TGYS Program – Aggregate Data Report SFY 2015-16

CSU Evaluation Team

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Acknowledgements

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Further Details

Further details about the TGYS Program can be found at:
http://www.colorado.gov/CDHS/TGYS

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Report Introduction and Results Summary

Background

The Tony Grampsas Youth Services Program (TGYS) is a program authorized by § 26-6.8-101 through 106, C.R.S., to provide funding to community-based organizations that serve children, youth, and their families with programs designed to 1) reduce youth crime and violence, 2) prevent youth marijuana use, and 3) prevent child abuse and neglect. Eligible TGYS applicants include local governments, schools, nonprofit organizations, state agencies and institutions of higher education. Funded programs strive to reduce the risk factors and enhance the protective factors among youth and parents that are inherent to meeting the objectives mentioned above. Types of programs include before and after school programs, in-school programs, mentoring programs, and restorative justice programs, to name a few.

In order to measure TGYS-focused risk and protective factors, TGYS contracted with the Colorado State University Evaluation Team (CSU) to manage a statewide outcome evaluation of the direct, measurable impacts among individuals served through the TGYS program. Using TGYS-selected survey instruments, grantees collected risk and/or protective factor data on program participants at the beginning and end of their program cycle or the grant period. Grantees were generally required to collect data on all participants in TGYS-funded programs. In some cases, such as school-based programs that serve a high number of youth (>100), CSU worked with these sites to select a representative sample of participants. This pre-/post-test evaluation design yielded both local-level and aggregate data.

Some of the risk and protective factors that are of utmost interest to the TGYS program are reflected by observable, self-reported behaviors (e.g., substance use), while others are represented by unobservable, self-reported attitudes and beliefs (e.g., perceived risk of substance use, self-efficacy). In order to measure an unobservable trait, it is customary to identify observable behaviors thought to represent that trait, and then use a self-report survey instrument as a way to sample the behaviors thought to be sensitive to the underlying attribute of interest. With such a large and wide range of organizations and programs, it is necessary to choose validated instruments that capture broad-level change on the factors of interest.

CSU and TGYS have together created a menu of 17 validated survey instruments to measure participants' self-reported behaviors and attitudes as a way to measure their capacity on the risk and protective factors of interest. These instruments are used throughout the grant cycle, which spans three years (2014-17), to collect data that can be aggregated in order to gain an overall picture of participant change in risk and protective factors associated with a reduction in substance use, youth crime and violence, and child abuse and neglect. Parent Possible, a TGYS

statewide intermediary agency, conducts independent evaluation specific to its subgrantees' implementation of parent home visiting programs. Those results are included and summarized in this report.

In addition to aggregate reporting, data analysis and reporting at the individual grantee level is also conducted and distributed to grantees in order to provide further evaluation of potential program successes and opportunities for adjustment or improvement. A summary of program characteristics and annual results using TGYS instruments has been created for each grantee and is included in Appendix F of this report.

The constructs measured by TGYS survey instruments, derived from *Stakeholder Short-Term Outcomes* delineated in the TGYS Logic Model (Table 1), have a documented link to the long-term outcomes and objectives of TGYS in the social sciences research literature. A summary of these constructs and research links may be found in Appendix D. As a result of 1) the legalization of retail marijuana in Colorado, 2) the addition of youth marijuana prevention as a statutorily defined goal of TGYS, and 3) a continued effort to assess the effort to build protective factors and reduce risk factors associated with the prevention of risky behaviors, a Marijuana Attitudes assessment for grades one through five, a Marijuana Use and Attitudes assessment for grades 6-12, and a Marijuana Use and Attitudes assessment for ages 18-25 were developed by CSU and are included in the TGYS survey instrument list. These survey tools were administered broadly among a range of TGYS grantees serving diverse ages and implementing a diverse range of programming. The results of these data will be utilized to inform site- and state-level marijuana prevention evaluation plans.

Table 1. *Excerpt from the TGYS logic model delineating risk factors, protective factors, and outcomes of interest*

Stakeholder Short-Term Outcomes	Long-Term Outcomes	TGYS Goals
Improve school performance Increase life effectiveness skills Decrease bullying Decrease alcohol, tobacco, and other drug use Decrease delinquency Increase negative attitudes/perceptions toward youth marijuana use Improve quality of early care and education programs Improve progress toward achieving developmental	Reduce youth crime and violence Prevent youth marijuana use Prevent child abuse and neglect	**Colorado's Youth are Safe, Healthy, Educated, Connected, and Contributing**

milestones Increase positive parenting skills/practices		

Method

The CSU Evaluation Team provided technical assistance to 63 grantees during 2015-16 in order to collect pretest and post-test data from TGYS-funded program participants using 15 selected survey instruments of the 17 available. Parent Possible also used two parent surveys to assess parent knowledge and confidence related to parenting and child development, as well as a validated scale to assess children's readiness for school. The TGYS survey instrument questions are provided in Appendix B of this report. Statistical methods including factor analysis, item response theory and differential item functioning were used to determine instrument performance. Statistical methods including paired *t*-tests and analysis of variance were used to determine whether changes in individual youth from pretest to post-test were statistically significant. Statistical 'significance' is indicated by the probability (statistical *p*-value) that the difference is likely due to program effects. As is typical in social science research, tests yielding a *p*-value of less than 0.05 (i.e., there was a less than a five percent likelihood that a pre-post difference was due to chance alone) were considered significant.

