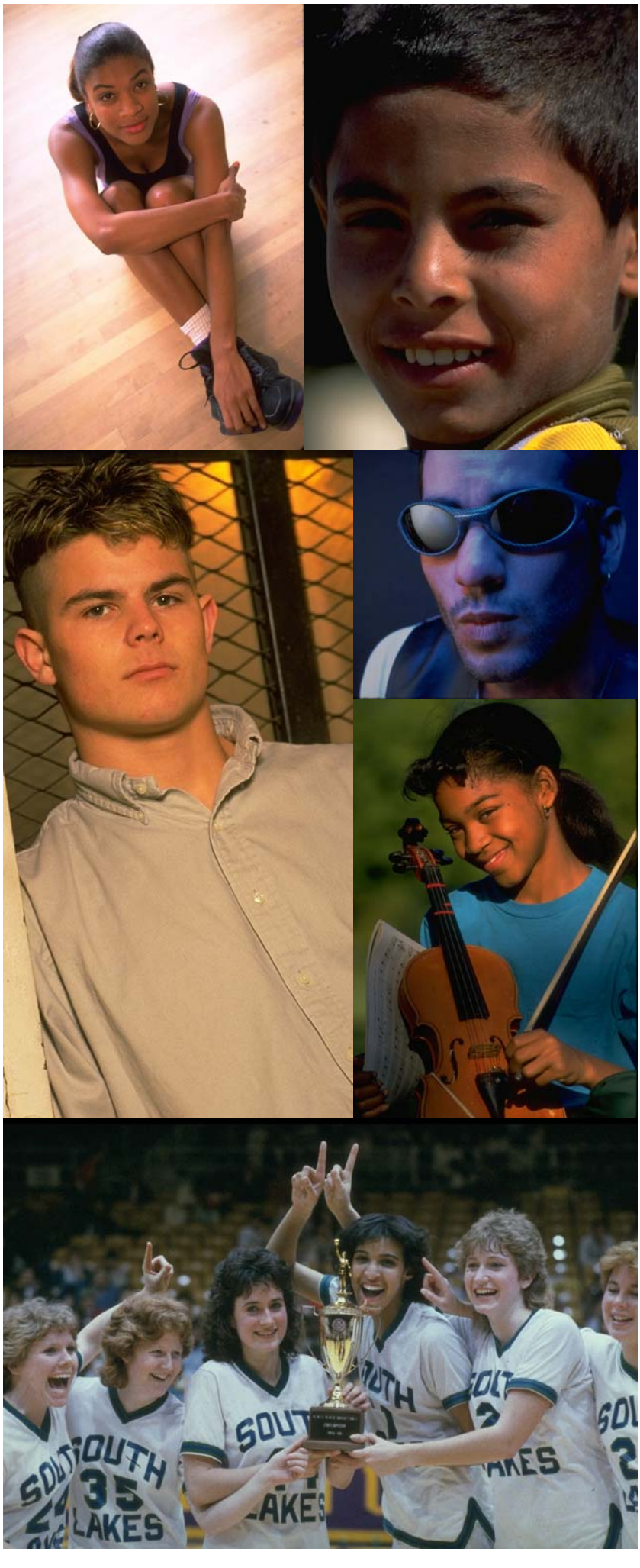

2003 Protective and Risk Factors

Fairfax County Results from the Virginia Community Youth Survey

March 2005
(Revised: July 18, 2005)

Data Compiled by:

Fairfax County Department of Systems Management for Human Services

Fairfax County 2003 Results from the Virginia Community Youth Survey

Protective and Risk Factor Scores

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Executive Summary

This report presents tabulations of Fairfax County student protective and risk factor scores from the *2003 Virginia Community Youth Survey* and data collected as part of the *2001 Fairfax County Communities that Care© Survey*. This report supplements previously released data and includes only protective and risk factor tabulations. In May 2004 Fairfax County published results from the *2003 Virginia Community Youth Survey*, excluding protective and risk factor data. This report follows the publication of results from the statewide *2003 Virginia Community Youth Survey* in February 2005 by the Virginia Department of Mental Health, Mental Retardation and Substance Abuse Services (DMHMRSAS).

In November 2003, a random sample of 4,239 Fairfax County students in the 8th, 10th, and 12th grades completed the *2003 Virginia Community Youth Survey*, representing nearly 13 percent of the total student membership. The population of students surveyed was representative of the demographic composition of the Fairfax County Public Schools as a whole. The protocols used to assess validity on the 2003 data are described in the May 2004 report.[1]

Following the publication of the *2001 Fairfax County Communities that Care© Survey*, the methodology used by some youth survey researchers to compute protective and risk factor scores was revised (see the Methodology section for details). The methodology utilized in this report produces tabulations of the percentage of students above, or at or below, a normative risk "cutoff point." In order to provide data for comparison purposes, protective and risk factor scores for 2001 data were re-calculated and included in this report using the new methodology.

Highlights of Protective and Risk Factor Scores

"Protective factors" indicate resiliency to drug abuse and problem behaviors, while "risk factors" help explain circumstances that may increase the likelihood of problem behaviors. Elevated risk factor scores increase the chance that a young person will be vulnerable to alcohol, tobacco, or other drug use, while high protective factor scores increase a young person's ability to resist use, and also indicate positive social skills and stronger family support.

Best-practices approaches to using protective and risk factors typically encourage the use of both in developing prevention strategies. Focusing on protective factors fosters resiliency in students, views children as empowered with strengths, rather than confronted by risks, and encourages nurturing children in order to help them succeed. Further, protective factors typically comprise variables which may be more amenable to programmatic impacts than those that comprise risk factors. Reinforcing protective factor processes can help young people be more resilient when confronting risk factors and risky behaviors.

Protective Factor Scores

- 2001-2003 Changes. Protective factor scores in 2003 were similar to 2001 scores. However, the percentage of students with scores above the cutoff point (indicating high protection) increased for the Community Domain "opportunities for pro-social involvement" and "community rewards for pro-social involvement" factors.
- 2003 Data. Protective factor scores with the largest percentage of students with scores above the cutoff point (indicating high protection) include:
  - School domain "opportunities for involvement" factor scores.
  - Peer-individual domain "religiosity" and "social skills" factor scores.

