

SPIRIT

MISSOURI SCHOOL-BASED SUBSTANCE ABUSE
PREVENTION INTERVENTION AND RESOURCE INITIATIVE

SIXTH YEAR REPORT 2007 –2008

MISSOURI DEPARTMENT OF MENTAL HEALTH
DIVISION OF ALCOHOL AND DRUG ABUSE

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The Missouri Division of Alcohol and Drug Abuse is pleased to present this Sixth Year Report of the Missouri School-based Substance Abuse Prevention Intervention Resources Initiative (SPIRIT). The report, prepared by the Missouri Institute of Mental Health (MIMH), was made possible through the Division's partnership with five school districts: Knox County, Hickman Mills (Kansas City), Ritenour (St. Louis), New Madrid County, and Carthage (Jasper County).

SPIRIT objectives are to delay onset and decrease use of substances, improve overall school performance, and reduce incidents of violence. The report shows positive outcomes and suggests future enhancements.

I hope it gives you a deeper understanding of this exciting project.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Stringer".

Mark Stringer
Director

The Department of Mental Health does not deny employment or services because of race, sex, creed, marital status, religion, national origin, disability or age of applicants or employees.

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Executive Summary

Introduction

In 2002, the Missouri Department of Mental Health's (DMH) Division of Alcohol and Drug Abuse (ADA) launched the School-based Prevention Intervention and Resources Initiative (SPIRIT). FY2008 marks the sixth year of SPIRIT, a project that proposes to delay the onset and decrease the use of substances, improve overall school performance, and reduce incidents of violence. To achieve these goals, prevention agencies are paired with participating school districts to provide technical assistance in implementing evidence-based substance abuse prevention programming and referral and assessment services as needed. In the majority of school districts, the providers not only support implementation of the programs, but conduct them as well.

The five school districts participating in the SPIRIT project this past year were Carthage R-IX, Hickman Mills C-I, Knox Co. R-I, New Madrid Co. R-I, and Ritenour. This was the first year of SPIRIT participation for the Ritenour District.

This report provides sixth year outcomes for the main goals of SPIRIT. Prevention programs currently include the following: PeaceBuilders (PB), Positive Action (PA), Life Skills Training (LST), Reconnecting Youth (RY), Second Step (SS), Project Towards No Drug Abuse (TND), and Too Good for Drugs (TGFD).

Methods

The SPIRIT evaluation, conducted by the Missouri Institute of Mental Health's Division of Child and Family Mental Health Services Research, uses a variety of data gathered through questionnaires, interviews, observations, and school records. The majority of data is collected from students in a self-report questionnaire or from teacher observations of students.

This past year, more students participated in the SPIRIT program than ever before. Further, parental consent was obtained for 76.4% of all participating students.

All consented students are assigned a unique identification code to track their responses and to ensure confidentiality. Baseline data are initially collected for every consented student in Kindergarten, fourth, sixth, and ninth grade in the fall semester. Random sampling is used to obtain follow-up data, whenever possible, to ease the burden on schools and to increase the reliability of the results. One hundred students per grade grouping (K-3, 4-5, 6-8, 9-12), equally represented by sex and grade, were randomly selected to be surveyed in both the Fall and Spring semesters. If, as in some school districts, there were an insufficient number of students for random sampling, all students were surveyed. The types of evaluation data collected is listed below:

Measures

- Teacher Observation Checklist (K – 3rd grade only): classroom teacher report survey
- SPIRIT questionnaire (4th – 5th & 6th – 12th grade versions): student self-report survey
- Student Perception of Program Effectiveness Survey (2nd – 3rd & 4th – 12th grade versions with same questions for all): student self-report survey
- Teacher and Provider Perception of Program Effectiveness Survey: Teachers who observe and those who implement self-report survey (electronic and paper-pencil versions)
- Program Fidelity Forms: implementer self-report form
- Monthly Reports: provider self-report
- Interviews (Provider, and Principal versions)
- Program Implementation Observations

Summary Outcome Findings

Substance Use

- Students in the SPIRIT evaluation report lower substance use rates than those sampled in either the 2008 Missouri Student Survey or the National Survey on Drug Use and Health for cigarettes, alcohol and marijuana.
- The age of initiation for cigarettes and inhalants increases the longer students spend in the program.
- Although past month usage of inhalants is lower in the SPIRIT sample than in the general Missouri sample, it is more than double the national percentage of use.
- In general, a higher percentage of females used substances than males.

Table 1. SPIRIT, Missouri and National Substance Use Comparison

		SPIRIT ¹	Missouri ²	National ³
Cigarettes	Lifetime use	20.2%	23.3%	23.7%
	Past month (30-day)	6.5%	10.1%	9.8%
	Age of initiation	11.22	11.31	n/a
Alcohol	Lifetime use	47.2%	53.6%	39.4%
	Past month (30-day)	13.7%	22.3%	15.9%
	Age of initiation	10.78	11.81	n/a
Marijuana	Lifetime use	10.8%	13.9%	16.2%
	Past month (30-day)	4.2%	6.1%	6.7%
	Age of initiation	12.17	12.60	n/a
Inhalants	Lifetime use	6.8%	10.4%	9.6%
	Past month (30-day)	3.4%	4.6%	1.2%
	Age of initiation	11.18	n/a	n/a

¹ SPIRIT, Spring 2008, 6th – 9th grade, n = 805 (average age = 13.00)

² Missouri Student Survey (MSS) 2008, 6th – 9th grade, n = 86,861 (average age = 13.64)

³ National Statistics on Drug Use and Health (NSDUH) 2007, 12 – 17 years of age, n = 25,241

Perceived Risk/Harm of Substance Use

- Methamphetamine, inhalants, prescription drugs, and ecstasy were perceived to be most harmful.
- Smoking one or two packs of cigarettes and drinking alcohol “nearly every day” were perceived to be least harmful.

Wrongfulness of Substance Use

- Methamphetamine is considered wrong to use by the largest percentage of students.
- Alcohol use was considered wrong by the fewest number of students.

Problem Behaviors

- The most prevalent problem behaviors, according to 4th – 9th graders, were being made fun of, making fun of others, and having rumors or lies spread about them by others.
- Younger youth tended to be bullied more than older youth. Older youth made fun of others more than younger youth.

Program Satisfaction/Effectiveness

- Overall, satisfaction with SPIRIT programs was high. Satisfaction was higher among younger students with the exception of the Reconnecting Youth program in high school, which was rated as highly as elementary school programming.
- Students reported that the program was most effective in helping them with say no to harmful things that others might want them to do (83.6%).

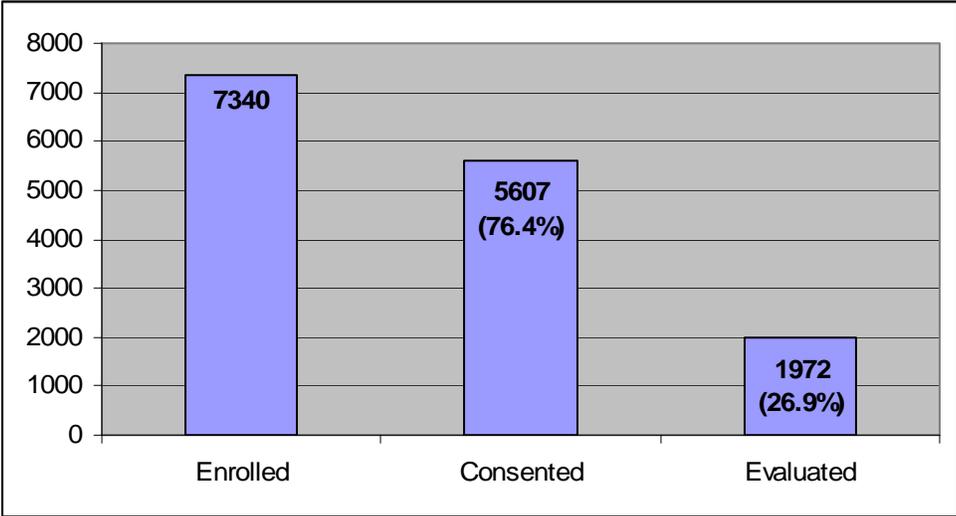
Recommendations

- More emphasis needs to be placed on resisting use of inhalants and on the consequences of use. Inhalant education should begin in elementary school.
- Greater emphasis needs to be placed on the consequences of using alcohol and cigarettes. Education on brain development and the effects of these drugs on the developing brain may be particularly helpful.
- Programming on relational/emotional aggression (making fun of others, spreading rumors, lying, etc.) should be considered, including in the high schools.
- Substance use education and prevention should be focused equally on males and females.

