scales is of particular importance. Exhibit 6-5 details the correlations between the risk and protective factors with the alcohol use, drug use, violent behavior, and delinquent behavior scales. Within each risk/protective factor domain, correlations are shown for individual factors and the behavior scales. As is the case for those correlations shown in the Exhibit 6-4, there is a great deal that is of interest in this set of correlations. Highlights from the correlations among the risk and protective factors and the behavior scales include these:

- ◆ The strongest correlations were clearly between the peer/individual factors and the behavior scales. In particular, strong correlations were seen between alcohol use, drug use, and delinquent behavior and the risk/protective factors of early initiation of problem behavior, attitudes favorable toward antisocial behavior, and friends' use of drugs.
- ◆ Community factors also showed some modest correlations with behaviors—in particular, laws and norms favorable to drug use and perceived availability of drugs and firearms.
- ◆ School factors generally showed fairly weak correlations with behaviors.

Exhibit 6-5
Correlation of Risk and Protective Factors With Other Scales

<i>Community Factors</i>				
Scale	Alcohol Use	Drug Use	Violent Behavior	Delinquent Behavior
Risk				
11 Low neighborhood attachment	+	+	+	+
12 Community disorganization	+	0.22	0.27	0.24
13 Personal transition and mobility	+	+	+	+
17 Community transition and mobility			+	
14 Laws and norms favorable to drug use	0.46	0.46	0.29	0.32
15 Perceived availability of drugs and firearms	0.56	0.53	0.32	0.34
Protective				
18 Opportunities for prosocial involvement	-	-	-	-
16 Rewards for prosocial involvement	-0.21	-0.23	-	-
School Factors				
Scale	Alcohol Use	Drug Use	Violent Behavior	Delinquent Behavior
Risk				
31 Academic failure	0.22	0.28	0.23	0.28
32 Little commitment to school	0.43	0.42	0.30	0.34
Protective				
33 Opportunities for prosocial involvement	-0.21	-0.22	-0.20	-
34 Rewards for prosocial involvement	-0.24	-0.21	-0.20	-

Exhibit 6-5, continued

<i>Peer/Individual Factors</i>				
Scale	Alcohol Use	Drug Use	Violent Behavior	Delinquent Behavior
Risk				
41 Rebelliousness	0.38	0.36	0.36	0.33
42 Early initiation of problem behavior	0.65	0.67	0.56	0.60
43 Antisocial behavior	0.42	0.55	0.59	0.74
44 Attitudes favorable toward antisocial behavior	0.43	0.44	0.47	0.41
45 Attitudes favorable toward drug use	0.65	0.67	0.34	0.44
53 Perceived risk of drug use	0.39	0.43	0.24	0.31
46 Interaction with antisocial peers	0.41	0.52	0.48	0.58
47 Friends' use of drugs	0.65	0.70	0.33	0.48
48 Sensation seeking	0.48	0.47	0.38	0.37
49 Rewards for antisocial behavior	0.27	0.27	0.23	0.22
52 Impulsiveness	0.26	0.24	0.26	0.24
Protective				
50 Belief in the moral order	-0.46	-0.42	-0.38	-0.36
51 Social skills	-0.56	-0.54	-0.41	-0.45
52 Religiosity	-	-	-	-

Note: (- = correlations of -.10 through -.19; + = correlations of .10 through .19)

Conclusions

This report provides a detailed discussion of the technical merits of the 1998 version of the Washington State Survey of Adolescent Health Behaviors. The findings of this report lend support for the following conclusions:

- ◆ Survey design was guided by a collaboration of key state agencies, local representatives, and researchers in addition to the study team at RMC Research. This collaborative process promoted a broad consensus about the goals and content of the survey. The multiple perspectives represented in this process ensured that the study would address a wide range of information needs while balancing practical and logistical considerations.
- ◆ A strong sampling design provided the framework for school selection. The overwhelmingly positive response from selected schools resulted in survey data that were representative of all students across the state and sufficiently precise to support decision making at the state level.
- ◆ Great care was taken in communication with local administrators and survey coordinators to build and maintain strong relationships with the participating schools. The cooperation and support of these individuals was crucial to the success of the survey.
- ◆ The quality of the data submitted by participating schools suggests that the detailed data collection protocol helped promote careful survey administration statewide.
- ◆ Virtually all large-scale studies of adolescent health behaviors rely on self-report data. Other studies have shown self-report measures generally yield valid results as long as certain precautions are taken to ensure confidentiality. In addition to such precautions, the study team developed a number of exclusion criteria which screened out the responses of a small percentage of respondents who appeared to greatly exaggerate their behavior, thus increasing the validity of the results.
- ◆ To promote easier interpretation of the survey results, several scales were constructed balancing new insights from other studies with the desire to keep results comparable with previous surveys in Washington. Analyses confirmed that nearly all of these scales were reliable and had relatively high correlations with substance use and delinquent behavior.

In conclusion, the 1998 administration of the WSSAHB yielded reliable, valid data that should support a wide range of information needs at the state, regional, and local levels.

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Appendix A
1998 WSSAHB
Survey Booklet

W

Washington State Survey of Adolescent Health Behaviors

Thank you for participating in this study about issues facing students in communities in Washington. The questions in this survey ask your opinions about yourself, your friends, your school, and your neighborhood. The information from this survey will be used by school, community, county, and state officials in planning future programs to help our youth.

Your answers to these questions are *anonymous*. (This means that your answers are secret.) **Do not write your name anywhere on this booklet.** No one will see your answers or know which booklet you completed.

This study is completely voluntary. You may skip any question you do not wish to answer.

Other students have said this survey is interesting and they enjoyed filling it out. We hope you will too. Please take a minute to read the instructions below before starting the survey.

I nstructions

1. This is not a test, so there are no right or wrong answers.
2. The questions should be answered by marking one of the answer spaces. If you don't find an answer that fits exactly, use one that comes closest. If any question does not apply to you, or you are not sure of what it means, just leave it blank.

3. Your answers will be read by a computer. Please follow these instructions carefully.

- Use only a blue or black pen or pencil.
- Make heavy marks inside the bubbles.
- Erase cleanly any answer you wish to change.
- Make no other markings or comments on the answer pages.

This kind of mark will work:
Correct Mark

○ ○ ● ○ ○

These kinds of marks will NOT work:
Incorrect Marks

⊗ ⊘ ⊖ ⊙ ⊕

4. Some of the questions have the following format:

Please mark in the bubble which of the four words best describes how you feel about that sentence.

EXAMPLE: Pepperoni pizza is one of my favorite foods.

NO! no yes YES!
○ ○ ● ○

Mark (the Big) YES! if you think the statement is definitely true for you.

Mark (the little) yes if you think the statement is mostly true for you.

Mark (the little) no if you think the statement is mostly not true for you.

Mark (the Big) NO! if you think the statement is definitely not true for you.

In the example above, the student marked yes because he or she thinks the statement is mostly true. (Please mark one answer).

PLEASE DO NOT WRITE IN THIS AREA



02755

These questions ask for some general information about the people completing the survey. Please mark the response that best describes you.

1. How old are you?

- 10 or younger 14 17
 11 15 18
 12 16 19 or older
 13

2. What grade are you in?

- 5th 8th 11th
 6th 9th 12th
 7th 10th

3. Are you:

- Female Male

4. What is your Zip Code? (Write the four numbers that follow 9 in your Zip Code, and fill in the bubbles below the numbers).

9				
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
●	9	9	9	9

5. How many adults 18 years old or older live in your home?

- none
 1
 2
 3
 4 or more

6. Not counting you, how many other children under age 18 live in your home?

- none
 1
 2
 3
 4 or more

7. What do you consider yourself to be? (Choose one best answer.)

- Black or African American, not of Hispanic origin
 Asian or Pacific Islander
 American Indian or Alaskan Native
 Hispanic
 White, not of Hispanic Origin
 Other

8. Which of the following adults are living with you now? (Choose all that apply.)

- Mother Father Other adults
 Stepmother Stepfather None of the above
 Foster Mother Foster Father
 Grandmother Grandfather
 Aunt Uncle

9. During the school year, how many hours a week do you work at a part-time job?

- I don't work
 1 to 4 hours
 5 to 9 hours
 10 to 20 hours
 over 20 hours

PLEASE DO NOT WRITE IN THIS AREA

These statements are about the neighborhood and community where you live.

	YES!
	yes
	no
	NO!