Pretest percentile scores were used as a proxy for participant risk. Often, pre-post change results may be masked by the effect of high scores on pretests wherein participants score higher on pretests and subsequently show little or no change at post-test. When scores start out higher than average at pretest, they likely cannot be maintained at that level and will drift, or regress downward at post-test. Thus, where *t*-tests include the entire sample, participants who started out with higher than average scores at pretest will tend to wash out the level of pre-post change for participants who started out showing vulnerability (risk) on the instrument constructs. Separating out potential ceiling effects (which is what is accomplished by looking at the lowest and highest scorers separately) provides the potential for finding realistic pre-post changes in both groups, which provides a perspective different from reviewing the results derived from the whole sample. As such, current analyses examined pre-post change among the overall group, as well as among the two participant groups that demonstrated the most and least desirable 25 percent of scores at pretest. On some survey instruments, higher scores are desirable, where on other instruments lower scores are desirable. These differences, along with the pre-post change recorded among each of the 3 groups, are delineated in Table 2 of the report.

Where data were available and sample sizes were large enough, results were compared based on grantee funding category and on whether grantees provided substance use prevention programming as part of their overall curriculum. Where possible, results were also compared based on the socioeconomic status (SES) of the schools participating youth attended during the

2015-16 school year. Percent of students receiving free or reduced cost lunches, graduation rate, and dropout rate were used as indicators of SES.

Overall, grantees submitted **13,772** pretests and **8,784** post-tests using 15 TGYS instruments during state fiscal year (FY) 2015-16, and TGYS grantees successfully obtained *matched* evaluation data on approximately **6,235** participants. The number of participants with matched data represents **45%** of all submitted pretests. Many TGYS-funded grantees implement after-school drop-in programs. Within these programs attrition (youth dropout) is common, often due to psychosocial influences such as family disruptions or moving/changing schools, as well as to factors such as participant involvement in sports or other activities at post-test as opposed to pretest making them unavailable for testing at both time points. Therefore, obtaining matched data can be difficult. Though not ideal, the percentage of matched post-tests to pretests for the FY 2015-16 represents a higher rate of matched data than is typical in most youth treatment and community prevention programs (Apsler, 2009).

Aims

The objectives/aims of collecting these data were to:

1) Assess participant pretest to post-test change in TGYS risk- and protection-related outcomes as measured by each instrument.
2) Assess the psychometric quality and performance of each selected instrument.
3) Provide recommendations for future program years.

Moreover, collected data will help the TGYS program focus future efforts toward parent and youth prevention programs, and may be used, where available, to facilitate statewide prevention efforts.

Survey Results

Results Related to General TGYS Youth Risk and Protective Factors. Participating youth experienced differential change during the course of the grant year on a number of risk and protective factors important to the TGYS program.

Significant desired change:

- Significantly lower tolerance of deviant behaviors (e.g., stealing, vandalism, lying, skipping school)
- Significant increase in perceived social support from family, friends, and significant others
- Significant increase in life skills such as resilience and social competence

No change:

- Improvement, but no significant change, in the perception that regular use of substances is harmful
- Improvement, but no significant change, in academic grades
- No significant change in reported school bonding or school engagement
- No significant change in self-efficacy

Significant undesired change:

- Slight increase in reported substance use among youth not in a substance use prevention program
- Slight increase in reported experiences of bullying, fighting, or victimization

Results Related to Marijuana Use and Attitudes. Findings reflected what would be expected among this age group based on similar data.

Marijuana attitudes among children in grades 1-5:

- More youth reported talking to their parents about marijuana
- Youth were more likely to say that their friends would not like them if they used marijuana
- Fewer youth thought using marijuana would make them more popular
- Youth perceptions of harm about marijuana use increased

Marijuana use and attitudes among youth in grades 6-12:

Most (75%) youth in grades 6-12 reported that they have never tried marijuana. There were no changes from pretest to post-test in youths' perception of harm related to marijuana use, where about one-third thought regular use posed 'no risk.' At post-test youth were more likely to report that they marijuana would be easy to obtain. Additionally:

- 85% of youth who had tried marijuana reported they had used it zero times in the last 30 days
- Half of youth indicated they believed marijuana use among their age group was 'very wrong'
- Most (75%) agreed their parent would disapprove of marijuana use, although belief of parental acceptance increased slightly at post-test
- One-fifth of youth reported friends would not try to stop them from using marijuana
- The most commonly reported consequences of marijuana use were reported as problems with schoolwork and fighting with parents