Chapter 1: Demographics

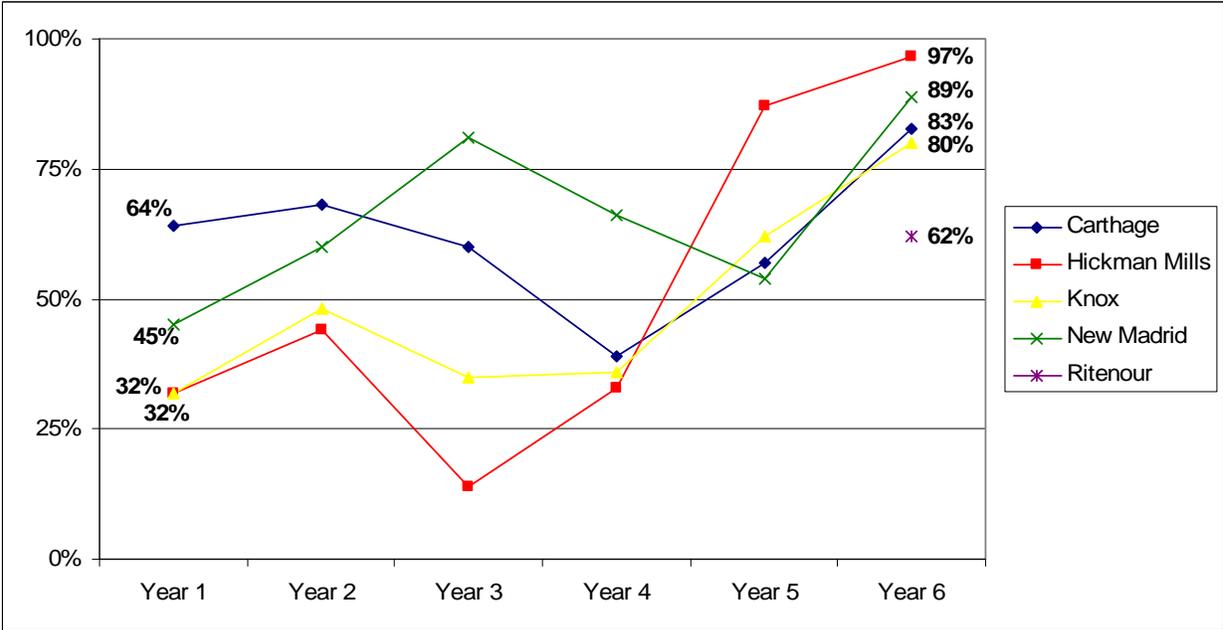
In the sixth year of the SPIRIT project, an additional 2,123 children and youth participated in SPIRIT, increasing the total number of participants to 7,340 from all districts. Over 76% (5,607) received parental consent for the evaluation. Because a random sampling technique was used in the Spring of 2008 to obtain follow-up information, 26.9% (1,972) of those enrolled were evaluated.

Figure 1. Students Enrolled, Consented, and Evaluated in Year 6



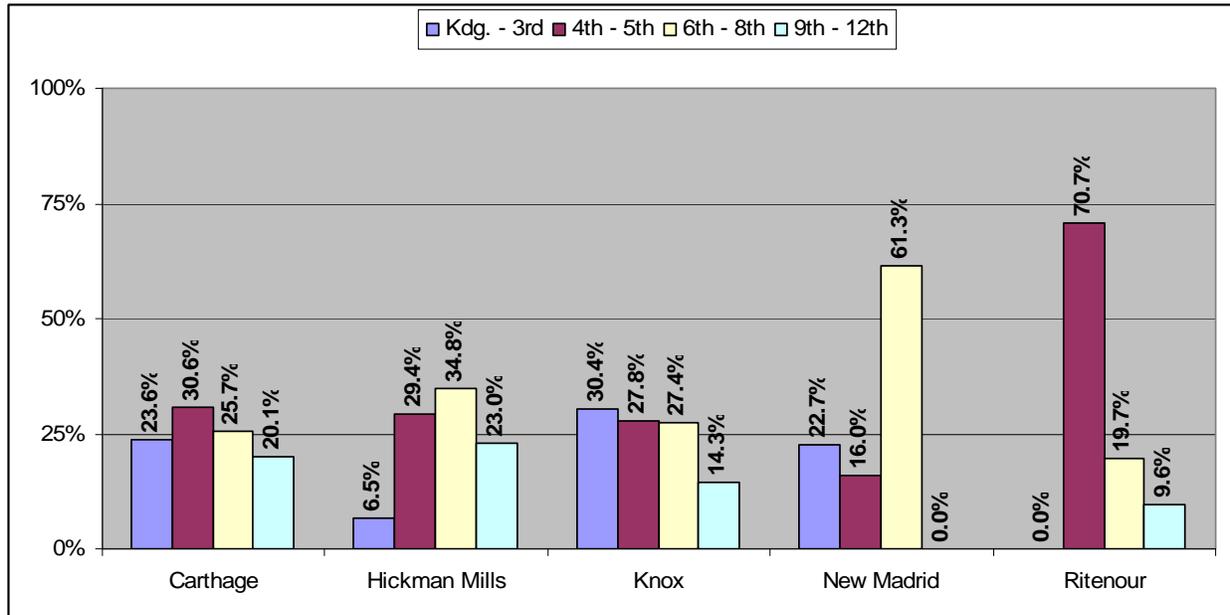
Most districts had consent rates at 80% or above. Because year 6 was Ritenour school district's first year of participation in the SPIRIT project, the consent rate is lower than in other districts. All districts increased their consent rate from Year 5 to Year 6 by anywhere from 9% to 34%.

Figure 2. Consent Rates, 2002-2008



The percentage of students in the evaluation was uneven across districts due to differences in the number of schools offering SPIRIT in each of the districts. Ritenour had the highest percentage of students overall (n = 741; 37.6%), followed by Carthage (n = 556; 28.2%), Hickman Mills (n = 282; 14.3%), Knox (n = 230; 11.7%), and New Madrid (n = 163; 8.3%). Participants represented four grade groups: Kdg. – 3rd (n = 274; 13.9%), 4th – 5th (n = 867; 44.0%), 6th – 8th (n = 550; 27.9%), and 9th – 12th (n = 281; 14.2%).

Figure 3. Percentage of Evaluated Participants across Districts by Grade Level



Almost half of the sample (50.3%) was White, Non-Hispanic. The second largest representation was Black, Non-Hispanic (26.4%), followed by Hispanic (14.9%). Because SPIRIT targets specific at-risk school districts, the distribution of youth according to their race/ethnicity is disproportionate to the total population, with fewer Whites and more African Americans and Hispanics. According to the U.S. Census estimates (2007), only 3.0% of Missourians are Hispanic, though the percentage is growing. Five and a half percent of children ages zero to four, 4.9% of five to nine year olds, 4.1% of 10 to 14 year olds, and 3.4% of 15 to 19 year olds are Hispanic.

Table 2. Percentage of Evaluated Participants across Districts by Race/Ethnicity

	Total	Carthage	Hickman Mills	Knox	New Madrid	Ritenour
White/Caucasian*	50.3%	67.1%	6.7%	90.5%	68.5%	44.0%
Black/African-American*	26.4%	1.8%	75.6%	1.4%	24.0%	29.2%
Black & White*	4.3%	1.8%	3.1%	1.4%	5.6%	6.4%
Hispanic/Latino	14.9%	26.5%	12.0%	4.8%	0.9%	13.7%
Asian*	2.8%	0.5%	0.4%	1.4%	0.9%	5.3%
Native Hawaiian or Other Pacific Islander*	0.9%	0.0%	0.0%	0.0%	0.0%	0.9%
Native American/Alaskan Native*	0.2%	0.0%	1.3%	0.0%	0.0%	0.1%
Other (not otherwise specified)*	0.4%	0.3%	0.9%	0.7%	0.0%	0.4%

Regardless of district, females (51.6%) and males (48.4%) were distributed nearly equally in the sample.

Table 3. Percentage of Evaluated Participants across District by Sex

	Carthage	Hickman Mills	Knox	New Madrid	Ritenour
Male	46.8%	49.6%	45.2%	47.9%	48.9%
Female	53.2%	50.4%	54.8%	52.1%	51.1%

Summary

- The 2007-2008 school year saw the largest number of students in SPIRIT programs. More students had parental consent and participated in the evaluation than in previous years.
- This past year saw the inclusion of a new district. Ritenour replaced the Jennings district in the St. Louis area.
- Because SPIRIT targets specific at-risk school districts, the distribution of youth according to their race/ethnicity is disproportionate to the total population, with fewer Whites and more African Americans and Hispanics.