10. I like my neighborhood.

11. If I had to move, I would miss the neighborhood I now live in.

12. I'd like to get out of my neighborhood.

13. How much do each of the following statements describe your neighborhood:

a. Crime and/or drug selling.

b. Fights.

c. Lots of empty or abandoned buildings.

d. Lots of graffiti.

14. I feel safe in my neighborhood.
 NO! no yes YES!

15. Have you changed homes in the past year (the last 12 months)?
 No Yes

16. How many times have you changed homes since kindergarten?
 Never
 1 or 2 times
 3 or 4 times
 5 or 6 times
 7 or more times

Have you changed schools in the past year?
 No Yes

18. How many times have you changed schools since kindergarten?

- Never
- 1 or 2 times
- 3 or 4 times
- 5 or 6 times
- 7 or more times

19. People move in and out of my neighborhood a lot.

- NO!
- no
- yes
- YES!

20. How wrong would most adults in your neighborhood think it was for kids your age:

	Not wrong at all
	A little bit wrong
	Wrong
	Very Wrong

a. To use marijuana.

b. To drink alcohol.

c. To smoke cigarettes.

21. About how many adults have you known personally who in the past year have:

	5 or more adults
	3 or 4 adults
	2 adults
	1 adult
	None

a. Used marijuana, crack, cocaine, or other drugs?

b. Sold or dealt drugs?

c. Done other things that could get them in trouble with the police like stealing, selling stolen goods, mugging or assaulting others, etc.?

d. Gotten drunk or high?

	YES!
	yes
	no
	NO!

22. If a kid drank some beer, wine or hard liquor (for example, vodka, whiskey, or gin) in your neighborhood would he or she be caught by the police?
23. If a kid smoked marijuana in your neighborhood would he or she be caught by the police?
24. If a kid carried a handgun in your neighborhood would he or she be caught by the police?

	Very easy
	Sort of easy
	Sort of hard
	Very hard

25. If you wanted to get some beer, wine or hard liquor (for example, vodka, whiskey, or gin), how easy would it be for you to get some?
26. If you wanted to get some cigarettes, how easy would it be for you to get some?
27. If you wanted to get some marijuana, how easy would it be for you to get some?
28. If you wanted to get a drug like cocaine, LSD, or amphetamines, how easy would it be for you to get some?
29. If you wanted to get a handgun, how easy would it be for you to get one?

30. There are lots of adults in my neighborhood I could talk to about something important.

NO! no yes YES!

31. Which of the following activities for people your age are available in your community?

	No
	Yes

- a. Sports teams.
- b. Scouting (such as Cub Scouts, Brownies, Boy Scouts, Girl Scouts, Camp Fire Girls, etc.)
- c. Boys and girls clubs.
- d. 4-H clubs.
- e. Service clubs (such as Circle-K, Job's Daughters, Candy Strippers, church youth groups, etc.)

	YES!
	yes
	no
	NO!

32. My neighbors notice when I am doing a good job and let me know.
33. There are people in my neighborhood who encourage me to do my best.
34. There are people in my neighborhood who are proud of me when I do something well.

The next section asks about your experience with tobacco, alcohol, and other drugs. Remember, your answers are anonymous.

Have you ever, even once in your lifetime, used any of the following drugs?

	No	Yes
35. Smoking tobacco (cigarettes, cigars, pipes).	<input type="radio"/>	<input type="radio"/>
36. Smokeless tobacco (chew, plug, snuff, spit).	<input type="radio"/>	<input type="radio"/>
37. Alcohol (beer, wine, wine coolers, liquor).	<input type="radio"/>	<input type="radio"/>
38. Marijuana or hashish (grass, hash, pot).	<input type="radio"/>	<input type="radio"/>
39. Cocaine or crack (coke, rock, snow).	<input type="radio"/>	<input type="radio"/>
40. Inhaled substances to get high (snappers, poppers, rush, other things you sniff to get high).	<input type="radio"/>	<input type="radio"/>
41. Hallucinogens (angel dust, LSD, acid, microdot, PCP, magic mushrooms).	<input type="radio"/>	<input type="radio"/>
42. Derbisol (wagon wheels, hope).	<input type="radio"/>	<input type="radio"/>
43. Steroids (muscle builders).	<input type="radio"/>	<input type="radio"/>
44. Heroin.	<input type="radio"/>	<input type="radio"/>
45. Amphetamines of any kind (speed, uppers, meth, bennies, crank) (do NOT include non-prescription or over-the-counter drugs, or drugs prescribed to you by a doctor).	<input type="radio"/>	<input type="radio"/>
46. Methamphetamine specifically (meth, crystal meth, ice, crank).	<input type="radio"/>	<input type="radio"/>

47. During the past 30 days, about how many cigarettes have you smoked?

- I did not smoke
- Up to 5 per day
- About 1 pack per day
- More than 1 pack per day
- About 2 packs per day

During the past 30 days, how many times have you used each of the following drugs?

	None	1-2 times	3-5 times	6-9 times	10 or more times
48. Smokeless tobacco (chew, plug, snuff).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
49. Alcohol (beer, wine, wine coolers, hard liquor).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
50. Marijuana or hashish (grass, hash, pot).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
51. Cocaine or crack (coke, rock, snow).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
52. Inhalants (things you sniff to get high).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
53. Hallucinogens (angel dust, LSD, acid, microdot, PCP, magic mushrooms).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
54. Derbisol (wagon wheels, hope).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
55. Heroin.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
56. Amphetamines of any kind (speed, uppers, meth, bennies, crank) (do NOT include non-prescription or over-the-counter drugs, or drugs prescribed to you by a doctor).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
57. Methamphetamine specifically (meth, crystal meth, ice, crank).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

58. Think back over the last two weeks. How many times have you had five or more drinks in a row? (A drink is a glass of wine, a bottle of beer, a shot glass of liquor, or a mixed drink.)

- None
- Once
- Twice
- 3 to 5 times
- 6 or more times

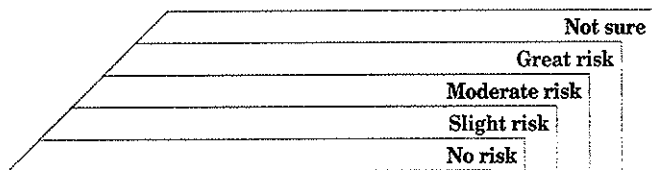
59. If you drink alcohol, how do you usually get the beer, wine, or liquor you drink?

- I don't drink alcohol
- From home and my parents know
- From home, but parents don't know
- From friends
- Ask adults to purchase or buy it myself

60. If you smoke, how do you usually get the cigarettes?

- I don't drink smoke
- From adults
- From friends
- From vending machines
- From a store

How much do you think people risk harming themselves if they:



61. Smoke one or more packs of cigarettes per day?

62. Try marijuana once or twice?

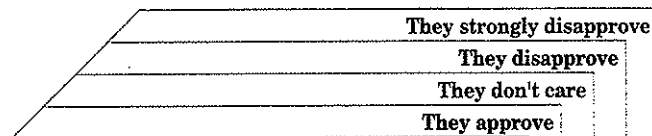
63. Smoke marijuana occasionally?

64. Try cocaine once or twice?

65. Take one or two drinks of an alcoholic beverage (beer, wine, liquor) nearly everyday?

66. Have five or more drinks once or twice each weekend?

How do you think your close friends feel (or would feel) about you doing each of the following things?:



67. Having five or more drinks once or twice each weekend?

68. Smoking marijuana occasionally?

69. Trying cocaine once or twice?

This section asks about your experiences at school.

70. Does your school provide a counselor, intervention specialist, or other school staff member for students to discuss problems with alcohol, tobacco, or other drugs?

- No
- Yes
- I'm not sure

71. If you had a question about alcohol, tobacco, or other drugs, which one of the following would you most likely go to for information?

- I would never need information about this
- A friend
- Someone in my family
- A teacher, school counselor, school nurse, coach, or school intervention specialist
- A minister, rabbi, or priest
- A community center or community counselor
- A doctor, nurse, or other health care provider
- A Peer Assistant or Peer Counselor
- Books, magazines, or a telephone hotline
- No one, I would keep it to myself
- I don't know where I would go

72. Putting them all together, what were your grades like last year?

- Mostly A's
- Mostly B's
- Mostly C's
- Mostly D's
- Mostly F's

73. Are your school grades better than the grades of most students in your class?

- NO!
- no
- yes
- YES!