- Those in dropout prevention programs appeared to be at higher risk for acceptance and use of marijuana
- Those exposed to substance use prevention programs were less likely report decreased 30-day use of marijuana
- Socioeconomic status was not related to reported marijuana use

Marijuana use and attitudes among young adults ages 18-25:
Most (64%) young adults ages 18-25 reported they have tried marijuana in the past.
Additionally:

- Nearly 85% of participants reported they had not used marijuana in the past 30 days, and significant decreases in frequency of use were reported from pretest to post-test
- One-fifth reported that almost all of their peers used marijuana
- The most common reasons reported for use were reducing negative feelings and enhancing introspection
- The most commonly reported consequences of marijuana use were internal factors such as feeling unmotivated or having a poor memory

Results Related to TGYS Parent Risk and Protective Factors. Parent Possible collects annual evaluation data for Parents as Teachers (PAT) and Home Instruction for Parents of Preschool Youngsters (HIPPY) programs. Two parent surveys were used to assess parent knowledge and confidence related to parenting and child development, and one scale (the Bracken School Readiness Assessment; BSRA-3) was used to assess children's readiness for school.

Parent Possible reported primarily positive program findings for each program, including:

- PAT and HIPPY programs were successful in providing literacy services to Colorado's most vulnerable populations
- Parents in the HIPPY program increased the frequency of literacy activities
- In the PAT program, 98% of the parents were able to correctly answer questions about the importance of parental bonding on development and learning
- There was a statistically significant reduction in the number of parents in the HIPPY program who report 'spanking' as a discipline technique they use
- Children in both programs increased their school readiness skills from a percentile rank of 39 to a percentile rank of 49
- Children in both programs had a statistically significant increase in their average percent mastery in each of the school readiness domain areas
- Significantly fewer children scored in the very delayed and delayed categories, and significantly more children scored in the advanced and very advanced categories on the school readiness assessment

Recommendations

Taken together, results indicate that an emphasis on specific types of programming may be helpful to the overall group, including efforts aimed at:

- Preventing substance use
    - Emphasize a prevention focus in middle school youth
- Addressing the high acceptability/low perceived risk of marijuana use
    - Enlist peer educators with life experience around risks associated with use
- Bolstering life skills that cultivate healthy attitudes toward substance use
    - Focus on conflict management, healthy risk-taking, and effective decision-making
- Addressing bullying and victimization
    - Train parents or other 'askable' adults to communicate with and instrumentally assist youth engaged in these behaviors

Demographic Information

Males were 51.5% and females were 48.5% of the total participants.