[1] See the Fairfax County summary tables from the 2003 Virginia Community Youth Survey at: http://www.co.fairfax.va.us/comm/demogrph/pdf/youth2003.pdf.

Risk Factor Scores

- 2001-2003 Changes. Again, there is little variation in risk factor scores from 2001 to 2003. Exceptions include the following.
  - Community domain: the percentage of students with elevated risk factor scores increased by over 14 percent for the "high community disorganization" scales. The "community disorganization" factor comprises variables that indicate the student's perception of personal safety, crime and/or drug selling, fights, lots of empty or abandoned buildings, lots of graffiti your neighborhood, or the place around where you live.
  - Peer-individual domain: the percentage of students at risk in both the "early initiation of drug use" and "attitudes favorable to drug use" scales decreased by 7.6 percent.
- 2003 Data. Risk factor scores with the largest percentage of students with scores above the cutoff point (high risk) include:
  - Family and peer-individual domain: parent and peer-individual "attitudes favorable towards antisocial behavior" factor scores.
  - School domain "academic failure" factor scores.

Significant Relationships between Protective and Risk Factors and Other Variables

This report includes data for statistically significant, substantively important relationships between protective and risk factor scores and population subgroups (grade, sex, any 30-day use of alcohol, tobacco, and other drugs (ATOD), and respondents who replied "Yes" to the question "Have you ever belonged to a gang?") Relationships between grade and any 30-day use of alcohol, tobacco, and other drugs (ATOD) and protective and risk factor scores are somewhat stronger than between protective and risk factors and other variables.

The strongest significant protective factor relationships are between 30-day use of alcohol, tobacco, and other drugs (ATOD) and the following: peer-individual domain protective factor scores for "social skills" and "belief in the moral order" scales (see Table 4). The strongest significant risk factor relationships were between any 30-day use of alcohol, tobacco, and other drugs (ATOD) and the following: community domain risk scores for "perceived availability of drugs," and family domain risk scores for "parental attitudes favorable to drug use," and peer-individual domain risk factor scores for "early initiation of drugs," "favorable attitudes toward drug use," "perceived risk of drug use," and "friends' use of drugs" (see Table 5).

Protective and Risk Factor Figures and Tables

Summary of Protective Factor Score Data
In many cases, the percentage of students in the 12th grade with high protection is lower than for other grades, with the exception of the peer-individual domain scores for "religiosity" and "social skills." The largest percentage of students in the 8th grade with high protection scores are in the peer-individual domain "social skills" and family domain "reward for involvement" factors. In most cases, female respondents have higher protective factor scores than males.

The percentage of respondents with high protective factor scores who report any 30-day use of alcohol, tobacco, and other drugs (ATOD) or who replied "Yes" to the question "Have you ever belonged to a gang?" is much lower than the overall population, particularly for school and family domain "rewards for pro-social involvement," and peer-individual domain "social skills" and "belief in the moral order."

Summary of Risk Factor Score Data
Students in the 12th grade are somewhat more likely to have elevated risk scores, particularly for community domain "perceived availability of drugs," school domain "low school attachment," and peer-

individual domain “rewards for antisocial involvement.” A larger percentage of students in the 8th grade have elevated risk scores for community domain “perceived availability of handguns,” and family domain “high family conflict” than do students in other grades. The percentage of female respondents with elevated risk scores for most factors is lower than for male respondents; an exception is the family domain score for “family conflict.”

The percentage of respondents with high risk factor scores who report any 30-day use of alcohol, tobacco, and other drugs (ATOD) or who replied “Yes” to the question “Have you ever belonged to a gang?” is larger than the overall population for all risk factor scores. Risk factor scores for students with any 30-day of use of alcohol, tobacco, and other drugs (ATOD) are highest for the following: community domain “perceived availability of drugs,” family domain “parental attitudes favorable toward antisocial behavior,” and peer-individual domain scores for “attitudes favorable toward antisocial behavior,” “antisocial peers,” “peer’s drug use,” and “sensation seeking.”

Figures 3 through 8 are useful for looking at variation in high protective and risk factor scores for the 2003 survey population as a whole, compared to the seven-state Diffusion Consortium Project scores, and compared to population subgroups (grade, sex, any 30-day use of alcohol, tobacco, and other drugs (ATOD), and respondents who replied “Yes” to the question “Have you ever belonged to a gang?”) Detailed data for Figures 3, 4, and 5 (2003 Protective Factors) are found in Tables 6 and 10. Detailed data for Figures 6, 7, and 8 (2003 Protective Factors) are found in Tables 7 and 11.

Introduction

This report presents tabulations of Fairfax County student protective and risk factor scores from the *2003 Virginia Community Youth Survey*. In November 2003, the *2003 Virginia Community Youth Survey* was administered to a random sample of Fairfax County students as part of an initiative sponsored by a consortium of agencies of the Commonwealth of Virginia. The survey was conducted to obtain valid statewide data about youth behaviors – those that are positive as well as those that are harmful. This information provides insight into the prevalence and frequency of substance abuse, antisocial behaviors and positive behaviors. Survey results provide Fairfax County with a barometer of the effectiveness of our community in fostering healthy choices in our youth and assist in the development of prevention strategies. In 2003, 4,239 students in 8th, 10th, and 12th grades completed the survey, representing nearly 13 percent of the total student membership in the grades surveyed. The population of students surveyed is representative of the demographic composition of the Fairfax County Public Schools as a whole. The protocols used to assess validity on the 2003 data are similar to those used on the 2001 data.