74. How often do you feel that the school work you are assigned is meaningful and important?

- Almost always
- Often
- Sometimes
- Seldom
- Never

75. How interesting are most of your courses to you?

- Very interesting and stimulating
- Quite interesting
- Fairly interesting
- Slightly dull
- Very dull

76. How important do you think the things you are learning in school are going to be for your after life?

- Very important
- Quite important
- Fairly important
- Slightly important
- Not at all important

77. Now, thinking back over the past year in school, how often did you ...

	Almost always	Often	Sometimes	Seldom	Never
a. Enjoy being in school?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Hate being in school?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Try to do your best work in school?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

78. During the LAST FOUR WEEKS how many whole days have you missed school ...

	11 or more	6-10	4-5	3	2	1	None
a. Because of illness.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Because you skipped or cut.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. For other reasons.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	YES!	yes	no	NO!
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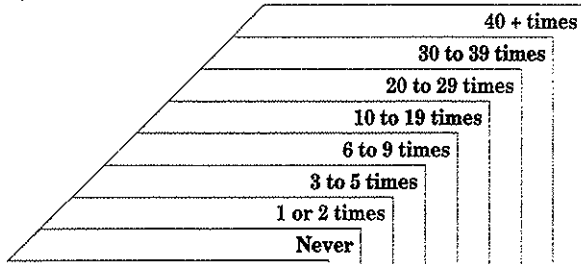
80. There are lots of chances for students in my school to talk with a teacher one-on-one.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
81. Teachers ask me to work on special classroom projects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
82. There are lots of chances for students in my school to get involved in sports, clubs, and other activities outside of class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
83. I have lots of chances to be part of class discussions or activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
84. My teacher(s) notices when I am doing a good job and lets me know about it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
85. The school lets my parents know when I have done something well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
86. I feel safe at my school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
87. My teachers praise me when I work hard in school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	YES!	yes	no	NO!
--	------	-----	----	-----

79. In my school, students have lots of chances to help decide things like class activities and rules.

These questions ask about your feelings and experiences in other parts of your life.

88. How many times in the past year (12 months) have you:



- a. Been suspended from school?
- b. Carried a handgun?
- c. Sold illegal drugs?
- d. Stolen or tried to steal a motor vehicle such as a car or motorcycle?
- e. Been arrested?
- f. Attacked someone with the idea of seriously hurting them?
- g. Been drunk or high at school?
- h. Taken a handgun to school?

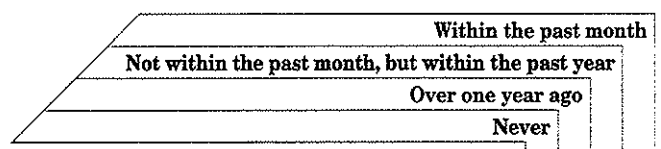
Now we ask some questions about gangs (sometimes referred to as an organization, click, clique, set, or posse):

89. Have you ever belonged to a gang?
 No Yes
90. If you have ever belonged to a gang, did that gang have a name?
 I have never belonged to a gang No Yes

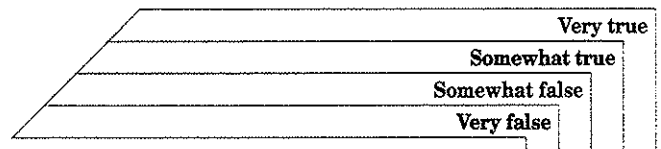
91. During the past 30 days, how many times have you carried a weapon, such as a gun, knife or club for self-protection or because you thought you might need it in a fight?

- None
- 1 time
- 2 or 3 times
- 4 or 5 times
- 6 or more times

When was the last time you carried each of the following weapons on school property for self protection or because you thought you might need it in a fight?

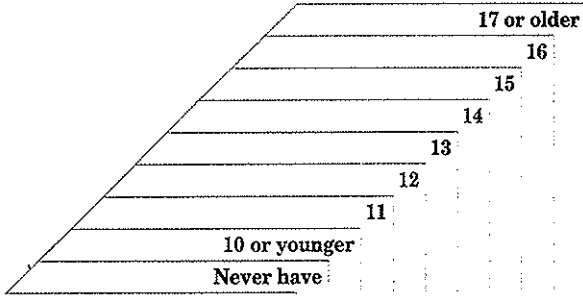


- 92. Gun.
- 93. Knife or razor.
- 94. Club, stick, pipe or other weapon.

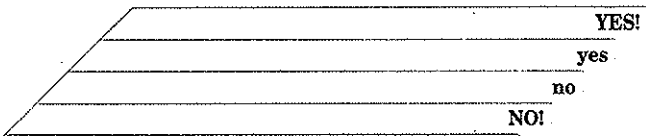


- 95. I do the opposite of what people tell me, just to get them mad.
- 96. I ignore rules that get in my way.
- 97. I like to see how much I can get away with.

98. How old were you when you first:



- a. Smoked marijuana?
- b. Smoked a cigarette, even just a puff?
- c. Had more than a sip or two of beer, wine or hard liquor (for example, vodka, whiskey, or gin)?
- d. Began drinking alcoholic beverages regularly, that is, at least once or twice a month?
- e. Got suspended from school?
- f. Got arrested?
- g. Carried a handgun?
- h. Attacked someone with the idea of seriously hurting them?
- i. Belonged to a gang?



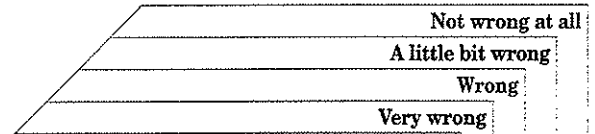
99. It is important to think before you act.

100. Do you have to have everything right away?

I often do things without thinking about what will happen.

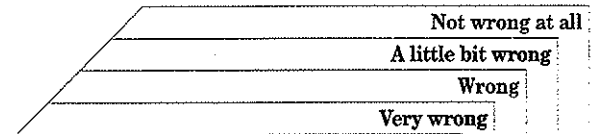
102. Do you often switch from activity to activity rather than sticking to one thing at a time?

103. How wrong do you think it is for someone your age to:



- a. Take a handgun to school?
- b. Steal anything worth less than \$5?
- c. Steal anything worth more than \$5?
- d. Pick a fight with someone?
- e. Attack someone with the idea of seriously hurting them?
- f. Stay away from school all day when their parents think they are at school?

104. How wrong do you think it is for someone your age to:



- a. Drink beer, wine or hard liquor (for example, vodka, whiskey or gin) regularly?
- b. Smoke cigarettes?
- c. Smoke marijuana?
- d. Use LSD, cocaine, amphetamines or another illegal drug?

105. Think of your four best friends (the friends you feel closest to). In the past year (12 months), how many of your best friends have:

	4
	3
	2
	1
None	

- a. Been suspended from school?
- b. Carried a handgun?
- c. Sold illegal drugs?
- d. Stolen or tried to steal a motor vehicle such as a car or motorcycle?
- e. Been arrested?
- f. Dropped out of school?
- g. Been members of a gang?

106. Think of your four best friends (the friends you feel closest to). In the past year (12 months), how many of your best friends have:

	4
	3
	2
	1
None	

- a. Smoked cigarettes?
- b. Tried beer, wine or hard liquor (for example, vodka, whiskey or gin) when their parents didn't know about it?
- c. Used marijuana?
- d. Used LSD, cocaine, amphetamines, or other illegal drugs?

107. How many times have you done the following things?

	Once a week or more
	2 or 3 times a month
	About once a month
	Less than once a month
	I've done it, but not in the past year
	Never

- a. Done what feels good no matter what.
- b. Done something dangerous because someone dared you to do it.
- c. Done crazy things even if they are a little dangerous.

108. What are the chances you would be seen as cool if you:

	Very good chance
	Pretty good chance
	Some chance
	Little chance
	No or very little chance

- a. Smoked cigarettes?
- b. Began drinking alcoholic beverages regularly, that is, at least once or twice a month?
- c. Smoked marijuana?
- d. Carried a handgun?

109. How often do you attend religious services or activities?

- Never
- Rarely
- 1-2 times a month
- About once a week or more

	NO!	no	yes	YES!
110. I think it is okay to take something without asking if you can get away with it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
111. I think sometimes it's okay to cheat at school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
112. It is all right to beat up people if they start the fight.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
113. It is important to be honest with your parents, even if they become upset or you get punished.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The next questions ask you what you would do in certain situations.

114. You're looking at CD's in a music store with friend. You look up and see her slip a CD under her coat. She smiles and says "Which one do you want? Go ahead, take it while nobody's around." There is nobody in sight, no employees and no other customers. What would you do now?