Chapter 2: The SPIRIT Programs

SPIRIT is currently being implemented in five school districts across the state of Missouri. As part of the program evaluation, evaluators conducted two site visits at each district and reviewed information submitted by prevention specialists in each of the participating districts. Below are brief summaries of the prevention programs that are offered at each school district. The figure following these pages shows the evidence-based programs used at each of the sites. Most of the sample was either participating in Peace Builders (25.8%) or Second Step (27.9%). The remaining were involved in Life Skills Training (9.7%), Too Good for Drugs (9.7%), Positive Action (4.5%), Reconnecting Youth (4.0%), Project Towards No Drug Abuse (1.5%), or a combination of Second Step and Too Good for Drugs (6.9%).

Carthage School District

SPIRIT operates in six schools in the Carthage School District; three elementary schools, one middle school, one regular high school and one alternative high school. PeaceBuilders is offered in the elementary schools, Life Skills Training in the middle school, and Reconnecting Youth (RY) for the two high schools. All programs are nationally recognized as evidence-based. Prevention specialists teach at the elementary schools and at the high school level; health and PE teachers implement the program with middle school students. All programs were administered according to program specifications. In addition to these evidence-based programs, the prevention specialists also initiated several complementary activities, including a program called Youth Reconnected that reinforces the skills learned in RY, and community service projects.

"PeaceBuilders has resolved most behavioral problems."

--Elementary school principal

"Reconnecting Youth really saved my life."

--Reconnecting Youth student

SPIRIT was very well received by school personnel in the elementary schools. Principals stated that in-school suspensions were down, children were using program language to resolve conflicts, and behavioral problems were reduced as a result of the PeaceBuilders Program. At the middle school, teachers augment Life Skills Training to make it more interactive. At the alternative school and regular high school, principals agreed that SPIRIT

had a tremendous impact on the students served and that they valued the program. The provider agency is involved in numerous collaborations.

Hickman Mills School District

Served by SPIRIT are one of six elementary, one of two middle schools and one of two high schools. Second Step and Too Good for Drugs are offered in the elementary school, Second Step is offered in the middle school and Reconnecting Youth is offered in the high school. All programs are nationally recognized as evidence-based. The elementary school programs are new this year because previous evaluations had shown that students needed more emphasis on behavioral alternatives to violence and education about ATOD, and these programs focus on these issues. Second Step is also taught at the middle school for the same reasons.

"We are blessed to have [SPIRIT] as a resource."

--Elementary school principal

The provider prevention specialists implement the programs at all schools. Last year, the program was taught by Physical Education (PE) teachers in the middle school. According to the principal, the PE teachers feel that the change to prevention specialists as teachers has been very positive for the youth. She also stated that the use of drugs and the number of fights had decreased.

"I feel like the second year of the program coincided with the drop in drug use during school time and less fights."

—Middle School Principal

At the high school, specific lessons from RY were taught to all ninth grade students during Freshman Focus in the first semester because scheduling problems made it impossible to implement RY as a class. Three classes were set up for second semester, but students were mandated into credit retrieval classes if warranted, leaving only six students in RY. The prevention specialists work with small groups of selected students on social skills and anger management.

New Madrid School District

SPIRIT serves one elementary and one middle school in the New Madrid district. PeaceBuilders and Positive Action are offered in the elementary school and Positive Action is offered in the middle school. The high school program was discontinued mid-way through the year because it was not being implemented according to program developer specifications. The provider prevention specialist introduced PeaceBuilders this year in the elementary school, and the principal and teachers were so impressed with the program and its results that they appealed to the superintendent to have the program implemented in all of the elementary schools next year, which it will be. In the first part of last year, PE teachers implemented only the drug curriculum of Positive Action in the middle school. Mid-way through the year, they doubled the amount of time allotted to the program in order to comply with fidelity standards. They also began teaching selected lessons from the regular curriculum. The prevention coordinator has provided many special activities for the students including an anger management program for all of the middle school students, a fun day at the end of the year to wrap up the program in both the elementary and middle schools, and a field trip for the primary children to Cape Girardeau. In addition, the prevention coordinator serves on the school guidance committee and maintains collaborations with several area agencies and committees.

"I've had minimal discipline issues this year."

--Elementary principal

Knox County School District

". . . SPIRIT teaches you take responsibility for your actions and the consequences of those actions."

—Superintendent

SPIRIT is offered at the only elementary, middle and high schools in the Knox district. PeaceBuilders is offered in the elementary school, Life Skills Training in the middle school, and Project Towards No Drug Abuse in the high school. Prevention specialists teach the programs in the middle school and ninth grade in the high school. Classroom teachers implement PeaceBuilders in the elementary school. This year, the entire administration of the district changed, and all new principals believe that SPIRIT has made a tremendous difference, especially over

time. One said, "We look at the effects of SPIRIT on a 5 or 6 year plan so we have to look at what the high school was like then and now. I would have to say that it's [SPIRIT] made a big difference."

The providers at this site are extremely active in the community; they collaborate with Rotary, Head Start, the Ministerial Alliance, and the Meth Coalition among other organizations. They also provide special lessons to students upon request from teachers, serve as chaperones for school events, and generally are a part of the school community. They also sponsor Donuts for Dads and Muffins for Moms as well as a father/daughter dance to involve parents. They produce a monthly newsletter to communicate with families.

Ritenour School District

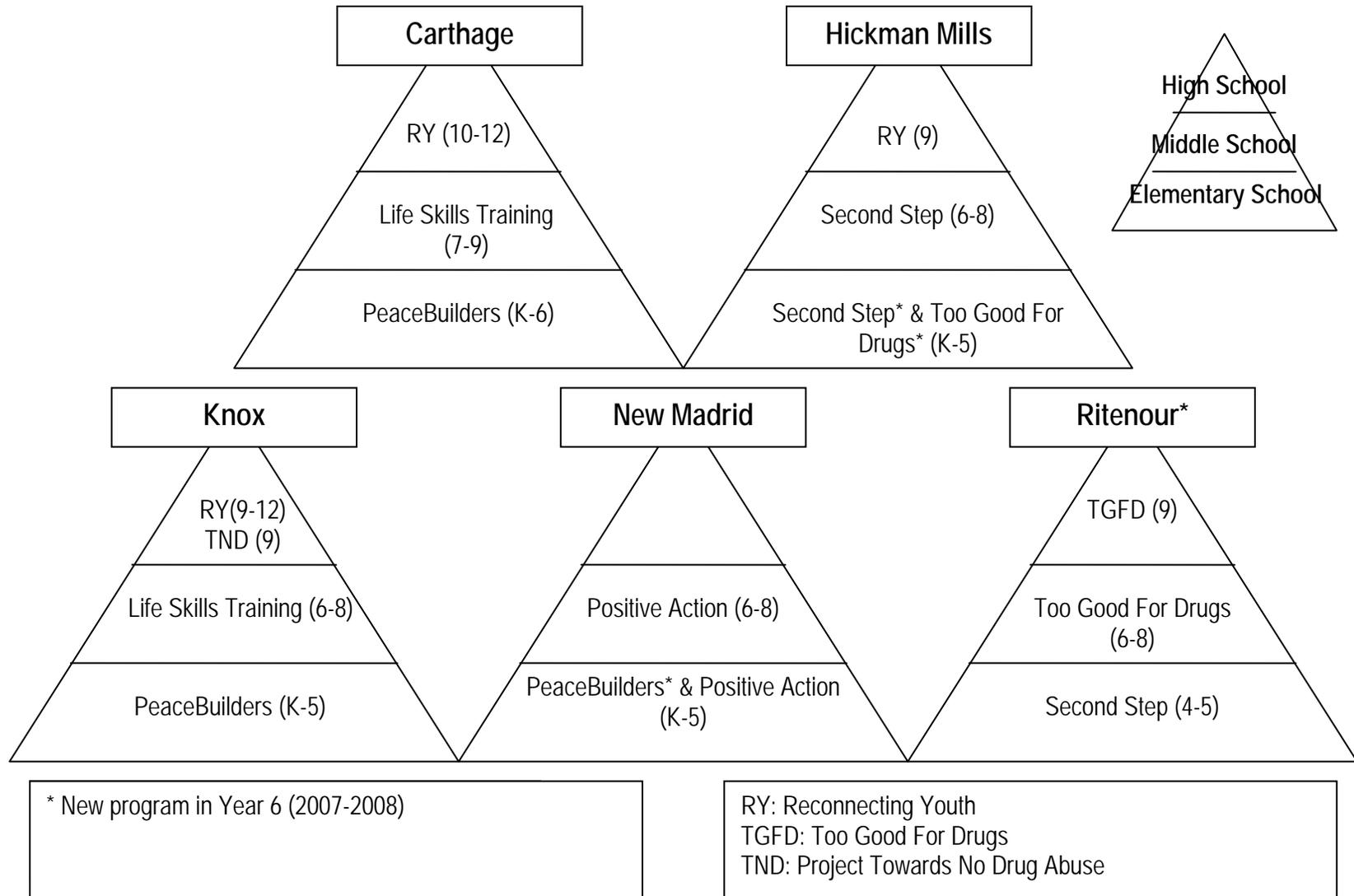
The Ritenour district is new to SPIRIT this year. While all six elementary schools are involved in SPIRIT, only 4th and 5th graders participate in the program. Students in the two middle schools and the one high school, through 9th grade, also receive programs. Elementary students are taught Second Step, and middle and high school students receive Too Good For Drugs. Prevention specialists provide teaching at all levels. Principals were very enthusiastic when interviewed about SPIRIT. They believed that the