This report supplements previously released data and includes only protective and risk factor tabulations. Based on research conducted by J. David Hawkins, Ph.D., and Richard F. Catalano, Ph.D., the protective and risk factor model theorizes that "protective factors" exist which can help increase resiliency to drug abuse and problem behaviors, while a set of "risk factors" helps explain circumstances that may increase the likelihood of problem behaviors. Elevated risk factor scores increase the chance that a young person will be vulnerable to alcohol, tobacco, or other drug (ATOD) use, while high protective factor scores increase a young person's ability to resist use, and also indicate positive social skills and stronger family support. Multiple protective and risk factors affect whether or not a young person will use alcohol, tobacco, or other drugs.[2] An individual's ability to utilize protective resources while avoiding risks may determine his or her ability to succeed. Protective and risk factors are categorized into four domains: Community, School, Family, and Individual-Peer.

Methodology

The methodology used to compute protective and risk factor scores for Fairfax County was revised after the publication of the *2001 Fairfax County Communities that Care© Survey*. Thus, protective and risk factor summaries published in the *2001 Fairfax County Communities that Care© Survey* report are not comparable to scores published in this report.[3] The 2001 methodology compared the scores of every student against an average score for the normative population of the Communities that Care© Survey. A score of 50 indicated the average for the normative population, with scores higher than 50 indicating above average scores, and scores below 50 indicating below average scores. The current methodology indicates the percentage of youth at risk and the percentage of youth with protection on each protective and risk factor scale. In order to provide comparison data for Fairfax County officials, protective and risk factor scores for *2001 Fairfax County Communities that Care© Survey* data were re-calculated and included in this report (see Tables 8 and 9) using the currently accepted methodology.

The scales for protective and risk factors were established using data from the Diffusion Consortium Project, a study of seven states funded by four Federal Agencies: the National Institute of Drug Abuse, Safe and Drug Free Schools Program, Office of Juvenile Justice and Delinquency Prevention,

[2] Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). "Protective and risk factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention." *Psychological Bulletin*, 112(1), 64-105.
[3] Developmental Research Programs, Inc. September, 1995: Fairfax County, Virginia. *Communities that Care: 2001 Youth Survey Report*.; available at < http://www.co.fairfax.va.us/comm/demogrph/pdf/youth2001.pdf>.

and Center for Substance Abuse Prevention.[4] States in the Diffusion Consortium Project included Colorado, Illinois, Kansas, Maine, Oregon, Utah, and Washington. Data from the Diffusion Consortium Project led to the development of a new methodology for computing protective and risk factor scores, and the development of cutoff points for each protective and risk factor scale that are used to classify a youth as being at risk on risk factor scales or having protection on protective factor scales.[5] Protective and risk factor scales are constructed using Likert scale question items (see Section VII of this report). Items comprising protective and risk factors were re-coded in order to provide uni-directional ordinal data for protective and risk factor item constructs. For the scaled data, cutoff points were determined by taking the median value for a set of specific responses (plus 0.15 times the standard deviation) for each scale for all the weighted data from all seven participating states in the Diffusion Consortium Project. If an individual's score was above the cutoff point, the respondent was considered at risk (or protected). For a more detailed methodology, definitions, the research basis for protective and risk factor domains, and an item construct dictionary, see the *2003 Virginia Community Youth Survey* report.[6]

Outline

This report is organized as follows. All tables present protective factor data first, followed by risk factor data. Low protective or risk factor scores are at or below the normative cutoff points, while high protective or risk factor scores are above. In figures, a heavy dashed line represents the percentage of youth with high protection or at high risk for the seven-state Diffusion Consortium Project sample upon which the cutoff points were based. The white dots show the percentage of all Fairfax County respondents with high protection or high risk scores.

Section I contains comparative data on overall respondent protective and risk factor scores from 2001 and 2003 surveys.

Section II includes tables of statistically significant measures of association for protective and risk factor scores for 2001 and 2003 data by grade and by sex, and for 2003 data by respondents with any 30-day use of alcohol, tobacco, and other drugs (ATOD), and for respondents who replied "Yes" to the question "Have you ever belonged to a gang?" Section II also includes figures for 2003 data illustrating the percentage of respondents with high (above the cutoff point) protective and risk factor scores.

Section III includes tables of percentages only (in order to facilitate comparisons across subcategories) of respondents only for the 2003 protective and risk factor data. Tables of 2003 data with numbers and percentages of respondents are included in Section V.

Section IV includes of numbers and percentages of respondents for the 2001 protective and risk factor data. Section VI includes a table of protective and risk factor cutoff points and Cronbach's Alpha reliability coefficients. Section VII lists variables comprising 2003 protective and risk factor items.

[4] Diffusion Consortium Project. J. David Hawkins, Ph.D., Principal Investigator. Richard F. Catalano, Ph.D., Co-Principal Investigator. Michael W. Arthur, Ph.D. Co-Investigator & Project Director. Funded by: National Institute on Drug Abuse, Department of Health & Human Services, Safe & Drug Free Schools Program, U. S. Department of Education, Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice, Center for Substance Abuse Prevention, Department of Health & Human Services.

[5] Briney, J. S., Arthur, M. W., Brooke-Weiss, B. L., & Hawkins, J. D., Abbott, R.D. (2002). "Measuring Community Risk and Protection Using the Communities That Care Youth Survey." Submitted to *Evaluation and Program Planning*.

[6] Survey and Evaluation Research Laboratory, Center for Public Policy, Virginia Commonwealth University. *The 2003 Virginia Community Youth Survey*. Prepared for the Virginia Department of Mental Health, Mental Retardation, and Substance Abuse Services. Principal investigators: Mary A. Moore, Ph.D., Andrea Glaze, M.S., Julie Honnold, Ph.D., James M. Ellis, M.S., and Mary E. Rives, M.S. http://www.dmhmrsas.state.va.us/documents/reports/OSAS-CommunityYouthSurvey2003.pdf).

I. Analyzing Protective and Risk Factors

This report includes tabulations of protective and risk factors by other variables. For the Fairfax County *2001 Communities that Care© Survey* data, factors are tabulated for grade and sex. For the Fairfax County *2003 Virginia Community Youth Survey*, factors are tabulated by grade, by sex, by any 30-day use of alcohol, tobacco, and other drugs (ATOD), and for those respondents who replied "Yes" to the question "Have you ever belonged to a gang?" Percent differences in Tables 2 and 3 are provided only for factors with high protection and high risk; percent differences for low protection and low risk would be the inverse of these numbers.