- Ignore her
- Grab a CD and leave the store
- Tell her to put the CD back
- Act like it's a joke, and ask her to put the CD back

115. It's 8:00 on a weeknight and you are about to go over to a friend's home when your mother asks you where you are going. You say "Oh, just going to hang out with some friends." She says, "No, you'll just get into trouble if you go out. Stay home tonight." What would you do now?

- Leave the house anyway
- Explain what you are going to do with your friends, tell her when you'd get home, and ask if you can go out
- Not say anything and start watching TV
- Get into an argument with her

116. You are visiting another part of town, and you don't know any of the people your age there. You are walking down the street, and some teenager you don't know is walking toward you. He is about your size, and as he is about to pass you, he deliberately bumps into you and you almost lose your balance. What would you say or do?

- Push the person back
- Say nothing and keep on walking
- Say "Watch where you're going" and keep on walking
- Swear at the person and walk away

117. You are at a party at someone's house, and one of your friends offers you a drink containing alcohol. What would you say or do?

- Drink it
- Tell your friend "No thanks, I don't drink" and suggest that you and your friend go and do something else
- Just say "No, thanks" and walk away
- Make up a good excuse, tell your friend you had something else to do, and leave

	NO!	no	yes	YES!
118. Sometimes I think that life is not worth it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
119. At times I think I am no good at all.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
120. All in all, I am inclined to think that I am a failure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
121. In the past year have you felt depressed or sad MOST days, even if you felt OK sometimes?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

122. How honest were you in filling out this survey?

- I was very honest
- I was honest pretty much of the time
- I was honest some of the time
- I was honest once in a while
- I was not honest at all



PLEASE DO NOT WRITE IN THIS AREA



02755

Appendix B
HRRB Approval
Letter



STATE OF WASHINGTON

DEPARTMENT OF SOCIAL AND HEALTH SERVICES

Human Research Review Board, P.O. Box 45205, Olympia, WA 98504-5205

January 22, 1998

Eric L. Einspruch, Ph.D.
RMC Research Corporation
522 Southwest Fifth Avenue, Suite 1407
Portland, Oregon 97204

RE: DSHS Project Application B-110397-S, "Survey of Public School Adolescent Health Behaviors"

Dear Dr. Einspruch:

Your response to the issues raised by the Board was satisfactory, and therefore we have approved your proposal. Ken Stark, Director, Division of Alcohol and Substance Abuse accepted the Board's approval recommendation and has extended final departmental administrative approval. Thus, you are free to proceed with your study as planned, using the amended study procedures negotiated with and approved by the Board.

Approval of this project is valid through January 22, 1999. A progress report will be required if your project continues past this date. Any proposed changes in study purposes, design or methods are subject to prior review and approval by the Review Board. You are required to submit a final report at the conclusion of the project. Your file will remain active until we have received this report.

Good luck with your project!

Sincerely,

Margaret Frederick, M.P.H.
Associate Executive Secretary
Human Research Review Board

Administrative Approval:

Ken Stark
Director
Division of Alcohol and Substance
Abuse

cc: DSHS/DOH Human Research
Review Board B



Appendix C
Recruitment Packet

Washington State Survey of Adolescent Health Behavior (1998)

Rationale and Description of Survey Content

The 1998 Washington State Survey of Adolescent Health Behavior contains questions about alcohol, tobacco, and other drug use; violent behaviors; and related risk and protective factors. It is a continuation of four previous statewide survey efforts (1988, 1990, 1992, and 1995). State agency staff from the Office of Superintendent of Public Instruction (OSPI), the Department of Social and Health Services' Division of Alcohol and Substance Abuse (DASA), and the Department of Community, Trade, and Economic Development (CTED) have collaborated on the content of the survey.

The content of the survey is broken down into five major sections, each containing items designed to obtain specific information about these behaviors. This report specifies the importance and rationale for including each of these health behaviors on the survey and presents a few sample items from the survey relating to each behavior.

Student Background Information

Some basic background information (e.g., age, grade level, ethnic group, zip code, etc.) is needed to ensure that the 25,000 students participating in the survey are generally representative of the statewide student population at these grades. In addition, it allows for examination of trends and differences in these behaviors among students of varying background characteristics. Finally, it allows for results to be produced at the local level for use in local prevention and intervention program planning. These analyses are conducted without specific identification of individual students, however, *so that anonymity is maintained throughout the survey effort*. In order to further protect student anonymity, reports will not be produced for schools with less than 10 students, and zip code will not be recorded for areas that contain less than 50 students.

Sample items of this type include:

What grade are you in?

How old are you?

Which race do you consider yourself to be?

What is your Zip Code?

Alcohol, Tobacco, and Other Drug Use

One of the target behaviors of interest in this survey is the extent to which students have used and are using alcohol, tobacco, and other drugs. Many of the same items that have been used in the 1988, 1990, 1992, and 1995 statewide surveys will again be employed here. Asking these questions again allows for both local and statewide assessments of the changes in these patterns of

use over time for Washington's students and provides important data-based direction for prevention efforts both locally and across the state.

Sample items of this type include:

Have you ever, even once in your lifetime, used any of the following drugs?

Substances included are: alcohol
tobacco
marijuana
cocaine
other drugs

During the past 30 days, how many times have you used each of the following drugs?

Think back over the last two weeks. How many times have you had five or more drinks in a row?

Risk and Protective Factors

Research has provided a great deal of guidance on attitudinal and behavioral factors that place students at great risk for violence and substance use, and those that, on the positive side, provide protection against these unhealthy behaviors. This survey contains several items that assess the degree to which these factors, both risk and protective, occur in the students who have responded to the survey. They relate to the students themselves, their peers, their schools, and the communities in which they live. Questions related to risk and protective factors in the family domain are *not* included in the survey. Again, these results highlight the important relationships that guide school prevention and intervention programs across the state.

Sample items of this type include:

How wrong do you think it is for someone your age to smoke marijuana?

What are the chances you would be seen as cool if you carried a handgun?

How old were you when you first smoked a cigarette, even a puff?

Violent Behaviors

Reducing violent behaviors is an important goal of state and local programs. Current federal goals for education include the assurance of "safe and drug-free schools" to promote student learning. This survey includes questions designed to determine the extent to which weapons are present inside and outside the school building. It also includes questions dealing with other forms of injury-related behaviors such as attempted suicide and driving under the influence of alcohol.

Sample items of this type include:

During the past 30 days, how many times have you carried a weapon, such as a gun, knife, or club for self-protection or because you thought you might need it in a fight?

When was the last time you carried each of the following weapons on school property for self-protection or because you thought you might need it in a fight? (gun; knife or razor; club, stick, pipe, or other weapon)

Access to school-based services

Schools are increasingly being seen as an important place for students to be able to access a variety of services. When schools do provide these services, students must also be aware that they are available. Therefore, the survey contains questions related to access to school-based services.

Sample items of this type include:

Does your school provide a counselor, intervention specialist, or other school staff member for students to discuss problems with alcohol, tobacco, or other drugs?

If you had a question about alcohol, tobacco, or other drugs, which one of the following would you most likely go to for information?

WASHINGTON STATE SURVEY OF ADOLESCENT HEALTH BEHAVIORS (1998)

FACT SHEET

In Spring 1998, the Office of Superintendent of Public Instruction (OSPI), the Department of Social and Health Services' Division of Alcohol and Substance Abuse (DASA), and the Department of Community, Trade, and Economic Development (CTED) will conduct a survey to measure the prevalence of alcohol, tobacco, and other drug use, violent behaviors, and related risk and protective factors among Washington's sixth, eighth, tenth, and twelfth grade students. This fact sheet answers important questions about the Washington State Survey of Adolescent Health Behaviors (WSSAHB).

Q: What is the focus of the WSSAHB?

A: The focus of the WSSAHB is on health risk behaviors — such as violence and alcohol, tobacco and other drug use — that can result in injury and/or impede positive development among our youth. The survey also includes risk and protective factors, which are attitudes and opinions that research has shown to be highly correlated with these health risk behaviors.

Q: Why is the survey conducted?

A: The purpose of the survey is to identify and monitor factors that affect the health of our state's youth. Since a similar survey has been conducted across the state every two years since 1988, its results can be used to monitor how these health behaviors increase, decrease or stay the same over time. They can also be used to identify important areas of need and plan effective state and local prevention programs.

Q: Do all Washington students take the WSSAHB?