Figure 1. *Percent of TGYS youth by ethnicity*

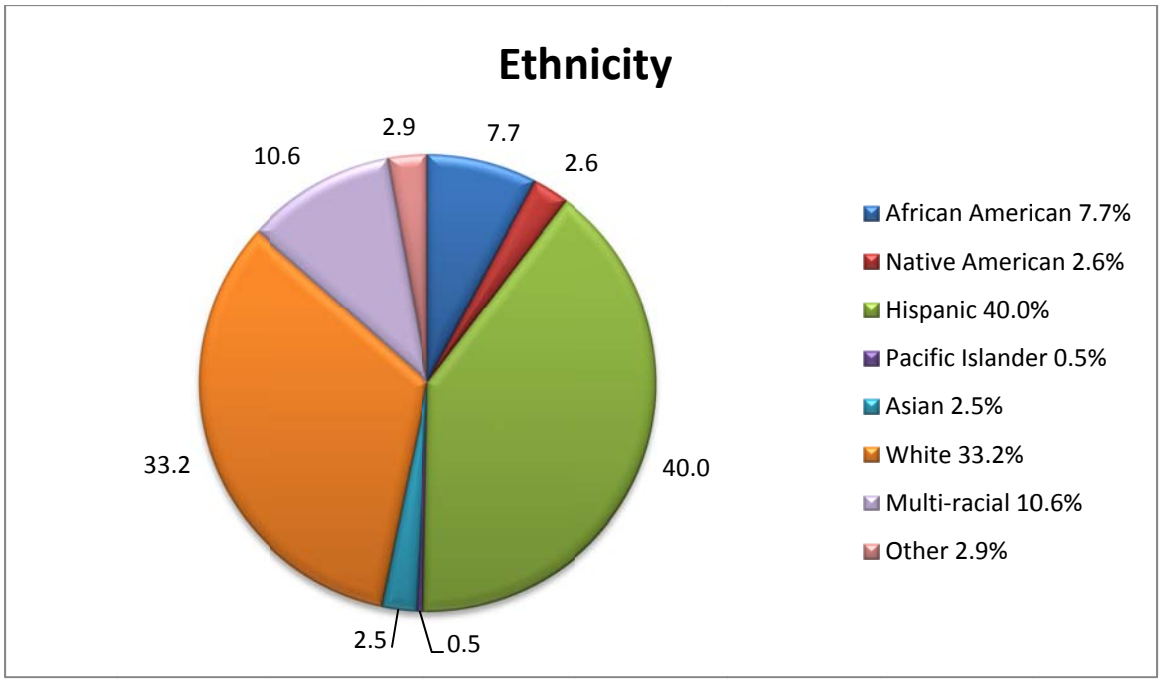
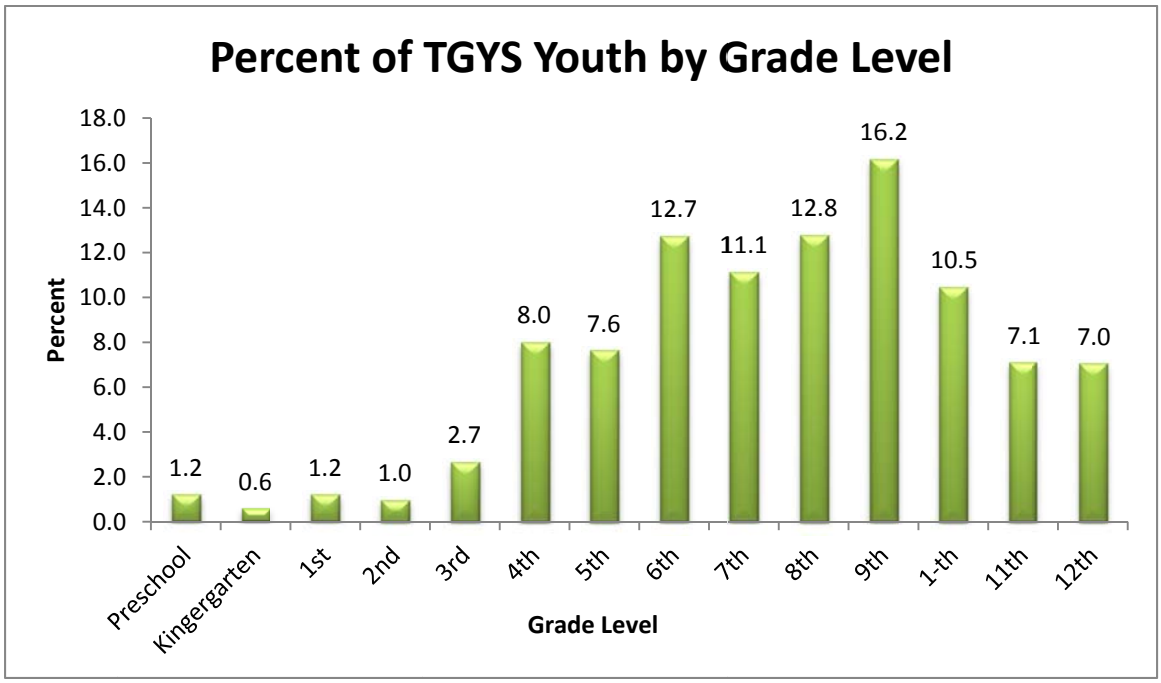


Figure 2. *Percent of TGYS youth by grade level*



Survey Results

Results Related to TGYS Youth Risk and Protective Factors

General Risk and Protective Behaviors and Attitudes

Analyses examined pre-post change among the overall group, as well as among the two participant groups that demonstrated the most and least desirable 25 percent of scores at pretest. These percentile scores were used as a proxy for participant risk, where those with more desirable scores fell in the 'low risk' group, and those with less desirable scores fell in the 'high risk' group.

Youth demonstrated significant positive change from pretest to post-test on a number of risk and protective factors (Table 2).