extra support offered by the programming would be valuable to the students as both informational and behavioral interventions. The prevention specialists also worked with small groups of selected children and youth at each of the schools. According to one of the principals, "5-10% of the kids produce 90% of the discipline problems," so the small groups are particularly beneficial.

"Although time is a problem, we value doing this [SPIRIT] for kids. We are going to make it work."

-Elementary Principal

Figure 4. Implementation Differences by Site, 2007-2008



Chapter 3: Substance Use

Chapter 3 describes two indicators from the National Outcome Measures (NOMs): (1) age of first use; and (2) 30 day use. These two indicators, along with lifetime substance use among the SPIRIT youth are compared to the most current state and national surveys: the 2008 Missouri Student Survey (MSS) and the 2007 National Survey on Drug Use and Health (NSDUH).

Substance Use: Comparisons with State and National Data

Cigarettes. A lower percentage of SPIRIT youth reported ever smoking cigarettes or smoking in the 30 days prior to taking the survey, compared to youth who participated in the MSS or the NSDUH surveys.

Marijuana. A lower percentage of SPIRIT youth reported ever smoking marijuana or using it in the 30 days prior to completing the survey.

Alcohol. Fewer SPIRIT youth reported the use of alcohol within the past 30 days than their counterparts in Missouri and the U.S. However, the percentage of SPIRIT youth that reported ever having used alcohol in their lifetime, while lower than Missouri, was higher than the U.S.

Inhalants. Fewer SPIRIT youth than those in Missouri and the U.S reported ever having used inhalants in their lifetime. However, the percentage of SPIRIT youth reporting the use of inhalants within the past 30 days, while lower than Missouri, was higher than the U.S. There is no comparison for the age of initiation of inhalants. On average, SPIRIT youth report first use of inhalants *three* years earlier than the use of other drugs.

Table 4. SPIRIT, Missouri and National Drug Use Comparison

		SPIRIT ¹	Missouri ²	National ³
Cigarettes	Lifetime use	20.2%	23.3%	23.7%
	Past month (30-day)	6.5%	10.1%	9.8%
	Age of initiation	11.22	11.31	n/a
Alcohol	Lifetime use	47.2%	53.6%	39.4%
	Past month (30-day)	13.7%	22.3%	15.9%
	Age of initiation	10.78	11.81	n/a
Marijuana	Lifetime use	10.8%	13.9%	16.2%
	Past month (30-day)	4.2%	6.1%	6.7%
	Age of initiation	12.17	12.60	n/a
Inhalants	Lifetime use	6.8%	10.4%	9.6%
	Past month (30-day)	3.4%	4.6%	1.2%
	Age of initiation	11.18	n/a	n/a

¹ SPIRIT, Spring 2008, 6th – 9th grade, n = 805 (average age = 13.00)

² Missouri Student Survey (MSS) 2008, 6th – 9th grade, n = 86,861 (average age = 13.64)

³ National Statistics on Drug Use and Health (NSDUH) 2007, 12 – 17 years of age, n = 25,241

Substance Use: Year 6 Overview

Daily Use of Cigarettes and Alcohol

Sixth – 12th graders were asked how many cigarettes they smoke per day. The majority (77.4%) indicated they smoked 5 or fewer cigarettes a day. Only 14.0% smoked 6-15 cigarettes a day (about ½ a pack), 3.2% reported smoking 16-25 cigarettes a day (about 1 pack), and 5.4% smoked 26 or more cigarettes a day (more than a pack a day).

A large percentage (47.1%) of 6th – 12th grade youth who reported drinking alcohol indicated that they only had one drink a day. Only 17.2% drank two drinks a day, 13.2% drank 3 drinks a day, and 5.2% drank 4 drinks a day. However, 17.2% reported drinking 5 or more drinks a day on the days that they drink. Encouragingly, however, when youth were asked if they had drunk 5 or more drinks on the same occasion within the past 30 days (binge drinking) only 7.9% reported doing so.

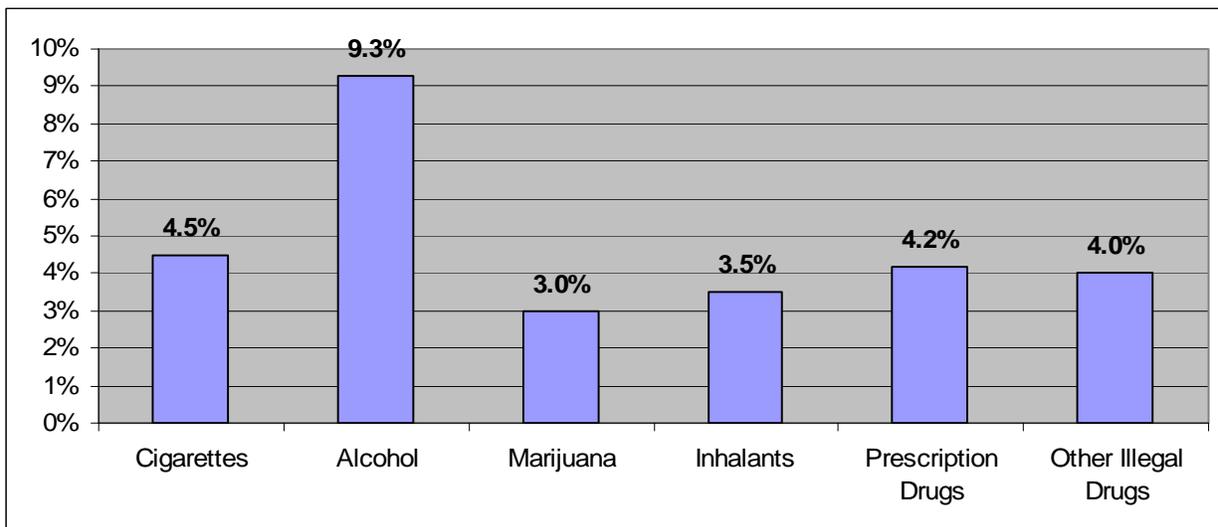
Alcohol Use and Automobiles

Among all students, 13.9% had ridden in a car driven by someone who had been drinking, and 2.7% admitted to having driven a car while drunk within the past 30 days.

30-Day Use of All Substances

Of all of the substances explored, alcohol was by far the drug of choice among SPIRIT youth. More than 10% had consumed alcohol in the 30 days prior to the survey; less than 5% had used other drugs. However, among those who had used a substance 10 or more times, cigarettes were the preferred drug.

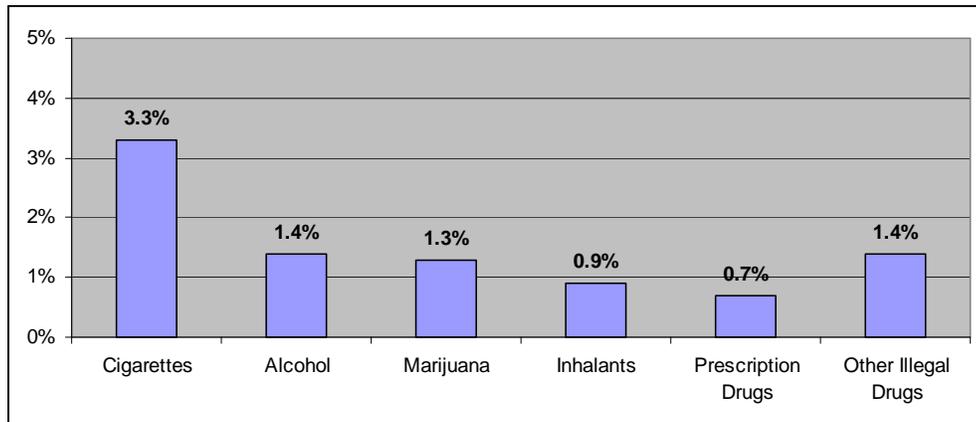
Figure 5. Percentage of youth who used substances one or more times in the past 30 days in Year 6 (4th – 12th grade[†])



[†] Inhalants, Prescription Drugs, Other Illegal Drugs 6th – 12th grade only.