A: No, only a sample of students in Grades 6, 8, 10 and 12 take the survey. Schools are selected across the state to provide a scientifically accurate sample of the entire student population at these grades. In all, about 125 schools and 25,000 students will participate — approximately 8 percent of the student population at these grade levels.

Q: Does my school have to participate?

A: Participation in the survey is voluntary. However, to obtain accurate estimates of these behaviors statewide and at regional and local levels, broad participation for all of the schools selected in the sample is needed.

Q: Why should my school participate?

A: It is our intent, pending Review Board approval, to provide schools selected for the sample with a summary report of the results of all survey questions for their school, along with statewide totals for

comparison. This information, which is provided at no cost, is very useful in guiding the planning of prevention programs and fulfilling data requirements for program led by county prevention coordinators, community mobilization coalitions, community public health and safety networks, and others. Schools may elect to receive their results at the same time as the statewide results are released, three weeks after the statewide results are released, or not at all.

Q: Can my school participate if it is not selected for the sample?

A: Yes, there is an opportunity for additional schools to participate and receive the results of the survey at the nominal cost of \$1.00 per student. A piggyback request form is available from RMC Research Corporation and must be completed in order for a school to participate as a piggyback.

Q: Are sensitive questions asked?

A: The survey questions have been designed to measure key behaviors without asking sensitive questions, although it is possible that some questions may be considered sensitive by some schools or school districts. The survey includes questions related to alcohol, tobacco, and other drug use; violent behaviors, and related risk and protective factors. Unless questions in these topic areas are asked honestly and straightforwardly, we cannot know the degree to which Washington's youth engage in these health risk behaviors. The survey **does not** include questions about sexual behavior or education. The survey **does not** include questions about risk and protective factors in the family domain.

Q: Is student participation voluntary? Is student privacy protected?

A: *Student participation is completely voluntary and anonymous.* Students are not asked for their names or identification numbers when they complete the survey. Survey administration procedures are designed to protect student privacy and maintain anonymity. When they finish the survey, students place their completed survey in a box or envelope with no personal identifiers. The box or envelope of completed surveys is then sealed and shipped to a contractor for optical scanning and analysis. Students may elect to participate in an alternative activity if they do not wish to complete the survey.

Q: How is the survey coordinated at each school?

A: Each participating school has a designated spokesperson, and each school district or ESD has a central coordinator for the survey effort. These spokespersons and coordinators have additional information on the survey, its administration instructions, and uses of the results.

Q: Can I review the survey?

A: Yes, a copy of the survey questions is available in the office of the district superintendent or his/her designee. A final version of the survey will be available once it has been completed.

Q: How long does it take to fill out the survey?

A: One class period is needed to complete the survey. All questions are self-report, and no physical tests or exams are involved.

Q: Do students answer the questions truthfully?

A: Both national research and the experience here in Washington indicate that, when students are told of the importance of the information and that their responses are completely confidential, the data collected are extremely accurate. Internal reliability checks help identify any surveys which have obviously been answered carelessly, and these surveys are discarded from the sample. In addition, students always have the option of not answering questions to which they do not feel comfortable responding.

Q: When is the survey conducted? When are results available?

A: The survey will be administered between March 23 and April 3, 1998. Results will be available by September 1998.

Q: How will this information be used?

A: Information from the Washington State Survey of Adolescent Health Behaviors can be used to meet a variety of needs at the community and state levels.

- The survey provides information that can be used to identify the importance of various problem behaviors. This information can be used as input for resource and policy decisions, such as targeting interventions. Those who receive the information may choose to share it with other community organizations.
- Those items that were asked in previous years can be used to identify trends or changes in the patterns of behavior over time.
- The state-level data can be used to compare Washington results to other states that do similar surveys.
- At the state and federal levels, there are a variety of competing interests for limited resources. Results of this survey can be and have been used to provide evidence for the high priority of those issues that are revealed to be important.

**WASHINGTON STATE SURVEY OF ADOLESCENT HEALTH BEHAVIORS
PARENT NOTIFICATION LETTER**

A sample letter that may be used to notify parents of the upcoming Washington State Survey of Adolescent Health Behaviors has been enclosed.

The Human Research Review Board that approved the survey requires that parents be notified by letter two weeks prior to the survey. In addition, the letter must include the following elements:

- A description of the of the study content, including a description of the most sensitive questions, or inclusion of verbatim sensitive questions;
- A statement which explains how survey data will be used;
- A statement that the child's participation is voluntary, and that youth may refuse to participate even if parents provide passive consent;
- A statement that survey results will be anonymous, to protect respondent confidentiality;
- A statement encouraging parents to talk to their child/ren about the survey;
- A statement that parents may review the survey prior to providing consent for their child to participate;
- A statement that students will participate in an alternative activity if the parent or student refuse study participation;
- Instructions for what parents should do if they do not want their child to participate;
- A statement of a deadline by which parental response must be received;
- An 800 number for RMC Research which parents may call for information about the survey.

You may modify the enclosed sample letter for your use, provided the required elements listed above are retained. Please note the text set off in bold face type.

Also, please be sure to send Eric Einspruch of RMC Research Corporation a copy of your parent notification letter.

Sample Letter to Parents
from School Principal or District Superintendent

DRAFT

Dear :

On [specify date] students in the 6th, 8th, 10th and 12th grades in [specify school/district] will be taking part in the Adolescent Health Behavior Survey. The survey is jointly sponsored by the state Office of the Superintendent of Public Instruction, the Department of Social and Health Services, and the Department of Community, Trade, and Economic Development. It will be administered by RMC Research in Portland, Oregon, a professional research company.

The survey will assess a variety of health behaviors and other issues which are important factors in the health and well being of our young people. Each child will be asked about his/her own behavior and beliefs about several topics: alcohol, tobacco, and drug use; violence and weapons; neighborhood and community attitudes; peer behaviors and attitudes about alcohol, tobacco, and drug use, and illegal activities; school performance. Some of the most personal questions are "During the past 30 days, how many times have you used cocaine or crack?" "How many times in the past year have you been drunk or high at school?" and "Have you ever belonged to a gang, organization, clik?"

If you would like to review the survey at any time, a copy is available in my office. After the survey, each student will be offered a list of community resources of agencies that work with youth. I encourage you to talk to your child about the survey and ask whether he/she wants to take part.

The Adolescent Health Behavior Survey is entirely anonymous, to protect your child's privacy. Students will not put their names on the survey questions or answer sheet. No one will know how your child answered survey questions. Survey results will be presented in group summaries, like many opinion polls. Results of the survey will be used to plan prevention programs and interventions to combat such problems as alcohol and drug use and violence in our communities. The survey will also help us determine whether our prevention programs are effective. The school district will be provided with a summary of survey results for this district. Your child's name will not be used in any reports about the survey.

Your child's participation is completely voluntary. You may refuse your child's participation. If you refuse, your child will participate in an alternate activity during the survey time, such as reading in the library or doing homework. **If you do not want your child to participate in the survey, please call [specify school survey coordinator] at [specify phone number] by [specify deadline for refusals].** Even if you give permission for your child to participate in the survey, he/she may decide not to take part or to refuse to answer any survey questions he/she does not want to answer. Whether or not your child takes part, it will not have any effect on your child's grades or standing in the school.

Please let us know if you do not want your son or daughter to participate in the Adolescent Health Behavior Survey. Please call me at [specify phone number] if you have an questions. Or, you may call Dr. Eric Einspruch at RMC Research at (800) 788-1887.

Sincerely,

[School Principal/District Superintendent]

cc: E. Einspruch

DRAFT

Appendix D
Survey
Administration
Packet

SURVEY COORDINATOR GUIDELINES
WASHINGTON STATE SURVEY OF ADOLESCENT HEALTH BEHAVIORS (1998)

Before the Survey

1. Announce the survey.

(a) Parents must be notified by letter at least two weeks prior to the survey. A sample letter has been enclosed for your use. You may also wish to notify parents by other means as well (e.g., in a school calendar, newsletter, etc.).

(b) Students must be notified of the survey at the same time as parents. Please ensure that the survey is announced as part of the general school announcements. You may announce the survey by some other means if you wish, so long as it is a general announcement to the students in the selected grades. Students should be informed that the notification letter is being sent to their parents, and they should be given the name of a person (such as the survey coordinator) to contact if they have any questions regarding the survey. This would be a good time to inform students that a Spanish version of the survey is available, and that they should let the survey coordinator know if they would like to complete the survey in Spanish. Finally, please be sure to repeat the announcement on the day prior to the survey.