Table 2. *Mean change on risk and protective factors among TGYS youth*

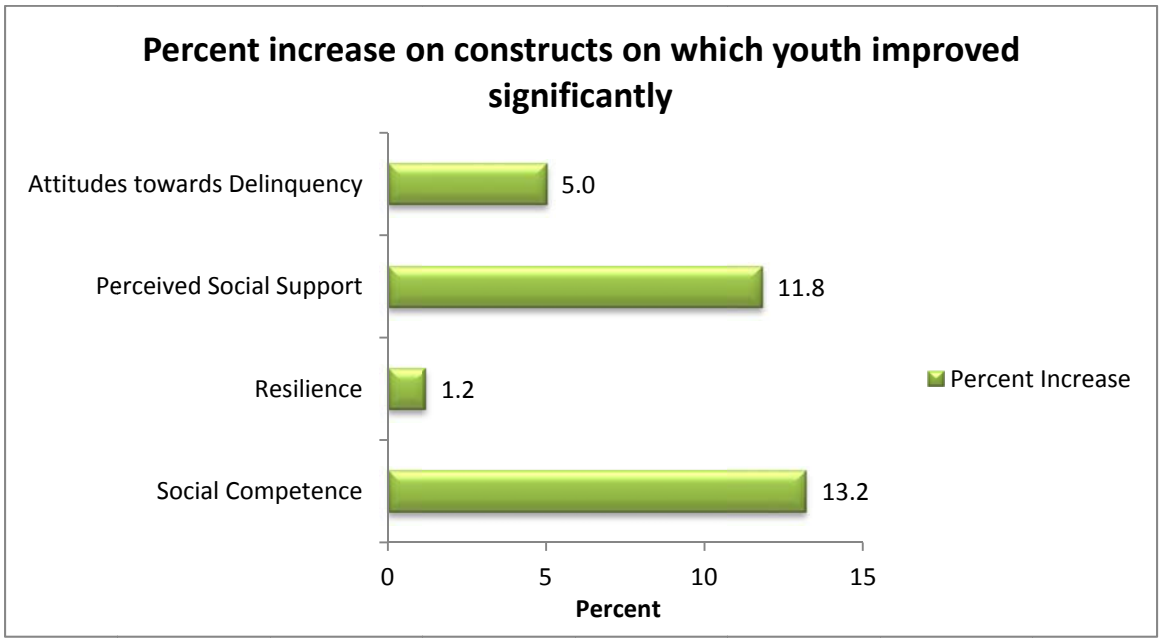
Construct (Response Scale Range)	Group	N	Pretest Mean (SD)	Post-test Mean (SD)	Mean Change	Desired Direction of Change?	Change Statistically Significant?
Significant Desired Change							
Attitudes towards Delinquency (1.00-4.00) *Higher scores are desired*	High Risk	121	2.70 (0.40)	3.31 (0.57)	0.61	Yes	Yes
Attitudes towards Delinquency (1.00-4.00)	**Overall**	**371**	**3.38 (0.57)**	**3.55 (0.48)**	**0.17**	**Yes**	**Yes**
Attitudes towards Delinquency (1.00-4.00)	Low Risk	94	3.98 (0.03)	3.84 (0.27)	-0.14	No	No
Perceived Social Support (1.00-7.00) *Higher scores are desired*	High Risk	27	3.58 (0.49)	4.71 (0.85)	1.13	Yes	Yes
Perceived Social Support (1.00-7.00)	**Overall**	**85**	**4.33 (0.62)**	**4.85 (0.94)**	**0.52**	**Yes**	**Yes**
Perceived Social Support (1.00-7.00)	Low Risk	27	4.91 (0.10)	4.90 (1.04)	-0.01	No	No
Resilience (1.00-5.00) *Higher scores are desired*	High Risk	388	3.34 (0.54)	3.76 (0.60)	0.42	Yes	Yes
Resilience (1.00-5.00)	**Overall**	**1439**	**4.07 (0.60)**	**4.12 (0.60)**	**0.05**	**Yes**	**Yes**
Resilience (1.00-5.00)	Low Risk	431	4.68 (0.20)	4.46 (0.52)	-0.22	No	Yes

Construct (Response Scale Range)	Group	N	Pretest Mean (SD)	Post-test Mean (SD)	Mean Change	Desired Direction of Change?	Change Statistically Significant?
Significant Desired Change (cont.)							
Social Competence (1.00-5.00) *Higher scores are desired*	High Risk	30	2.23 (0.61)	3.03 (0.69)	0.80	Yes	Yes
Social Competence (1.00-5.00)	**Overall**	**105**	**3.18 (0.84)**	**3.60 (0.87)**	**0.42**	**Yes**	**Yes**
Social Competence (1.00-5.00)	Low Risk	25	4.24 (0.34)	4.15 (0.89)	-0.09	No	No
No Significant Change							
ATOD Attitudes (1.00-4.00) *Higher scores are desired*	High Risk	62	1.73 (0.64)	2.45 (0.95)	0.72	Yes	Yes
ATOD Attitudes (1.00-4.00)	**Overall**	**232**	**2.94 (0.88)**	**3.00 (0.35)**	**0.06**	**Yes**	**No**
ATOD Attitudes (1.00-4.00)	Low Risk	83	3.74 (0.21)	3.38 (0.73)	-0.36	No	Yes
Life Effectiveness (1.00-5.00) *Higher scores are desired*	High Risk	143	3.52 (0.75)	4.26 (1.01)	0.74	Yes	Yes
Life Effectiveness (1.00-5.00)	**Overall**	586	**4.80 (0.91)**	**4.86 (0.86)**	**0.06**	**Yes**	**No**
Life Effectiveness (1.00-5.00)	Low Risk	127	5.80 (0.15)	5.30 (0.65)	-0.50	No	Yes
Grade Point Average (0.00-4.00) *Higher scores are desired*	High Risk	59	0.97 (0.36)	1.08 (0.43)	0.11	Yes	Yes
Grade Point Average (0.00-4.00)	**Overall**	**233**	**2.29 (0.93)**	**2.33 (0.93)**	**0.03**	**Yes**	**No**
Grade Point Average (0.00-4.00)	Low Risk	59	3.36 (0.29)	3.28 (0.50)	-0.08	No	No
School Bonding (1.00-5.00) *Lower scores are desired*	High Risk	51	1.72 (0.47)	2.14 (0.48)	0.42	No	Yes
School Bonding (1.00-5.00)	**Overall**	**154**	**1.54 (0.43)**	**1.59 (0.51)**	**0.05**	**No**	**No**
School Bonding (1.00-5.00)	Low Risk	24	1.06 (0.05)	1.33 (0.36)	0.27	No	Yes