Since elevated risk scores are associated with negative outcomes, it is preferable to have risk factor scores below the cutoff point, indicating low risk. Alternately, since protective factor scores are associated with better student outcomes, it is preferable to have protective factor scores above the cutoff point, indicating high protection.

Table 1 explains some of the ways prevention specialists may analyze variation in protective and risk factors. When looking at figures and tables, look for variation in percentages of respondents. The measures of association in Tables 4 and 5 indicate which of these relationships are statistically significant, and substantively important.

Table 1. Analyzing Variation in Protective and Risk Factors		
Focus	**Example**	**Offers Support for Theories that…**
Relative Percentages at Low Protection/ High Risk	Where a larger percentage of respondents report low protection, or where a larger percentage of respondents report high risk.	Some programs may offer more (or less) support, or resiliency, than do others.
Measures within Protective and Risk Factor Domains	Scores for a factor of programmatic interest (drug use, family conflict, etc.) vary substantially from other scores.	
Comparable Measures across Protective and Risk Factor Domains	Where the percentage of youth at low protection in a factor with multiple domains (i.e., the "opportunities for involvement" scale) differs across the domains.	
Longitudinal: Comparisons of Baseline Data to and between Subsequent Survey Periods	Where the percentage of youth at risk for family conflict in a community prior to implementing a community-wide family and parenting program subsequently decreases after the program is implemented.	
Protective and Risk Factor Measures by Population Subgroup	Variation in factor scores by grade, sex, or incidence of risky behavior.	Some programs may have more of an impact when targeted at specific population subgroups.
Protective and Risk Factor Measures by Regional Comparison	Comparisons to regional or national data. "National" comparisons are actually to the seven-state norms established in the Diffusion Consortium Project.[7] Virginia state data is available in the *2003 Virginia Community Youth Survey* report.[8]	Regional attributes (economic and demographic variables, in particular) may impact protective and risk factors.

[7] Briney, J. S., Arthur, M. W., Brooke-Weiss, B. L., & Hawkins, J. D., Abbott, R.D. (2002). "Measuring Community Risk and Protection Using the Communities that Care Youth Survey." Submitted to *Evaluation and Program Planning*.

[8] Data cleaning methods differed for Fairfax County and Virginia state databases, which may impact the comparability of state and Fairfax County protective and risk scores. Thus, state data was not included in this report. Virginia state results are available from the Survey and Evaluation Research Laboratory, Center for Public Policy, Virginia Commonwealth University. *The 2003 Virginia Community Youth Survey*. Prepared for the Virginia Department of Mental Health, Mental Retardation, and Substance Abuse Services. Principal investigators: Mary A. Moore, Ph.D., Andrea Glaze, M.S. Julie Honnold, Ph.D., James M. Ellis, M.S., and Mary E. Rives, M.S. http://www.dmhmrsas.state.va.us/documents/reports/OSAS-CommunityYouthSurvey2003.pdf).

I.a. Protective Factors

Table 2. *2001 Communities that Care© Survey* Data and *2003 Virginia Community Youth Survey* Scores for Protective Factors by All Grades Together Percentage of Respondents

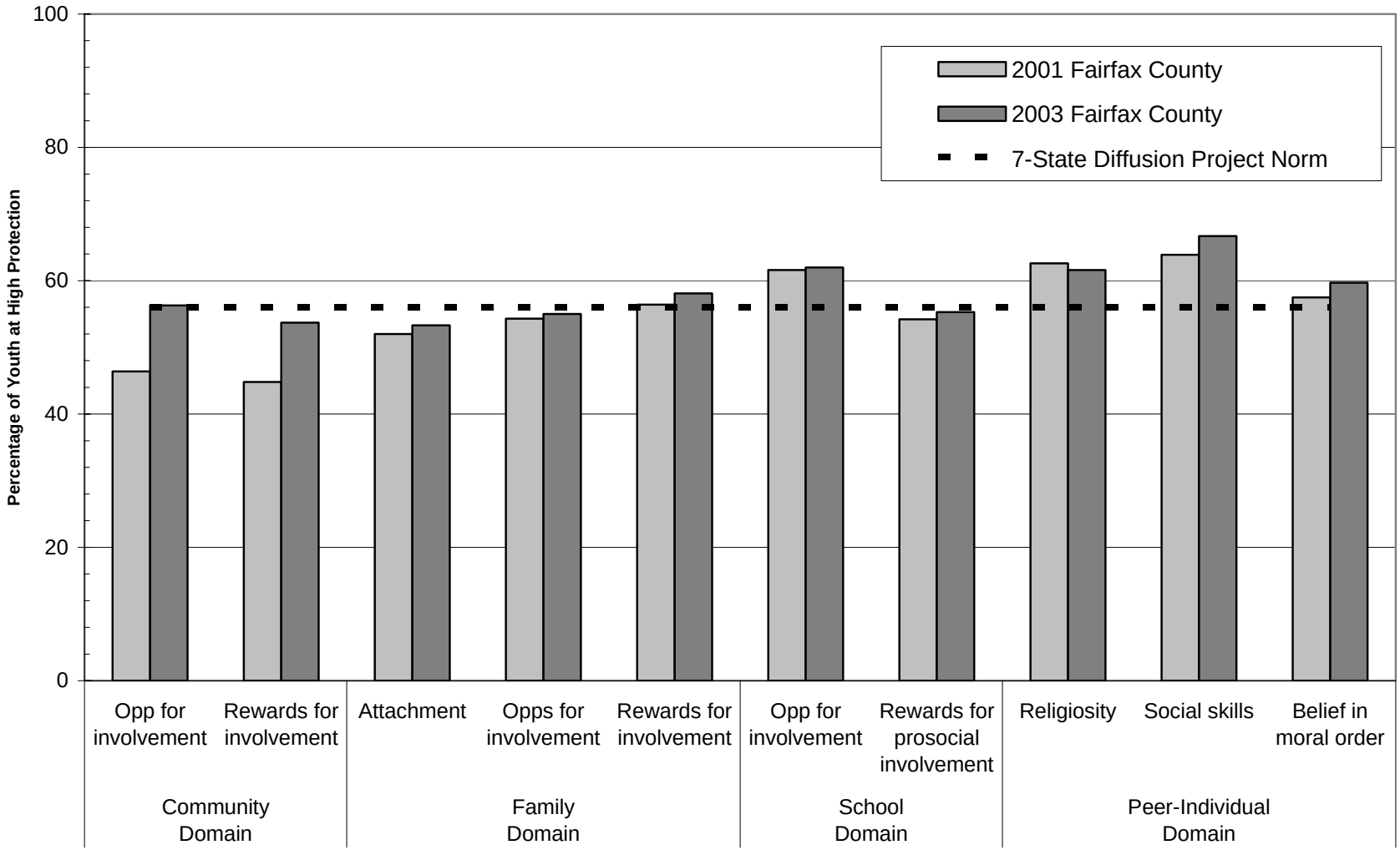
		2001 Fairfax County Communities that Care© Survey	2003 Fairfax County Virginia Community Youth Survey	Percent Difference
Community Domain Protective Factor Scores				
Community opportunities for pro-social involvement scale	Low protection	53.6%	43.7%	
	High protection	46.4%	56.3%	**+9.9%**
Community rewards for pro-social involvement scale	Low protection	55.2%	46.3%	
	High protection	44.8%	53.7%	**+8.9%**
Family Domain Protective Factor Scores				
Family attachment scale	Low protection	48.0%	46.7%	
	High protection	52.0%	53.3%	+1.3%
Family opportunities for involvement scale	Low protection	45.7%	45.0%	
	High protection	54.3%	55.0%	+0.7%
Family rewards for involvement scale	Low protection	43.6%	41.9%	
	High protection	56.4%	58.1%	+1.7%
School Domain Protective Factor Scores				
School opportunities for involvement scale	Low protection	38.4%	38.0%	
	High protection	61.6%	62.0%	+0.4%
School rewards for pro-social involvement	Low protection	45.8%	44.7%	
	High protection	54.2%	55.3%	+1.1%
Peer-Individual Domain Protective Factor Scores				
Peer-individual religiosity scale	Low protection	37.4%	38.4%	
	High protection	62.6%	61.6%	-1.0%
Peer-individual social skills scale	Low protection	36.1%	33.3%	
	High protection	63.9%	66.7%	+2.8%
Peer-individual belief in moral order scale	Low protection	42.5%	40.3%	
	High protection	57.5%	59.7%	+2.2%