(c) A sample copy of the survey should be placed in the district office for review by interested parents. (If they wish, parents may be provided a copy for their sole use and encouraged to call RMC Research.)

2. Select a date.

Choose the day **between March 23 and April 3** that is best for you to administer the survey. The administration should be scheduled for a single period of one day throughout the school. This prevents students from talking about their answers with classmates who have not yet taken the survey.

3. Prepare materials. Divide the survey materials for distribution as follows:

For each school:	Packing list
For each classroom:	Envelopes for surveys, with classroom information form Administration instructions
For each student:	Survey booklet Student information form and resource list

You may add local numbers to the resource list if you wish. (These numbers may be found, for example, through the district office, school counselor, drug-free schools coordinator, county prevention coordinator, county health coordinator, etc.)

No answer sheets need to be distributed; students will mark their answers directly in the booklet. There is only one form of the survey.

4. Train teachers.

Meet briefly with the teachers who will be administering the survey to discuss the purpose and administration procedures for the survey. They should also take a few minutes to review the administration instructions. This would also be a good time to determine whether you need copies of the Spanish version of the survey.

Student participation in the survey is **anonymous and voluntary**, and it is important that students do not feel that they have to participate. Therefore, students need to be provided with an alternative activity if they choose not to complete the survey. At this time there should be a decision about what alternative activity will be provided and whether or not these students will remain in the same room or be asked to move to another room. Each building has the freedom to decide what alternative activity to provide (for example, free reading time, assigned supplemental reading, a library assignment if arranged in coordination with the school librarian, or another appropriate activity).

The Day of Administration

5. **Distribute materials.** Distribute the survey materials to each classroom. Also include some No. 2 pencils for students who may not have them.
6. **Collect materials.** Collect the envelopes (or boxes) containing the used booklets, administration instructions, and any unused booklets. Be sure there is a completed classroom information form (number of students enrolled, absent, choosing not to participate, etc.) for each envelope. In addition, *be sure to keep the materials from each room separate from each other, and the materials from each school separate from each other.*

After the survey

7. **Package materials.** Package all the materials in a sturdy shipping carton:
 - (a) first place the unused booklets in the bottom of the carton,
 - (b) then stack the envelopes or boxes flat in the carton. If the survey booklets are loose, stack them face up with the class header sheet on top of each class.
 - (c) Place the packing list on top of the stack. Add packaging material to the remaining space in the carton to protect the envelopes.
 - (d) Attach the shipping labels to the carton. If you have more than one carton, mark each carton as 1 of 3, 2 of 3, 3 of 3, etc.
8. **Return materials.** Call RMC Research at (800) 788-1887 to let us know the weight of your shipping carton(s). RMC Research will then call UPS and ask them to pick up your carton(s). **Materials need to be returned no later than April 10.** In case the label is lost, ship the materials to:

Dr. Eric L. Einspruch, Senior Research Associate
RMC Research Corporation
522 SW 5th, Suite 1407
Portland, OR 97204

SURVEY ADMINISTRATION INSTRUCTIONS

WASHINGTON STATE SURVEY OF ADOLESCENT HEALTH BEHAVIORS (1998)

Introduction

The Washington State Survey of Adolescent Health Behaviors is the product of a collaborative effort among the Office of Superintendent of Public Instruction, Department of Social and Health Service (Division of Alcohol and Substance Abuse), and Department of Community, Trade and Economic Development. Technical input has been provided by the University of Washington Social Development Research Group. The survey is being conducted by RMC Research Corporation of Portland, Oregon.

The current survey is the fifth generation of the student alcohol and other drug use survey conducted in 1988 and repeated about every two years since then. The survey includes questions related to student background; alcohol, tobacco, and other drug (ATOD) use; risk and protective factors related to ATOD use; violence; and access to school-based services. The information from this survey has been critical for planning and improving prevention and intervention programs at the school, district, county, and state levels. It has also been important for monitoring changes in student behaviors over time.

Student participation is voluntary. Any student may decline to participate, and those students who make this choice need to be provided with an alternative activity to be chosen by your school. Any student that chooses to participate may skip any question that he or she prefers not to answer. In addition, **all responses are completely anonymous.** No one will know the answers from any student.

Prior to the Survey Administration

Materials. Your survey coordinator will provide each teacher with the number of survey booklets required for his or her class. Administration instructions, an envelope (or box, depending on the number of surveys required for the classroom) and a classroom information sheet will also be provided. Make sure you have additional No. 2 pencils for students who may need them. If you do not have enough booklets, contact your building coordinator to obtain them.

Scheduling

Students will need one class period to answer the survey. All students in the participating grades in your school should receive the survey during the same class period, if possible. This will prevent distorted results caused by students discussing their answers with others who have not yet received the survey. It is not expected that every student will answer every question on the survey. Students are expected to answer only as many questions as they can during the class period.

Survey Forms. There is only one form of the survey. Each student will complete only one survey booklet. Students will mark their answers directly in the survey booklet. There are no answer sheets.

Survey Administration

Please read the instructions on the following page to the students. It is essential that you convey the importance of the survey for your school, the district, and the state in planning student service programs. In addition, you should remain in your room (but seated at your desk) while students are completing the survey. Please accommodate any students with special needs in the manner that they are usually accommodated, to the extent reasonable, *so long as the voluntary and anonymous nature of the survey is preserved.*

It is essential students know that their participation is voluntary and that their answers are anonymous. Therefore, you should follow all instructions as indicated in these guidelines. Also, students must be provided with a copy of the "Student Information Form" and the resource list entitled "If I Need Some Help."

Alternative Activity

Since student participation is completely voluntary, each building needs to choose an alternative activity for those students who decide not to participate in the survey administration.

Return of Surveys and Unused Booklets

When all students have completed the survey, pass an empty envelope (or box) around the classroom. Each student will put his/her own completed booklet into it.

Complete the classroom information form on the envelope. Only used booklets go into the envelope or box. Return the envelope or box of used booklets and any unused booklets to the survey coordinator who will return the materials to RMC Research Corporation.

Instructions to students

Say to the class: Today we will be completing the Washington State Survey of Adolescent Health Behaviors. This survey is completely voluntary and anonymous. If you prefer not to participate in the survey, you may participate in _____ (alternative activity) instead. Would anyone who prefers to _____ (participate in the alternative activity) please _____ (direct them to the activity) now.

Hand out the student information form and resource list, and then hand out the survey booklets. Then say: Please take a moment to read the "Student Information Form." Please do not open the survey booklet or make any marks on the materials until I tell you to do so. If your pencil breaks during the survey, quietly pick up another one from my desk.

Pause, then say: The purpose of this survey is to learn what students in our school think about alcohol, tobacco, and other drug use, and related attitudes and behaviors. Your answers will help us understand the attitudes, behaviors, and needs of students in our school. We are very interested in what you have to say and appreciate your honest answers. It is important that you answer the questions accurately and honestly. Your participation is voluntary. If there is any question that would upset you or your parents, just leave it blank.

Make sure that you have a survey booklet and a No. 2 pencil. (You may use a pen with blue or black ink if you do not have a pencil.) Mark your answers directly in the survey booklet. Remember to fill in the circle completely, as shown in the example on the cover of the survey. Erase your answer completely if you wish to change it.

This is not a test, and there are no right or wrong answers. Choose the answer that is right for you. You are not expected to answer every question on the survey, but answer as many as you can. If you have any questions about the survey, you may come to my desk and ask me. I will answer them if I can, otherwise please simply skip any question you do not understand. You may also ask your question of _____ (survey coordinator) or RMC Research Corporation after the survey.

When all of you have finished the survey, I will pass around an envelope (or box) to collect your survey booklet. _____ (name of designated student) will close the envelope (or box) and return it to me. Keep your student information form and resource list. If you finish before others, please work quietly until all have finished. If you wish to receive a copy of the survey results, you may request them from _____ (survey coordinator) once they are available.

When students have finished: When all students have finished, have a designated student pass around the envelope (or box) to collect the survey booklets. Complete the classroom header sheet on the envelope. Then return the envelope and any unused booklets to the survey coordinator.

Washington State Survey of Adolescent Health Behaviors (1998)

Student Information Form

Thank you for agreeing to take part in this study about issues facing students in Washington public schools. This survey will ask you questions about your alcohol, tobacco, and other drug use; attitudes and perceptions related to use, violent behaviors, and access to school-based services. It was developed so you can tell us the things you do that may affect your health or cause injuries. The information you give will be used by school, community, county, and state officials to plan programs for young people like you. Your parent/guardian has been informed that students in your school are completing this survey.