Construct (Response Scale Range)	Group	N	Pretest Mean (SD)	Post-test Mean (SD)	Mean Change	Desired Direction of Change?	Change Statistically Significant?
No Significant Change (cont.)							
School Engagement (1.00-5.00) *Higher scores are desired*	High Risk	31	2.85 (0.62)	3.11 (0.59)	0.26	Yes	No
School Engagement (1.00-5.00)	**Overall**	**130**	**3.95 (0.79)**	**3.90 (0.87)**	**-0.05**	**No**	**No**
School Engagement (1.00-5.00)	Low Risk	34	4.81 (0.17)	4.57 (0.62)	-0.24	No	Yes
Self-Efficacy Grades 1-5 (1.00-5.00) *Higher scores are desired*	**Overall**	**12**	**3.42 (0.65)**	**3.77 (0.72)**	**0.35**	**Yes**	**No**
Self-Efficacy Grades 6-12 (1.00-5.00) *Higher scores are desired*	High Risk	67	3.13 (0.45)	3.43 (0.67)	0.30	Yes	Yes
Self-Efficacy (1.00-5.00)	**Overall**	**238**	**3.84 (0.61)**	**3.83 (0.61)**	**-0.01**	**No**	**No**
Self-Efficacy (1.00-5.00)	Low Risk	68	4.53 (0.30)	4.17 (0.58)	-0.36	No	Yes
Significant Undesired Change							
ATOD Use (1.00-5.00) *Lower scores are desired*	High Risk	72	1.66 (0.68)	1.71 (0.64)	0.05	No	No
ATOD Use (1.00-5.00)	**Overall**	**241**	**1.20 (0.48)**	**1.26 (0.48)**	**0.06**	**No**	**Yes**
ATOD Use (1.00-5.00)	Low Risk	169	1.00 (0.05)	1.07 (0.20)	0.07	No	Yes
Bullying (1.00-7.00) *Lower scores are desired*	High Risk	58	3.52 (0.92)	3.29 (1.39)	-0.23	Yes	No
Bullying (1.00-7.00)	**Overall**	**233**	**2.05 (1.04)**	**2.19 (1.20)**	**0.14**	**No**	**Yes**
Bullying (1.00-7.00)	Low Risk	68	1.12 (0.11)	1.53 (0.75)	0.41	No	Yes

Specifically, youth had significantly less tolerance of deviant behaviors (stealing, vandalism, lying, skipping school) after programming. There was also a significant improvement in perceived social support and in life skills measures including resilience and social competence, which indicate youth tendencies toward perseverance, self-reliance, and skill in social interactions. The overall percent increase on these constructs among youth is depicted in Figure 3.

Figure 3. *Percent increase on constructs on which youth improved significantly*



Risk and protective factors that demonstrated a trend toward improvement but no significant change over time were perceived harm around substance use, life effectiveness, grade point average, school bonding and engagement, and self-efficacy. There was a slight increase among youth on reports of bullying, fighting, and victimization. This is in part due to girls reporting significantly more incidents of victimization at post-test than at pretest. Furthermore, reported levels of substance use increased significantly from pretest to post-test among youth who did not receive exposure to any substance use programming. These results and some recommendations for future programming are discussed later in this report.