When the use of substances 10 or more times in the past 30 days was examined, cigarettes were identified as the substance used heavily by more students than any other drug.

Figure 6. Percentage of students who used drugs 10 or more times in the past 30 days in Year 6 (4th – 12th grade[†])

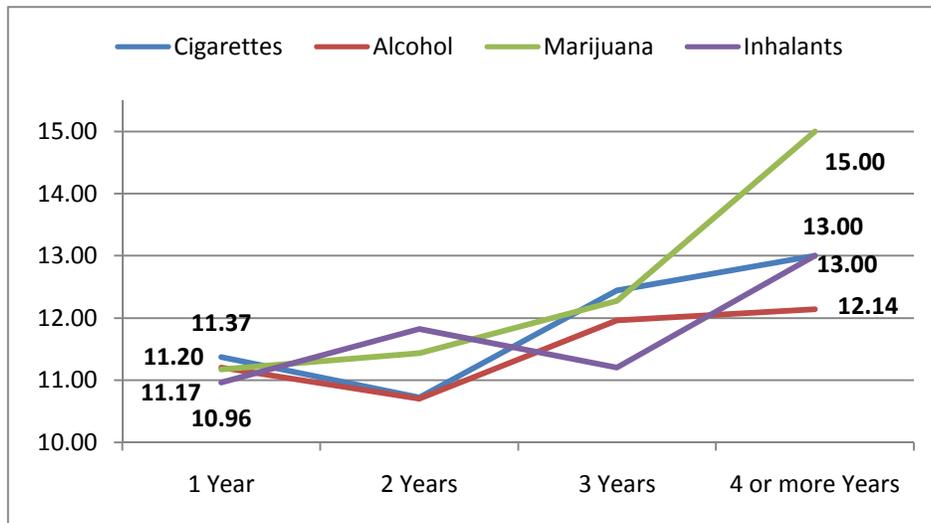


[†] Inhalants, Prescription Drugs, Other Illegal Drugs 6th – 12th grade only.

Exposure to SPIRIT: Effect on Substance Use

The age of initiation of drug use increased the longer time youth were exposed to the SPIRIT project. Years of exposure to the SPIRIT project greatly delayed the onset of marijuana use. First use of marijuana averaged 11.17 years of age for youth in SPIRIT for one year and 15.00 for those with four or more years of exposure.

Figure 7. Age of 1st Use by number of years in SPIRIT (6th – 12th grade)



Substance Use by District, Grade Level, and Sex

There were many differences in the frequency of substance users across districts. Because Ritenour students had only one year of exposure to SPIRIT, it would be expected that there would be more users in that school district.

There were a higher percentage of cigarette users in New Madrid and Ritenour than the other districts.

Hickman Mills and Ritenour had a higher percentage of lifetime alcohol and marijuana users than the other districts.

The Knox school district had a lower percentage of users of all substances than any other district. However, the age of initiation of substance use among Knox users was similar to other districts for most drugs.

The age of first use of cigarettes and inhalants in Hickman Mills is younger than in the other districts.

Table 5. Frequency of Substance Use and Age of Initiation in Year 6 by District (6th – 9th Grade).[†]

		Carthage	Hickman Mills	Knox	New Madrid [†]	Ritenour
Cigarettes	Lifetime use	19.4%	15.3%	12.9%	27.0%	26.7%
	Past month (30-day)	4.4%	4.9%	2.2%	12.0%	9.7%
	Age of initiation	11.20	10.96	11.86	11.15	11.48
Alcohol	Lifetime use	34.3%	58.9%	32.3%	40.0%	60.8%
	Past month (30-day)	11.6%	11.7%	8.6%	11.0%	21.3%
	Age of initiation	11.15	10.44	10.94	10.57	10.82
Marijuana	Lifetime use	7.3%	13.5%	3.2%	10.0%	16.1%
	Past month (30-day)	3.0%	3.7%	1.1%	3.0%	7.9%
	Age of initiation	12.78	11.48	11.00	11.90	12.49
Inhalants	Lifetime use	4.3%	4.9%	2.2%	7.0%	10.1%
	Past month (30-day)	3.6%	3.1%	2.2%	4.0%	3.7%
	Age of initiation	11.58	9.75	15.00	12.00	11.05

[†]New Madrid did not have a program for 9th grade youth in Year 6. These statistics are for 6th – 8th grade youth only.

As might be expected, a larger percentage of youth in higher grades (9th-12th grades) reported substance use in their lifetime and within the past 30-days, with the exception of inhalants. Regardless of grade level, the frequency of inhalant users is similar.

Table 6. Frequency of Substance Use in Year 6 by Grade Level

		4 th -5 th grade	6 th -8 th grade	9 th -12 th grade
Cigarettes	Lifetime use	5.9%	17.7%	32.2%
	Past month (30-day)	0.9%	5.5%	13.9%
Alcohol	Lifetime use	25.1%	43.5%	58.8%
	Past month (30-day)	3.7%	11.0%	23.1%
Marijuana	Lifetime use	1.6%	7.8%	23.1%
	Past month (30-day)	0.5%	3.2%	10.5%
Inhalants	Lifetime use	n/a	7.2%	7.5%
	Past month (30-day)	n/a	3.7%	3.4%

On the whole, there were only slight differences in use among males and females with regard to substances. For example, of 4th – 12th graders, females had a higher percentage of lifetime and past month use of cigarettes and marijuana. A larger percentage of females in 6th – 12th grade used inhalants, but they began using inhalants at a later age than males.

Table 7. Frequency of Substance Use in Year 6 by Sex[†]

		Male	Female
Cigarettes	Lifetime use	12.2%	15.7%
	Past month (30-day)	3.5%	5.5%
	Age of initiation	11.32	11.30
Alcohol	Lifetime use	36.4%	37.1%
	Past month (30-day)	9.5%	9.1%
	Age of initiation	10.81	10.98
Marijuana	Lifetime use	6.8%	7.7%
	Past month (30-day)	2.8%	3.2%
	Age of initiation	12.65	12.67
Inhalants	Lifetime use	5.7%	8.6%
	Past month (30-day)	3.1%	3.8%
	Age of initiation	10.94	11.76

[†] Cigarette, alcohol and marijuana use reported for 4th – 12th graders, inhalant use asked only of 6th – 12th graders.

Summary

- Cigarette, alcohol, marijuana and inhalant use was lower among youth in the SPIRIT evaluation when compared to state data, and with the exception of lifetime alcohol use, lower than national averages.
- Fewer SPIRIT youth reported ever having used inhalants in their lifetime than those in Missouri and the U.S. However, the percentage of SPIRIT youth reporting the use of inhalants within the past 30-days, while lower than Missouri, was higher than the U.S.
- Alcohol was the drug of choice among SPIRIT youth, followed by cigarette use. However, use overall was low, with around 90% of SPIRIT youth reported no drinking in the past 30 days. Around 8% reported binge drinking (5 or more drinks on the same occasion) in the past 30 days.
- 13.9% had ridden in a car driven by someone who had been drinking, and 2.7% of youth reported driven a car while drunk within the past 30 days.
- The age of initiation of drug use, especially marijuana, increased the longer youth are exposed to the SPIRIT program.
- Substance use was slightly *higher* among females than males.

Chapter 4: Substance Use Attitudes

Perceived risk of harm of use and the perception of disapproving attitudes are other NOMs indicators of interest. The SPIRIT evaluation examined the extent that youth perceived the use of substances were harmful and the extent that the use of substances was wrong.

Perceived Risk or Harm of Use

More youth perceived the use of methamphetamine to pose a moderate or great risk of harm (90.2%) than the use of any other drug, followed by inhalants (88.0%), prescriptions drugs (88.1%), and ecstasy (86.6%).