Completing the survey is entirely voluntary. Your grades in this class will not be affected, whether you decide to take part or not. If you are uncomfortable or don't want to answer any question, leave it blank. You may stop filling out the survey any time you want.

DO NOT write your name on the survey. The answers you give will be kept private. No one will know how you answered these questions. Please answer the questions based on what you really do or believe. We will not tell your parents, teachers, school administrators, or anyone else how you answered these questions.

The questions that ask about your background will only be used to describe the types of students who complete this survey. We will not use this information to find out your name. Your name will not be included with any of the results from this survey. If you wish to see the results of the survey once they are available, the person giving you the survey can tell you the name of the contact person who will have them.

Other students have said surveys like this are interesting and they enjoy filling them out. We hope you will too. Please take a minute to read the instructions before starting the survey. When you answer questions, please fill in the circles completely. When you are finished, follow the instructions of the person giving you the survey. If you have any questions as you complete the survey, please ask the person giving you the survey. Please do not talk about the survey or ask your classmates for help. If you have any questions about this survey, you can ask the survey coordinator in your school. Or, you can call Eric Einspruch, the researcher doing the study, at (800) 788-1887.

If I Need Some Help

The Office of Superintendent of Public Instruction (OSPI), Department of Health (DOH), and Department of Social and Health Services (DSHS) appreciate your participation in today's survey. The information you provide is anonymous, and will be used only to gain insight into the health behavior trends of young people so that we can better understand how to meet **your** needs.

If today's survey causes you to have questions or feelings about which you would like to seek help, we recommend that you do one or more of the following as soon as possible:

- Contact a trusted adult in your school, such as a teacher, counselor, nurse, intervention specialist, or principal.
- Talk to other trusted adults in your family or community, such as your parents or religious leader.
- Call one or more of the following numbers for information on where to seek further help.

24 Hour Crisis Line	(800) 244-5767 or (425) 461-3222 in King County
A Friend Cares Crisis Line	(425) 258-HELP
Alcohol/Drug 24 Hour Help Line	(800) 562-1240 or (206) 722-4222 (Teen Line)
Boys' Town (Alcohol and Other Drugs)	(800) 448-3000
Cocaine Anonymous	(800) COCAINE
Domestic Violence Hotline	(800) 562-6025
Information and Referral Service	(800) 752-9422
National Association for Native American COA	(206) 467-7686
YWCA (Rape/Sexual Assault)	(800) 695-0167
Washington State HIV/AIDS Hotline	(800) 272-AIDS
Washington State Substance Abuse Coalition	(800) 662-9111
Office of Superintendent of Public Instruction	(360) 753-5595
Division of Alcohol and Substance Abuse	(360) 438-8200
Department of Health (can also give you the number for your County Health Office)	(206) 586-7424

Appendix E
Participating
Schools and
Districts

1998 Washington State Survey of Adolescent Health Behaviors
Participating Schools and Districts

County	District	School	Sample	Grades in: Piggyback
Asotin	Asotin-Anaton	Asotin Elementary		6
		Asotin Junior-Senior High		8, 10, 12
	Clarkston	Grantham Elementary		6
		Heights Elementary		6
		Highland Elementary		6
		Parkway Elementary	6	
		Lincoln Middle		8
Charles Francis Adams High		10, 12		
Benton	Finley	Finley Middle	6	8
		Riverview High		10, 12
	Kennewick	Highlands Middle		8
		Horse Heaven Hills Middle	6, 8	
	Kiona-Benton	Kiona-Benton City Middle		6, 8
		Kiona-Benton City High		10, 12
	Prosser	Housel Middle		6, 8
		Prosser High		10, 12
	Richland	Carmichael Middle		8
		Chief Joseph Middle		8
		Hanford Middle		8
		Hanford High		10, 12
		Richland High	10, 12	
River's Edge High		10, 12		
Clallam	Cape Flattery	Neah Bay Elementary & High	8	
Clark	Evergreen	Crestline Elementary	6	
		Fircrest Elementary	6	
		Wy'East Junior High	8	
	Washougal	Jemtegaard Middle	8	6
Douglas	Bridgeport	Bridgeport Middle	8	
Franklin	North Franklin	Connell High		10, 12
		McLoughlin Middle	6	8
	Pasco	Stevens Middle		6, 8
		Pasco Senior High	10	
		New Horizons High	10, 12	

County	District	School	Sample	Grades in: Piggyback
Grant	Moses Lake	Chief Moses Junior High	8	
Grays Harbor	Aberdeen	Miller Junior High		8
		J. M. Weatherwax High		10, 12
	Elma	Elma Middle		8
		Elma High		10, 12
	Hoquiam	Central Elementary		6
		Lincoln Elementary		6
		Washington Elementary		6
		Hoquiam Middle	8	
		Hoquiam High		10
	Montesano	Beacon Avenue Elementary	6	
		Simpson Avenue Elementary		6
		Montesano Jr. - Sr. High		8, 10, 12
	North Beach	North Beach Middle	8	6
		North Beach High		10, 12
	Ocosta	Ocosta Elementary		6
		Ocosta Jr. - Sr. High		8, 10, 12
Island	Coupeville	Coupeville Middle		6, 8
		Coupeville High	10, 12	
	South Whidbey	Langley Middle		6, 8
		South Whidbey High		10, 12
Jefferson	Port Townsend	Port Townsend High	10, 12	
	Quilcene	Quilcene Elementary & High		6, 8, 10, 12
King	Auburn	Olympic Middle		6, 8
	Federal Way	Lake Dolloff Elementary		6
		Lakeland Elementary		6
		Mark Twain Elementary		6
		Meredith Hill Elementary	6	
		Olympic View Elementary		6
		Silver Lake Elementary		6
		Star Lake Elementary		6
		Twin Lakes Elementary	6	
		Lakota Junior High		8
		Saghalie Junior High		8
		Totem Junior High	8	
		Decatur High		10, 12
		Thomas Jefferson High		10
		Truman High		10, 12
	Highline	Beverly Park Elementary		6
		Bow Lake Elementary		6
		Cedarhurst Elementary		6
		Des Moines Elementary		6
		Gregory Heights Elementary		6
		Hazel Valley Elementary		6

County	District	School	Sample	Grades in: Piggyback
		Hilltop Elementary		6
		Madrona Elementary		6
		Marvista Elementary		6
		McMicken Heights Elementary		6
		Midway Elementary		6
		Mount View Elementary		6
		Olympic Elementary		6
		Riverton Heights Elementary		6
		Salmon Creek Elementary		6
		Seahurst Elementary		6
		Shorewood Elementary		6
		Southern Heights Elementary		6
		Sunnydale Elementary	6	
		Valley View Elementary		6
		White Center Heights Elem.		6
	Lake Washington	Juanita Elementary	6	
		Peter Kirk Elementary	6	
		Rose Hill Elementary	6	
		Evergreen Junior High	8	
		Inglewood Junior High	8	
		Lake Washington High	10, 12	
		Community	6	
		Northstar Junior High	8	
	Renton	A. W. Dimmitt Middle	6	8
		McKnight Middle	8	6
		Nelsen Middle		8, 6
		Lindbergh Senior High		10, 12
		Oliver M. Hazen Senior High		10, 12
		Renton Senior High		10, 12
		Black River High		10, 12
		Renton Re-Entry Program	10, 12	
	Riverview	Tolt Middle		6, 8
		Cedarcrest High		10, 12
	Seattle	McClure Middle	8	
	Shoreline	Shorewood High		9
	Snoqualmie Valley	Chief Kanim Middle		6, 8
		Snoqualmie Middle		6, 8
		Mount Si High		10, 12
		Two Rivers High		10, 12
	Tahoma	Cedar River Elementary	6	
		Lake Wilderness Elementary		6
		Rock Creek Elementary		6
		Glacier Park School		8
		Tahoma Junior High		8
		Tahoma Senior High		10
	Vashon Island	McMurray Middle	6	8
		Vashon High		10, 12
Kittitas	Cle Elum-Roslyn	Walter Strom Middle	6	
	Thorp	Thorp Elementary & High	6	
Klickitat				