Marijuana-Related Behaviors and Attitudes

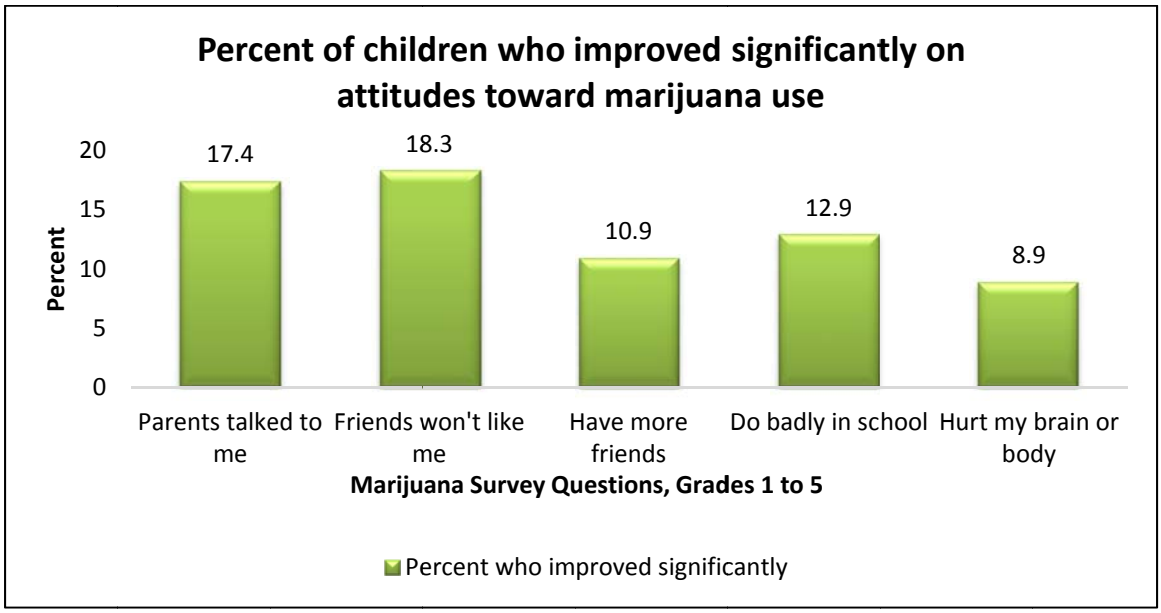
Results around marijuana use and attitudes largely reflected what would be expected among participating age groups.

Children in Grades 1-5

After TGYS programming, children in grades 1-5 (N=434) were more likely to report that their parents talked to them about marijuana, that their friends would not like them if they used it, that marijuana use would negatively affect their schoolwork, and that it would be harmful to their body (Table 4). They were also less likely to agree that using marijuana would help them

have more friends. These changes in attitudes reflect a positive change in the desirable direction.

Figure 4. *Percent of children in grades 1-5 who improved significantly on attitudes toward marijuana use*

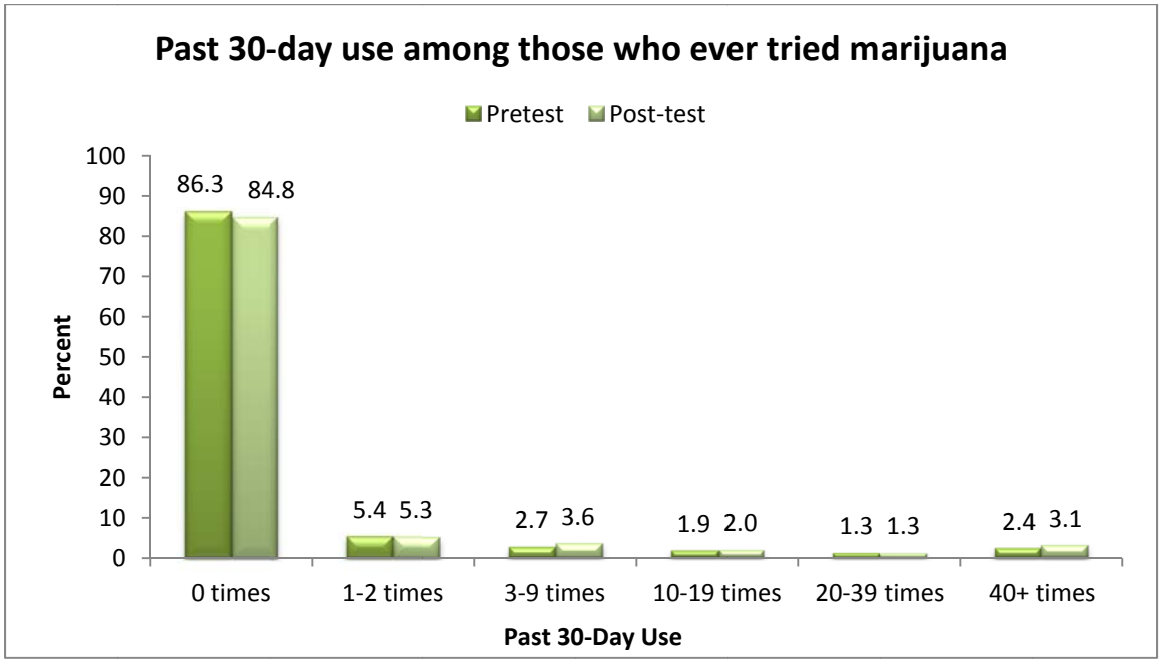


Youth in Grades 6-12

The vast majority of youth in grades 6-12 (N=1,876) reported that they have never tried marijuana (~75%).