Source: Fairfax County protective and risk factor scores were computed by the Fairfax County Department of Systems Management for Human Services. The Fairfax County *2001 Communities that Care© Survey* included 11,631 valid cases. The Fairfax County *2003 Virginia Community Youth Survey* included 4,074 valid cases. Fairfax County percentages and totals are unweighted.

The cutoff points used to classify responses as "high" were provided by the University of Washington's Social Development Research Group (SDRG). Low protection and low risk scores are at or below the cutoff points established. High protection and high risk scores are above the cutoff points established.

Figure 1

Fairfax County Protective Factor Profile
Percentage of Students ABOVE Cutoff Point (High Protection)



Source: Fairfax County *2001 Communities that Care© Survey* Data and *2003 Virginia Community Youth Survey*; Diffusion Consortium Project. J. David Hawkins, Ph.D., Principal Investigator. Richard F. Catalano, Ph.D., Co-Principal Investigator. Michael W. Arthur, Ph.D. Co-Investigator & Project Director. Funded by: National Institute on Drug Abuse, Department of Health & Human Services, Safe & Drug Free Schools Program, U.S. Department of Education, Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice, Center for Substance Abuse Prevention, Department of Health & Human Services.

I.b. Risk Factors

Table 3. *2001 Communities that Care© Survey* Data and *2003 Virginia Community Youth Survey* Scores for Risk Factors by All Grades Together Percentage of Respondents*

		2001 Fairfax County Communities that Care© Survey	2003 Fairfax County Virginia Community Youth Survey	Percent Difference
Community Domain Risk Factor Scores				
Low neighborhood attachment scale	Low risk	61.4%	65.8%	
	High risk	38.6%	34.2%	-4.4%
High community disorganization scale	Low risk	72.4%	58.1%	
	High risk	27.6%	41.9%	**+14.3%**
Risk score – Transitions and mobility scale	Low risk	58.2%	60.7%	
	High risk	41.8%	39.3%	-2.5%
Laws and norms favorable to drugs scale*	Low risk	*	66.7%	
	High risk	*	33.3%	
Risk score - Perceived availability of drugs scale	Low risk	65.1%	63.1%	
	High risk	34.9%	36.9%	+2.0%
Risk score - Perceived availability of handguns scale	Low risk	82.5%	80.9%	
	High risk	17.5%	19.1%	+1.6%
Family Domain Risk Factor Scores				
Risk score - Poor family management scale	Low risk	54.9%	60.5%	
	High risk	45.1%	39.5%	-5.6%
Risk score - High family conflict scale*	Low risk	*	55.2%	
	High risk	*	44.8%	
Risk score - Family history of antisocial behavior scale	Low risk	73.5%	76.4%	
	High risk	26.5%	23.6%	-2.9%
Risk score - Parental attitudes favor drug use	Low risk	68.6%	69.7%	
	High risk	31.4%	30.3%	-1.1%
Risk score - Parental attitudes favor antisocial behavior	Low risk	56.4%	54.7%	
	High risk	43.6%	45.3%	+1.7%
School Domain Risk Factor Scores				
Risk score - School academic failure scale	Low risk	54.0%	54.6%	
	High risk	46.0%	45.4%	-0.6%