County	District	School	Sample	Grades in: Piggyback
	Klickitat White Salmon	Klickitat Elementary & High	8	
		Henkle Middle		8
		Columbia High	10, 12	
Lewis	White Pass	White Pass Jr. - Sr. High		8, 10, 12
Lincoln	Wilbur	Wilbur High	10	
Okanogan	Omak	Omak Middle	6	
Pacific	Ocean Beach	Hilltop Elementary		6
		Ilwaco Junior High		8
		Ilwaco High		10, 12
	Raymond South Bend	Raymond Jr. - Sr. High	8	10, 12
		Chauncey Davis Elementary	6	
	Willapa Valley	South Bend Middle		8
South Bend High			10, 12	
Pierce	Clover Park	Hudtloff Middle		6, 8
		Iva Alice Mann Middle		6, 8
		A-1 Alternative		10, 12
	Eatonville Fife	Eatonville Middle	8	
		Surprise Lake Middle		8
	Orting Puyallup	Fife High		10, 12
		Orting High		10, 12
		Edward Zeiger Elementary		6
		Fingrove Elementary		6
		Florence Pope Elementary		6
		Frank Brouillet Elementary		6
		J. P. Stewart Elementary		6
		Northwood Elementary		6
		Ridgecrest Elementary		6
		Spinning Elementary		6
		Wildwood Park Elementary		6
		Aylen Junior High		8
		Doris Stahl Junior High		8
		Edgemont Junior High		8
		Ferrucci Junior High		8
		Frank Ballou Junior High	8	
		Sumner	Kalles Junior High	
	Gov. John Rogers High			10, 12
	Puyallup High			10, 12
	E. B. Walker High			10, 12
	Phoenix Program			8
	Bonney Lake Elementary			6
	Crestwood Elementary		6	
Emerald Hills Elementary		6		

County	District	School	Sample	Grades in: Piggyback
		Liberty Ridge Elementary		6
		Maple Lawn Elementary	6	
		McAlder Elementary		6
		Victor Falls Elementary	6	
		Lakeridge Junior High		8
		Mountain View Junior High		8
		Sumner Junior High	8	
		Sumner Senior High	10, 12	
	Tacoma	Baker Middle	6	8
		Gault Middle	8	6
		Gray Middle		6, 8
		Jason Lee Middle		6, 8
		Mason Middle	8	
		McIlvaigh Middle	6	8
		Meeker Middle		6, 8
		Stewart Middle		6, 8
		Truman Middle		6, 8
		Henry Foss High	10, 12	
		Lincoln High		10, 12
		Mount Tahoma High	10, 12	
		Stadium High	10, 12	
		Wilson High		10, 12
		Oakland Alternative High		10, 12
	University Place	Curtis Junior High		8
		Curtis Senior High		10
		University Place Alternative		10, 12
	White River	Elk Ridge Elementary	6	
Skagit	Anacortes	Anacortes Middle		8
		Anacortes Senior High	10	
		Learning Opportunity Center		10, 12
	Burlington-Edison	Allen Elementary		6, 8
		Bay View Elementary	8	6
		Edison Elementary	8	6
		Lucille Umbarger Elementary		6, 8
		West View Elementary		6, 8
		Burlington-Edison High		10, 12
	Concrete	Concrete Elementary		6
		Concrete Middle		8
		Concrete High		10
	Conway	Conway Consolidated		6
	La Conner	La Conner Middle	6	8
		La Conner High		10, 12
	Mount Vernon	Centennial Elementary		6
		Jefferson Elementary		6
		Lincoln Elementary	6	
		Little Mountain Elementary		6
		Madison Elementary		6
		Washington Elementary		6
		LaVenture Middle	8	
		Mount Baker Middle		8
		Mount Vernon High		10, 12

County	District	School	Sample	Grades in: Piggyback
	Sedro-Woolley	Big Lake Elementary		6
		Central Elementary	6	
		Lyman Elementary		6
		Samish Elementary		6
		Cascade Middle		8
		Sedro-Woolley High		10, 12
		State Street Education Center		10, 12
Snohomish				
	Edmonds	Cedar Valley Elementary	6	8
		Chase Lake Elementary		6
		College Place Elementary		6
		Hazelwood Elementary		6
		Hilltop Elementary		6
		Lynndale Elementary		6
		Meadowdale Elementary		6
		Mountlake Terrace Elementary		6
		Terrace Park Elementary		6, 8
		Westgate Elementary		6
		Lynnwood High		10, 12
		Scriber Lake High		10, 12
		Madrona Nongraded	6	8
		Maplewood Parent Coop		6, 8
	Everett	Eisenhower Middle	8	6
		Evergreen Middle		6, 8
		Heatherwood Middle	6	8
		North Middle		6, 8
		Everett High		10, 12
		Everett Alternative High		10, 12
	Granite Falls	Monte Cristo Elementary		6
		Granite Falls Middle		8
		Granite Falls High		10, 12
	Lakewood	Lakewood Middle		6, 8
		Lakewood High		10, 12
	Monroe	Frank Wagner Middle		6, 8
		Monroe Middle		6, 8
		Monroe High		10, 12
	Mukilteo	Explorer Middle		6, 8
		Harbour Pointe Middle		6, 8
		Olympic View Middle		6, 8
		Voyager Middle		6, 8
		Kamiak High		10, 12
		Mariner High		10
		ACES Alternative High		10
	Snohomish	Cascade View Elementary		6
		Cathcart Elementary		6
		Central-Emerson Intermediate		6
		Dutch Hill Elementary		6
		Machias Elementary	6	
		Riverview Elementary		6
		Seattle Hill Elementary		6
		Totem Falls Elementary		6
		Centennial Middle		8

County	District	School	Sample	Grades in: Piggyback
		Valley View Middle		8
		Snohomish Senior High	10, 12	
		AIM High		10, 12
Spokane				
	Cheney	Cheney High	10, 12	
	Freeman	Freeman Elementary	8	
	Mead	Evergreen Elementary	6	
	Riverside	Riverside Middle		6, 8
		Riverside High		10, 12
	Spokane	Arlington Elementary	6	
		Audubon Elementary	6	
		Regal Elementary	6	
		Garry Middle	8	
Stevens				
	Chewelah	Jenkins High	10, 12	
	Mary Walker	Springdale Middle	8	
	Valley	Valley Elementary	8	
Thurston				
	Griffin	Griffin Elementary		8
	North Thurston	Evergreen Forest Elementary		6
		Horizons Elementary		6
		Lacey Elementary		6
		Lakes Elementary		6
		Lydia Hawk Elementary		6
		Meadows Elementary	6	
		Mountain View Elementary		6
		Olympic View Elementary		6
		Pleasant Glade Elementary	6	
		Seven Oaks Elementary		6
		South Bay Elementary		6
		Woodland Elementary		6
		Chinook Middle		8
		Nisqually Middle	8	
		North Thurston High		10, 12
		River Ridge High		10, 12
		Timberline High		10, 12
		New Century High		10, 12
		Puget Sound High		10, 12
	Olympia	Jefferson Middle		6, 8
		Washington Middle		6, 8
		Wilfred Reeves Middle	6	8
		Capital High	10, 12	
		Wm. Winlock Miller High		10, 12
	Rochester	Rochester Middle		6, 8
		Rochester High		10, 12
	Tenino	Tenino Middle		8
		Tenino High	10, 12	
	Tumwater	Black Lake Elementary		6
		East Olympia Elementary		6
		Littlerock Elementary		6

County	District	School	Sample	Grades in: Piggyback
		Michael T. Simmons Elementary		6
		Peter G. Schmidt Elementary		6
		Tumwater Hill Elementary	6	
		George Washington Bush		8
		Tumwater Middle		8
		A. G. West Black Hills High	10	
		Tumwater High		10, 12
Wahkiakum				
	Wahkiakum	Wendt Elem./Wahiakuch Middle		6, 8
		Wahkiakum High		10, 12
Walla Walla				
	College Place	Meadow Brook Intermediate		6
		John Sager Middle		8
	Prescott	Prescott Elementary		6
		Prescott High		8, 10, 12
	Touchet	Touchet Elementary & High	8	
Whatcom				
	Nooksack Valley	Nooksack Valley Elementary		6
		Nooksack Valley Jr.-Sr. High	10, 12	8
Whitman				
	Rosalia	Rosalia Elementary - High		6, 8, 10, 12
	Tekoa	Tekoa High	10, 12	
Yakima				
	Naches Valley	Naches Valley High		10, 12, 9
	Sunnyside	Chief Kamiakin Elementary	6	
	Toppenish	Toppenish Middle	8	