Of all risky behaviors, smoking one or two packs of cigarettes (61.2%) and drinking alcohol (62.9%) had the lowest percentages of students who thought it moderately or greatly harmful.

Table 8. Youth Perception of the risk of causing harm to themselves physically or in other ways if they use substances in Year 6 (4th – 12th Grade[†])

	No Risk	Slight Risk	Moderate Risk	Great Risk
Smoke one or two packs of cigarettes per day	16.5%	22.2%	30.2%	31.0%
Drink one or two alcoholic beverages (beer, wine, liquor) nearly every day?	14.1%	23.0%	33.6%	29.3%
Smoke marijuana regularly?	15.0%	7.4%	19.0%	58.5%
Sniff anything through their nose to get high	6.7%	5.3%	18.1%	69.9%
Prescription drugs without a prescription	6.3%	5.6%	17.2%	70.9%
Use ecstasy occasionally (more than once or twice)	5.9%	7.5%	17.2%	69.4%
Use meth occasionally (more than once or twice)	6.1%	3.7%	12.7%	77.5%

[†] Inhalants, Prescription Drugs, Other Illegal Drugs 6th – 12th grade only.

A larger percentage of students in SPIRIT perceive inhalants to be of greater risk of harm than those in the Missouri Student Survey. It is interesting to note that students taking the MSS see smoking cigarettes as more harmful than SPIRIT students. An equal percentage of students in SPIRIT and MSS think consuming alcohol is risky.

Table 9. Risk of Harm from Substance Use: SPIRIT vs. Missouri (% Moderate and Great Risk; 6th – 9th Grade)

	SPIRIT ¹	Missouri ²
Smoke one or two packs of cigarettes per day	67.3%	87.7%
Drink one or two alcoholic beverages (beer, wine, liquor) nearly every day?	68.1%	68.2%
Smoke marijuana regularly?	82.3%	85.9%
Sniff anything through their nose to get high	87.7%	79.7%
Prescription drugs without a prescription	88.0%	n/a
Use ecstasy occasionally (more than once or twice)	86.7%	88.6%
Use meth occasionally (more than once or twice)	90.0%	92.2%

¹ SPIRIT, Spring 2008, 6th – 9th grade, n = 805 (average age = 13.00)

² Missouri Student Survey (MSS) 2008, 6th – 9th grade, n = 86,861 (average age = 13.64)

While well over half of students in all districts perceived smoking one or two packs of cigarettes per day as risky, it was thought to be less harmful than other substance use. In general, the Carthage and Knox school districts perceived substances to be more harmful than other SPIRIT sites.

Table 10. Risk of Harm from Substance Use by District (% Moderate and Great Risk; 4th – 12th Grade[†])

	Total	Carthage	Hickman Mills	Knox	New Madrid	Ritenour
Smoke one or two packs of cigarettes per day	61.2%	66.5%	60.5%	66.5%	60.8%	57.4%
Drink one or two alcoholic beverages (beer, wine, liquor) nearly every day?	62.9%	66.3%	60.1%	63.9%	72.8%	60.0%
Smoke marijuana regularly?	77.5%	82.4%	71.5%	87.7%	81.3%	74.1%
Sniff anything through their nose to get high	88.0%	91.3%	86.4%	94.8%	79.8%	85.9%
Prescription drugs without a prescription	88.1%	91.3%	85.7%	94.8%	81.9%	86.0%
Use ecstasy occasionally (more than once or twice)	86.6%	87.9%	82.7%	95.8%	80.6%	86.9%
Use meth occasionally (more than once or twice)	90.2%	92.0%	85.7%	96.9%	81.8%	92.6%

[†] Inhalants, Prescription Drugs, Other Illegal Drugs 6th – 12th grade only.

Perception of Disapproving Attitudes

The occasional use of methamphetamine use was considered to be wrong or very wrong by the largest percentage of students (95.6%), followed by the occasional use of ecstasy (93.7%), use of prescription drugs without a prescription (93.5%), inhalants use (93.3%), and the regular use of marijuana (90.5%); see table on next page.

However, cigarette and alcohol use was considered to be wrong or very wrong by 77.5% and 69.2% of youth, respectively.

Table 11. Youth Perception of How Wrong it is to Use Substances in Year 6 (4th – 12th Grade[†])

	Very wrong	Wrong	A little bit Wrong	Not wrong at all
Smoke one or two packs of cigarettes per day	54.0%	23.5%	15.2%	7.2%
Drink one or two alcoholic beverages (beer, wine, liquor) nearly every day?	46.2%	23.0%	21.5%	9.4%
Smoke marijuana regularly?	77.6%	12.9%	4.8%	4.7%
Sniff anything through their nose to get high	77.6%	15.7%	4.4%	2.3%
Prescription drugs without a prescription	77.1%	16.4%	3.6%	2.8%
Use ecstasy occasionally (more than once or twice)	78.3%	15.4%	3.9%	2.4%
Use meth occasionally (more than once or twice)	83.5%	12.1%	2.2%	2.2%

[†] Inhalants, Prescription Drugs, Other Illegal Drugs 6th – 12th grade only.

A smaller percentage of SPIRIT students thought daily cigarette smoking or drinking alcoholic beverages was wrong when compared to those in the MSS.

Table 12. Wrongfulness of Substance Use: SPIRIT vs. MO (% Very wrong and Wrong; 6th – 9th Grade)

	SPIRIT ¹	Missouri ²
Smoke one or two packs of cigarettes per day	70.0%	85.6%
Drink one or two alcoholic beverages (beer, wine, liquor) nearly every day?	60.9%	78.5%
Smoke marijuana regularly?	88.8%	89.1%
Sniff anything through their nose to get high	93.4%	n/a
Prescription drugs without a prescription	93.8%	n/a
Use ecstasy occasionally (more than once or twice)	93.8%	96.3% [†]
Use meth occasionally (more than once or twice)	95.8%	

¹ SPIRIT, Spring 2008, 6th – 9th grade, n = 805 (average age = 13.00)

² Missouri Student Survey (MSS) 2008, 6th – 9th grade, n = 86,861 (average age = 13.64)

[†] The MSS asks about meth, club drugs, and ecstasy within the same question

All districts considered each of the substances wrong or very wrong, 100% of students in the Knox district thought prescription drugs, ecstasy and methamphetamine were wrong.

Table 13. Wrongfulness of Substance Use by District (% Very wrong and Wrong; 4th – 12th Grade)

	Total	Carthage	Hickman Mills	Knox	New Madrid	Ritenour
Smoke one or two packs of cigarettes per day	77.5%	78.9%	74.5%	85.3%	68.3%	77.8%
Drink one or two alcoholic beverages (beer, wine, liquor) nearly every day?	69.2%	72.8%	62.4%	77.1%	71.4%	67.3%
Smoke marijuana regularly?	90.5%	89.2%	86.6%	96.6%	91.9%	90.8%
Sniff anything through their nose to get high	93.3%	92.5%	84.4%	98.9%	90.9%	92.1%
Prescription drugs without a prescription	93.5%	93.7%	93.8%	100%	93.0%	90.7%
Use ecstasy occasionally (more than once or twice)	93.7%	92.3%	93.3%	100%	93.9%	92.6%
Use meth occasionally (more than once or twice)	95.6%	94.4%	95.7%	100%	95.0%	95.4%

[†] Inhalants, Prescription Drugs, Other Illegal Drugs 6th – 12th grade only.

Summary

- SPIRIT youth felt strongly that methamphetamine, prescription drugs, and ecstasy were very harmful and very wrong. These patterns mirrored those of the MSS-surveyed youth.
- Cigarette and alcohol use were perceived to be least harmful.
- Encouragingly, a larger percentage of students in SPIRIT perceived inhalants were a greater risk of harm

- A smaller percentage of SPIRIT students thought daily cigarette smoking or drinking alcoholic beverages was wrong when compared to those in the MSS.
- While well over half of students in all districts perceived smoking one or two packs of cigarettes per day as risky, it was thought to be less harmful than other substance use. In general, the Carthage and Knox school districts perceived substances to be more harmful than other SPIRIT sites.
- In Year 6, a smaller percentage of students in grades 4th through 9th thought frequent cigarette smoking and alcoholic use was wrong compared to students in Year 5, though a large majority still felt it was either wrong or very wrong.
- Between Year 5 and Year 6, improvements in the perception of harmfulness were made for all substances with the exception of cigarettes which declined slightly, though not significantly. Some of those comparisons were dramatic such as methamphetamine, ecstasy, inhalants, and marijuana.