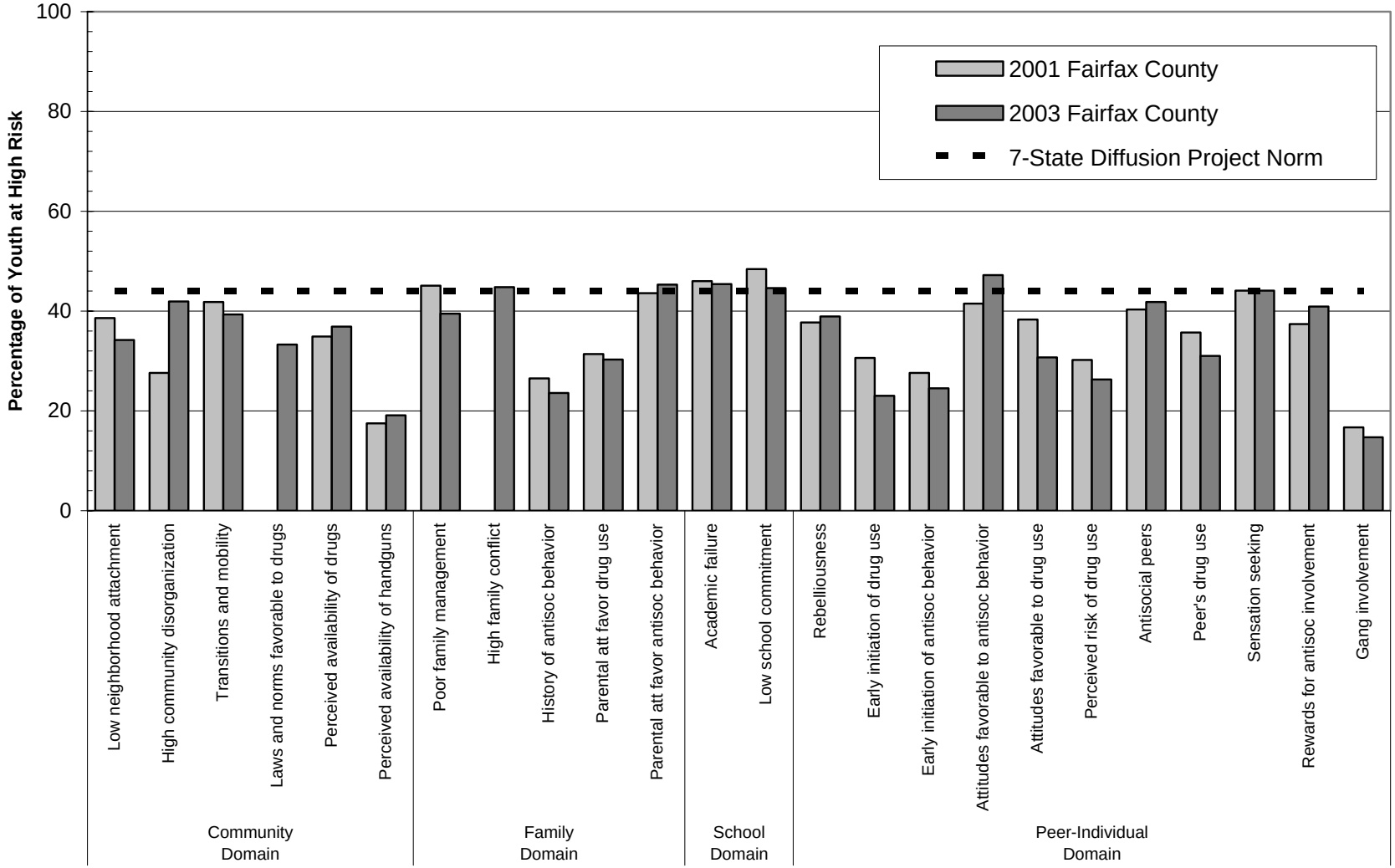
School Domain Risk Factor Scores (continued)				
Risk score - Low school commitment scale	Low risk	51.6%	55.4%	
	High risk	48.4%	44.6%	-3.8%
Peer-Individual Domain Risk Factor Scores				
Risk score - Peer-individual rebelliousness scale	Low risk	62.3%	61.1%	
	High risk	37.7%	38.9%	+1.2%
Risk score - Peer-individual early initiation of drug use scale	Low risk	69.4%	77.0%	
	High risk	30.6%	23.0%	**-7.6%**
Risk score - Peer-individual early initiation of antisocial behavior scale	Low risk	72.4%	75.5%	
	High risk	27.6%	24.5%	-3.1%
Risk score - Peer-individual attitudes favorable to antisocial behavior scale	Low risk	58.5%	52.8%	
	High risk	41.5%	47.2%	+5.7%
Risk score - Peer-individual attitudes favorable to drug use scale	Low risk	61.7%	69.3%	
	High risk	38.3%	30.7%	**-7.6%**
Risk score - Peer-individual perceived risk of drug use scale	Low risk	69.8%	73.7%	
	High risk	30.2%	26.3%	-3.9%
Risk score - Peer-individual antisocial peers scale	Low risk	59.7%	58.2%	
	High risk	40.3%	41.8%	+1.5%
Risk score - Peer-individual peer's drug use scale	Low risk	64.3%	69.0%	
	High risk	35.7%	31.0%	-4.7%
Risk score - Peer-individual sensation seeking scale	Low risk	55.9%	55.9%	
	High risk	44.1%	44.1%	+0.0%
Risk score - Peer-individual rewards for antisocial involvement scale	Low risk	62.6%	59.1%	
	High risk	37.4%	40.9%	+3.5%
Risk score - Peer-individual gang involvement scale	Low risk	83.3%	85.3%	
	High risk	16.7%	14.7%	-2.0%

Sources: Fairfax County protective and risk factor scores were computed by the Fairfax County Department of Systems Management for Human Services. The Fairfax County *2001 Communities that Care© Survey* included 11,631 valid cases. The Fairfax County *2003 Virginia Community Youth Survey* included 4,074 valid cases. The cutoff points used to classify responses as "high" were provided by the University of Washington's Social Development Research Group (SDRG). Fairfax County percentages and totals are unweighted.

* Fairfax County 2001 scores were not calculated for "Community Domain: Laws and Norms Favorable to Alcohol, Cigarette, and Marijuana Use" since Question 82 ("If a kid smokes cigarettes in your neighborhood, or the area around where you live, would he or she be caught by the police?" was not included on the *2001 Communities that Care© Survey*. Scores were also not calculated for "Family Domain: Family Conflict" because of data coding errors for Q2909 on the 2001 survey ("People in my family often insult or yell at each other.")

Figure 2

Fairfax County Risk Factor Profile
Percentage of Students ABOVE Cutoff Point (High Risk)



Source: Fairfax County *2001 Communities that Care© Survey* Data and *2003 Virginia Community Youth Survey*; Diffusion Consortium Project. J. David Hawkins, Ph.D., Principal Investigator. Richard F. Catalano, Ph.D., Co-Principal Investigator. Michael W. Arthur, Ph.D. Co-Investigator & Project Director. Funded by: National Institute on Drug Abuse, Department of Health & Human Services, Safe & Drug Free Schools Program, U.S. Department of Education, Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice, Center for Substance Abuse Prevention, Department of Health & Human Services.

II. Protective and Risk Factor Score Relationships to Other Variables

This section includes statistically significant measures of association for the relationships between protective and risk factor scores and grade, gender, any 30-day use of alcohol, tobacco, or other drugs, and those who responded "Yes" to the question "Have you ever belonged to a gang?" Analyzing protective and risk factors by population subgroups may help prevention specialists target programs where they will be most useful. Some prevention efforts, for example, may be more effective with younger students rather than older, or for boys rather than girls.

Data were analyzed to compute significance tests and measures of association to evaluate the statistical relative strength of relationships between protective and risk factors and population sub-groups.[9] For the purposes of this research, measures are included only where the chi-square statistic indicated a statistically significant relationship at the 0.05 level or less. A measure of association (Cramer's V) of 0.10 was used as a minimum threshold to indicate a substantive relationship between factors and other variables.

Using this Data

- Cramer's V ranges from 0 (indicating no association) to 1 (indicating a perfect association). In this table, a Cramer's V measure of 0.25 would indicate a statistically significant, stronger relationship between variables of interest than a Cramer's V measure of 0.10.
- Where a measure is entered in the table, there is a statistically significant, substantively important relationship with a Cramer's V measure greater than 0.09. The number and percentage of respondents for categories comprising variables (different grades, females and males, etc.) are found in the data tables. For example, there is a significant, substantive relationship between the peer-individual domain protective factor score "social skills" and sex in both the 2001 and 2003 data sets. Analyzing data in tables, we see that a smaller proportion of male respondents had scores in the "high protection" category for the "social skills" factor than did females. This would support, for example, conclusions that programs promoting this factor may be more effective with girls than boys, or that girls are more likely to have stronger social skills than are boys.
- Note where factors with measures across domains differ. For example, there is no significant relationship between "rewards for pro-social involvement" in the community domain. However, there are significant relationships between this factor and other variables in the family and school domains.

[9] Chi-square tests indicate the statistical significance of relationships between two variables. However, the relationship between those variables may not be statistically important. Measures of association are used to help evaluate the relative strength of a statistically significant relationship. For the purposes of this research, measures are included only for where the chi-square statistic indicated a statistically significant relationship at the 0.05 level or less.

Table 4. Statistically Significant Measures of Association >0.09 for Protective Factor Scores: by Grade, by Sex, by Respondents with Any 30-Day Use of Alcohol, Tobacco, and Other Drugs (ATOD), and by Respondents Ever in a Gang

Protective Factor Domain	2001		2003			
	Grade	Sex	Grade	Sex	Any 30-Day ATOD Use	Ever Been in a Gang: YES
Community Domain Protective Factor Scores						
Opportunities for Pro-social Involvement						
Rewards for Pro-social Involvement						
Family Domain Protective Factor Scores						
Attachment					0.11	
Opportunities for Pro-social Involvement					0.14	0.10
Rewards for Pro-social Involvement	0.11		0.12		0.16	0.11
School Domain Protective Factor Scores						
Opportunities for Pro-social Involvement			0.15			
Rewards for Pro-social Involvement	0.14		0.16		0.14	
Peer-Individual Domain Protective Factor Scores						
Religiosity	0.20		0.18			
Social Skills		0.18	0.12	0.16	0.41	0.16
Belief in the Moral Order	0.16	0.18	0.15	0.14	0.31	0.15

Table 5. Statistically Significant Measures of Association >0.09 for Risk Factor Scores: by Grade, by Sex, by Respondents with Any 30-Day Use of Alcohol, Tobacco, and Other Drugs (ATOD), and by Respondents Ever in a Gang

Risk Factor Domain	2001		2003			
	Grade	Sex	Grade	Sex	Any 30-Day ATOD Use	Ever Been in a Gang: YES
Community Domain Risk Factor Scores						
Low Neighborhood Attachment	0.11		0.14			
High Disorganization			0.10		0.12	0.10
High Transitions and Mobility						
Laws and Norms Favorable to Drug Use			0.11		0.22	
Perceived Availability of Drugs	0.18		0.17		0.34	0.12