Chapter 5: Problem Behavior

Youth in 4th – 12th grades were asked if they had engaged in aggressive and bullying behaviors or were the victim of such behaviors within the past three months.

A majority of youth reported having been made fun of, making fun of others, and having rumors spread about them during that time frame. A lesser, but still large percentage, of youth reported being harassed or bullied, being pushed, shoved, slapped, hit or kicked, or hitting or pushing other kids at school.

It is apparent that youth are more willing to admit being the victim than the aggressor. Wherever there was a corresponding victim and aggressor behavior, a greater percentage of youth report being victims than aggressors. The behavior in which this was most prevalent was spreading rumors. In the total Year 6 sample 54.6% of youth reported having had rumors spread about them in the past 3 months, while only 26.6% reported spreading rumors about others.

A greater percentage of youth in the Ritenour school district reported problem behaviors. This, however, might be expected as the SPIRIT program was only been present in this district for one year, as compared to six years in the other districts. In general, a greater percentage of youth in the Hickman Mills, New Madrid and Ritenour school districts reported physical acts of aggression such as hitting or pushing others, being in a physical fight, and being afraid of being beaten up than in the Carthage and Knox school districts.

**Table 14. Percentage of Youth Reporting Problem Behaviors by District in Year 6
(Past 3 months; 4th – 12th Grade)**

	Total	Carthage	Hickman Mills	Knox	New Madrid	Ritenour
Been made fun of	62.5%	57.6%	63.2%	61.0%	58.1%	66.3%
Made fun of other people	62.0%	56.3%	67.3%	51.2%	62.7%	65.8%
Had mean rumors or lies spread about you	54.6%	49.3%	53.5%	51.9%	57.6%	58.2%
Been harassed or bullied	43.0%	41.6%	37.0%	35.2%	30.4%	49.7%
Been pushed, shoved, slapped, hit or kicked	42.0%	35.3%	36.5%	38.0%	36.9%	49.4%
Hit or pushed other kids at school	41.6%	27.9%	51.4%	29.4%	48.4%	47.7%
Spread mean rumors about other kids	26.6%	20.7%	33.2%	20.1%	29.6%	28.7%
Been in a physical fight	26.4%	19.7%	28.6%	15.8%	24.8%	32.0%
Been afraid of being beaten up	24.7%	21.6%	16.2%	20.1%	21.1%	30.8%
Seen someone carrying a gun, knife or other weapon	23.0%	22.2%	22.4%	8.3%	11.0%	31.8%
Been threatened or injured with weapon	8.2%	6.7%	5.6%	5.2%	8.0%	13.4%
Used any weapon to threaten or bully someone	5.1%	5.1%	4.3%	1.1%	5.0%	7.4%

For the most part, younger youth reported more victimization and aggressive behaviors than older youth. The exceptions were making fun of other people and seeing someone with a weapon, both of which increased as grade level increased and thus were highest among 9th – 12th grade youth. Being made fun of was the most prevalent problem behavior among 4th – 5th graders; making fun of others was the most prevalent problem behavior in 6th – 12th grade youth. These findings suggest that more programming in the high schools about the destructive effects of bullying may be warranted.

**Table 15. Percentage of Youth Reporting Problem Behaviors by Grade Level in Year 6
(Past 3 months; 4th – 12th Grade)**

	4 th – 5 th	6 th – 8 th	9 th – 12 th
Been made fun of	66.6%	60.2%	54.1%
Had mean rumors or lies spread about you	60.5%	52.0%	43.5%
Made fun of other people	55.9%	63.9%	71.8%
Been harassed or bullied	52.4%	36.3%	26.7%
Been pushed, shoved, slapped, hit or kicked	51.9%	36.3%	22.4%
Hit or pushed other kids at school	43.9%	43.4%	30.8%
Been in a physical fight	33.2%	20.7%	17.4%
Been afraid of being beaten up	32.8%	19.6%	9.2%
Spread mean rumors about other kids	29.7%	27.2%	15.6%
Seen someone carrying a gun, knife or other weapon	n/a	20.0%	28.7%
Been threatened or injured with weapon	n/a	9.2%	7.5%
Used any weapon to threaten or bully someone	n/a	6.2%	3.4%

For the most part, females reported higher non-physical victimization, while males were more likely both to engage in aggressive behaviors and be the victims of physical violence. Rumor-spreading was similar for both groups.

Table 16. Percentage of Youth Reporting Problem Behaviors in Year 6 by Sex (Past 3 months; 4th – 12th Grade)

	Male	Female
Made fun of other people	63.6%	60.6%
Been made fun of	58.8%	65.9%
Hit or pushed other kids at school	49.8%	34.1%
Had mean rumors or lies spread about you	48.9%	59.9%
Been pushed, shoved, slapped, hit or kicked	44.7%	39.6%
Been harassed or bullied	39.5%	46.3%
Been in a physical fight	36.8%	17.0%
Spread mean rumors about other kids	25.6%	27.6%
Been afraid of being beaten up	22.0%	27.2%
Seen someone carrying a gun, knife or other weapon	21.8%	24.0%
Been threatened or injured with weapon	9.8%	6.8%
Used any weapon to threaten or bully someone	6.5%	3.9%

The longer youth have been exposed to the SPIRIT project the less likely they are to be frequent aggressors or victims of problem behavior. Most significantly, the percentage of youth who made fun of others declined depending upon the number of years of exposure. An illustration of this difference was that 17.6% of youth who had completed one year of SPIRIT reported making fun of others 10 or more times in the past three months, whereas only 3.0% of those who were in the program for four or more years reported doing so. When most other behaviors were considered, youth who were exposed to the program for two or more years were less likely to be the frequent aggressors or victims of problem behavior.

Figure 8. Percentage of Youth Reporting Being the Aggressor of Problem Behavior by Number of Years in SPIRIT (10 or More Times in the Past 3 Months; 6th – 12th grade)

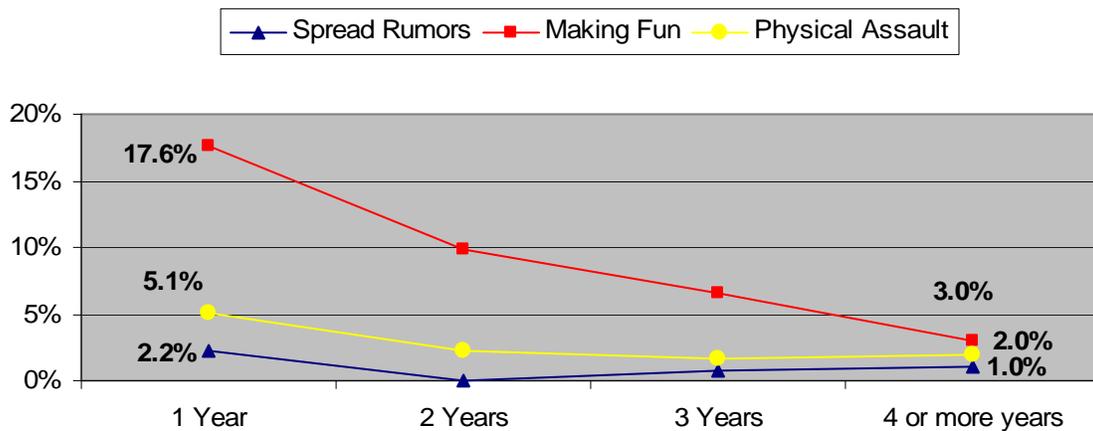
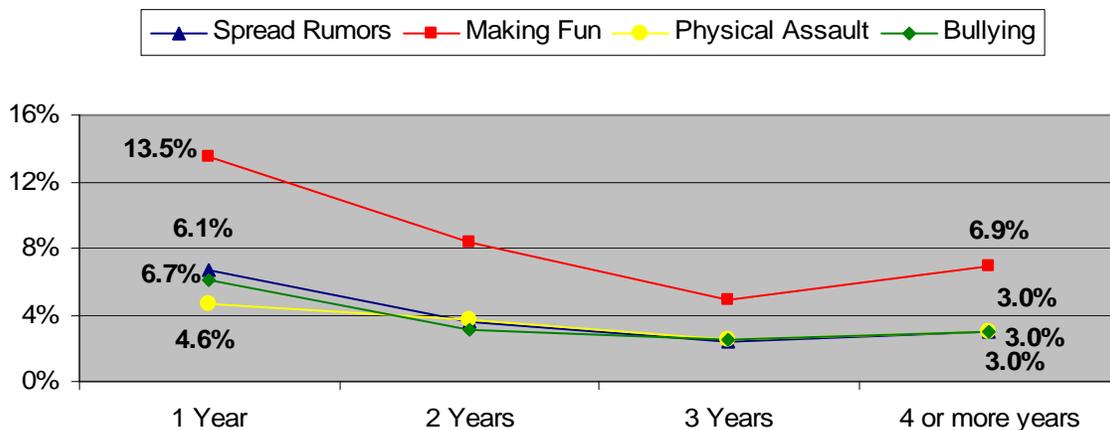


Figure 9. Percentage of Youth Reporting Being the Victim of Problem Behavior by Number of Years in SPIRIT (10 or More Times in the Past 3 Months; 6th – 12th grade)



Summary

- A majority of youth reported having been made fun of, making fun of others, and having rumors spread about them within the past three months. A smaller, but still large percentage, of youth reported being harassed or bullied, being pushed, shoved, slapped, hit or kicked, or hitting or pushing other kids at school.

Chapter 6: Program Effectiveness

Children and youth in 2nd through 12th grades were asked to report their perception of their particular prevention program's effectiveness. Students, on the whole, were satisfied and felt the programs were effective.

In year 6, children and youth thought the program was most effective in helping with peer pressure—83.6% thought the program helped them say no to others at least a little. They liked the program (83.2%), agreed that the time they spent on it was helpful (80.8%), and thought it taught them about dealing with anger (78%). They were less likely to say other children were nicer to them because of the program or that it had helped them get along with other people.

Table 17. Effectiveness of and Satisfaction with SPIRIT in Year 6[†]

	No, not at all	No, not much	Yes, a little	Yes, a lot
Did you like the program?	6.7%	10.1%	39.9%	43.3%
Did the program teach you what to do when you are angry?	9.5%	12.5%	32.6%	45.4%
Do you act better because of the program?	11.0%	17.7%	40.9%	30.4%
Did the program help you feel better about yourself?	11.2%	15.4%	38.0%	35.4%
Does the program help you to say no to harmful things other kids might want you to do?	7.6%	8.8%	27.1%	56.5%
Has the program helped you to get along better with other people?	11.0%	19.1%	38.3%	31.6%
Are other kids nicer to you because of the program?	23.2%	27.8%	30.4%	18.7%
Was the time spent on the program helpful?	7.9%	11.3%	38.6%	42.2%

[†] The 4th – 12th grades were included in this analysis.

The majority of youth in every district liked the program, with over 80% of youth claiming they liked the program in the Ritenour, Knox and Hickman Mills school districts (see table on next page). A greater percentage of children and youth in the Knox and Ritenour school districts thought the program positively affected their anger management and thought the time spent on the program was helpful than in the other districts.

A majority of children and youth, regardless of district thought the program improved their behavior, resistance skills, self-esteem, and peer relationships. A smaller percentage of youth in the Carthage school district thought the program positively affected their self-esteem than in any other district.

A smaller percentage of children and youth, regardless of district, thought the program affected the way other kids behaved.

Table 18. Effectiveness of and Satisfaction with SPIRIT in Year 6 by District (% “yes, a lot” and “yes, a little”)†

	Total	Carthage	Hickman Mills	Knox	New Madrid	Ritenour
Did you like the program?	83.2%	76.7%	82.9%	84.4%	65.3%	89.6%
Did the program teach you what to do when you are angry?	78.0%	76.5%	72.2%	84.9%	65.8%	81.4%
Do you act better because of the program?	71.3%	71.9%	70.3%	71.1%	70.8%	71.5%
Did the program help you feel better about yourself?	73.4%	70.3%	72.1%	73.0%	69.1%	76.4%
Does the program help you to say no to harmful things other kids might want you to do?	83.6%	82.2%	77.7%	83.3%	81.6%	86.8%
Has the program helped you to get along better with other people?	69.9%	72.1%	66.3%	75.0%	64.8%	69.7%
Are other kids nicer to you because of the program?	49.1%	50.1%	49.8%	54.8%	50.4%	46.7%
Was the time spent on the program helpful?	80.8%	76.6%	78.0%	84.1%	76.0%	84.2%

† The 4th – 12th grades were included in this analysis.

An overwhelming majority (over 90%) of youth in the 2nd and 3rd grades were satisfied with the program and thought it was effective in most areas. The percent of satisfied children and youth decreased as grade level increased, however in most cases the majority of youth were satisfied. The areas which demonstrated the greatest decline in satisfaction as grade level increased were the programs’ ability to positively affect behavior, self-esteem, and peer relations.

Table 19. Effectiveness of and Satisfaction with SPIRIT in Year 6 by Grade Level % “yes, a lot” & “yes, a little”

	Total	2 nd – 3 rd	4 th – 5 th	6 th – 8 th	9 th – 12 th
Did you like the program?	83.2%	96.9%	90.4%	76.7%	73.8%
Did the program teach you what to do when you are angry?	78.0%	93.6%	89.3%	67.8%	63.0%
Do you act better because of the program?	71.3%	92.4%	80.9%	65.6%	53.0%
Did the program help you feel better about yourself?	73.4%	91.2%	79.9%	70.6%	58.4%
Does the program help you to say no to harmful things other kids might want you to do?	83.6%	90.0%	89.1%	79.8%	73.9%
Has the program helped you to get along better with other people?	69.9%	90.8%	77.0%	66.1%	55.2%
Are other kids nicer to you because of the program?	49.1%	75.7%	53.7%	48.9%	34.6%
Was the time spent on the program helpful?	80.8%	93.0%	85.9%	77.3%	71.8%

The largest percentage of youth who reported liking the program were participating in PeaceBuilders, Second Step, Too Good for Drugs, and Reconnecting Youth. Compared with youth in other programs, a greater percentage of PeaceBuilders and Second Step participants thought the program was effective. Overall, youth liked the programs and thought they were effective.

Table 20. Effectiveness of and Satisfaction with SPIRIT in Year 6 by Program (% “yes, a lot” and “yes, a little”) †

	Total	Positive Action ¹	Peace Builders ²	Life Skills Training ³	Second Step ⁴	Too Good for Drugs ⁵	SS/ TGFD ⁶	Project Towards No Drug Abuse ⁷	Reconnecting Youth ⁸
Did you like the program?	83.2%	60.6%	88.6%	62.6%	92.2%	82.0%	76.3%	78.8%	85.7%
Did the program teach you what to do when you are angry?	78.0%	59.2%	89.8%	62.8%	89.6%	58.6%	74.1%	72.8%	61.9%
Do you act better because of the program?	71.3%	65.0%	82.0%	58.9%	81.5%	48.8%	68.8%	53.1%	60.7%
Did the program help you feel better about yourself?	73.4%	64.9%	79.1%	58.4%	83.0%	64.3%	65.5%	65.6%	61.9%
Does the program help you to say no to harmful things other kids might want you to do?	83.6%	77.8%	88.7%	73.2%	90.4%	77.0%	73.1%	84.9%	72.6%
Has the program helped you to get along better with other people?	69.9%	58.6%	82.2%	59.8%	77.6%	53.4%	55.4%	60.6%	63.0%
Are other kids nicer to you because of the program?	49.1%	44.4%	69.0%	39.6%	56.3%	32.2%	34.2%	45.5%	36.2%
Was the time spent on the program helpful?	80.8%	72.7%	84.2%	68.5%	88.8%	72.9%	70.7%	84.8%	77.1%

† Only the 4th – 12th grades were included in this analysis.

¹ New Madrid, 6th – 8th grade ² Carthage, 4th – 6th grade, 3 schools; Knox, 4th – 5th grade, New Madrid, 4th – 5th grade ³ Carthage, 7th – 9th grade; Knox, 6th – 8th grade

⁴ Ritenour, 4th – 5th grade; Hickman Mills, 6th – 8th grade ⁵ Ritenour, 6th – 9th grade ⁶ Hickman Mills, 4th – 5th grade ⁷ Knox, 9th grade

⁸ Knox, 9th – 12th grade; Hickman Mills, 9th grade; Carthage 10th – 12th grade

Summary

- The majority of children and youth (over 80%) liked the SPIRIT program they were participating in.
- A greater percentage of children and youth thought the program was effective in teaching them resistance skills (helping them to “say no”), when compared to other measures of effectiveness.
- A fewer percentage of children and youth thought the program was effective in getting other kids to be nicer to them, when compared to other measures of effectiveness.
- As in past years, satisfaction with and perceived effectiveness of SPIRIT was higher among lower grade levels. In general, the older the participant the less satisfied with SPIRIT. However, over 85% of youth in the Reconnecting Youth program indicated that they liked the program.

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