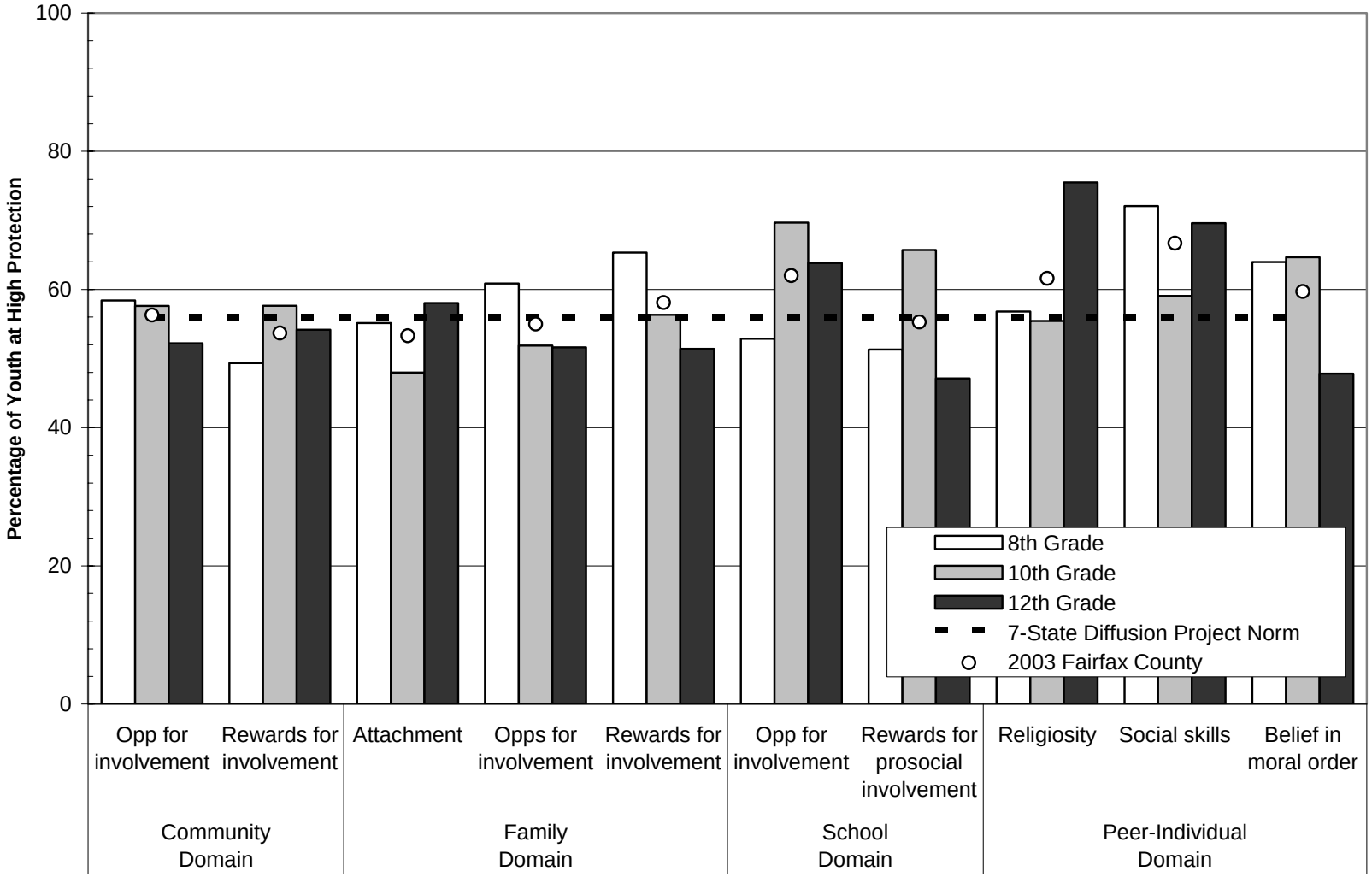
Table 5. Statistically Significant Measures of Association >0.09 for Risk Factor Scores: by Grade, by Sex, by Respondents with Any 30-Day Use of Alcohol, Tobacco, and Other Drugs (ATOD), and by Respondents Ever in a Gang

Risk Factor Domain	2001		2003			
	Grade	Sex	Grade	Sex	Any 30-Day ATOD Use	Ever Been in a Gang: YES
Community Domain Risk Factor Scores (Continued)						
Perceived Availability of Handguns	0.12	0.11	0.14	0.10		0.17
Family Domain Risk Factor Scores						
Poor Family Management		0.10			0.23	0.10
Conflict			0.10			
History of Antisocial Behavior					0.29	0.18
Parental Attitudes Favorable toward Drug Use	0.16		0.18		0.36	
Parental Attitudes Favorable toward Antisocial Behavior		0.11		0.16	0.21	
School Domain Risk Factor Scores						
Academic Failure					0.13	
Low Commitment to School				0.16	0.21	
Peer-Individual Domain Risk Factor Scores						
Rebelliousness					0.27	0.11
Early Initiation of Drugs	0.10		0.16		0.48	0.20
Early Initiation of Problem Behavior		0.23		0.22	0.22	0.23
Favorable Attitudes toward Antisocial Behavior		0.14			0.27	0.12
Favorable Attitudes toward Drug Use	0.18		0.19		0.47	
Perceived Risks of Drug Use	0.12	0.14	0.12	0.11	0.37	
Interaction with Antisocial Peers		0.14		0.13	0.27	0.17
Friends' Use of Drugs	0.10		0.18		0.50	0.17
Sensation Seeking		0.17		0.19	0.32	0.12
Rewards for Antisocial Involvement	0.10		0.10		0.23	
Gang Involvement					0.13	0.52

* Table includes data only where Chi Square significance at 0.05 level or less and the Cramer's V measure of association is greater than 0.09. Cramer's V was used for this research since variables were both nominal and ordinal, and since comparisons are made of multiple Chi Square test statistics, and a measure generalizable across contingency tables of varying sizes was desired. Cramer's V is also not affected by sample size, and therefore is useful in this case since it may be hypothesized that a statistically significant chi-square was the result of large sample size instead of any substantive relationship between the variables. Measures of association were not calculated for 2001 data for "Community Domain: Laws and Norms Favorable to Alcohol, Cigarette, and Marijuana Use" since Question 82 ("If a kid smokes cigarettes in your neighborhood, or the area around where you live, would he or she be caught by the police?" was not included on the *2001 Communities that Care© Survey*, or for "Family Domain: Family Conflict" because of data coding errors for Q2909 on the 2001 survey ("People in my family often insult or yell at each other."

Figure 3

2003 Fairfax County Protective Factor Profile by Grade
Percentage of Students ABOVE Cutoff Point (High Protection)



Source: Fairfax County *2003 Virginia Community Youth Survey*; Diffusion Consortium Project. J. David Hawkins, Ph.D., Principal Investigator. Richard F. Catalano, Ph.D., Co-Principal Investigator. Michael W. Arthur, Ph.D. Co-Investigator & Project Director. Funded by: National Institute on Drug Abuse, Department of Health & Human Services, Safe & Drug Free Schools Program, U.S. Department of Education, Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice, Center for Substance Abuse Prevention, Department of Health & Human Services.