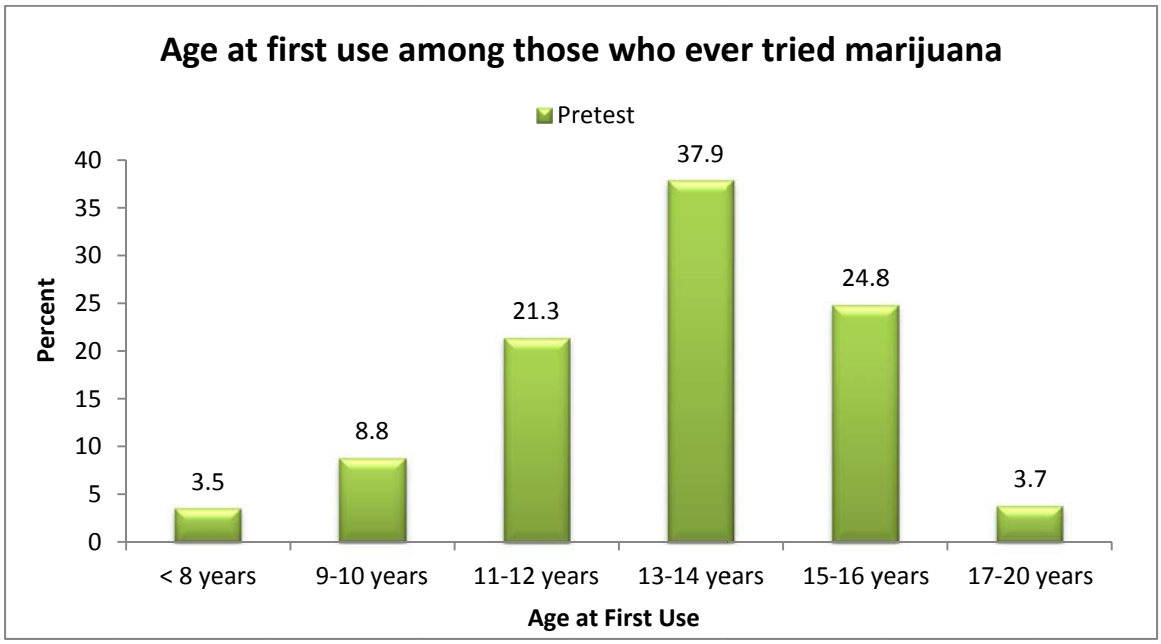
Past 30-day use. Of those who reported that they had tried it, most (~85%) had not used marijuana in the past 30 days (Figure 5). No significant change in use was reported from pretest to post-test.

Figure 5. *Past 30-day use among those who ever tried marijuana*



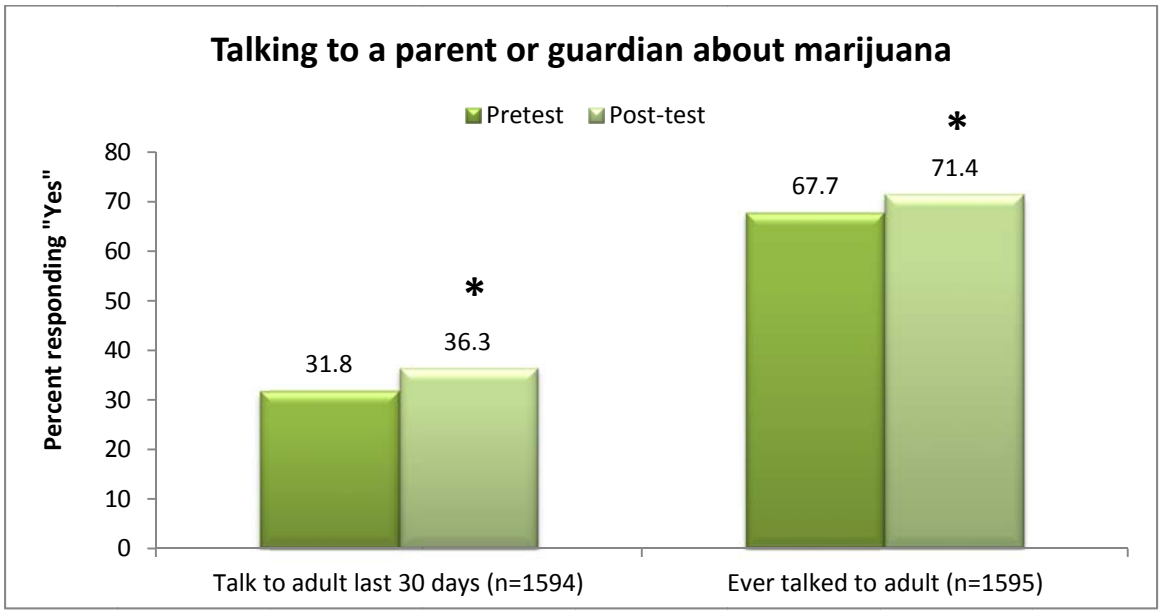
Age at first use. The average age at first use was about 13 to 14 years (Figure 6).

Figure 6. *Age at first use among those who ever tried marijuana*



'Askable' parent or guardian. A greater number of youth reported having talked to at least one parent or guardian about marijuana in the last 30 days at post-test than at pretest. Similarly, there was an increase in those who reported having ever talked to a parent or guardian about marijuana at post-test (Figure 7).

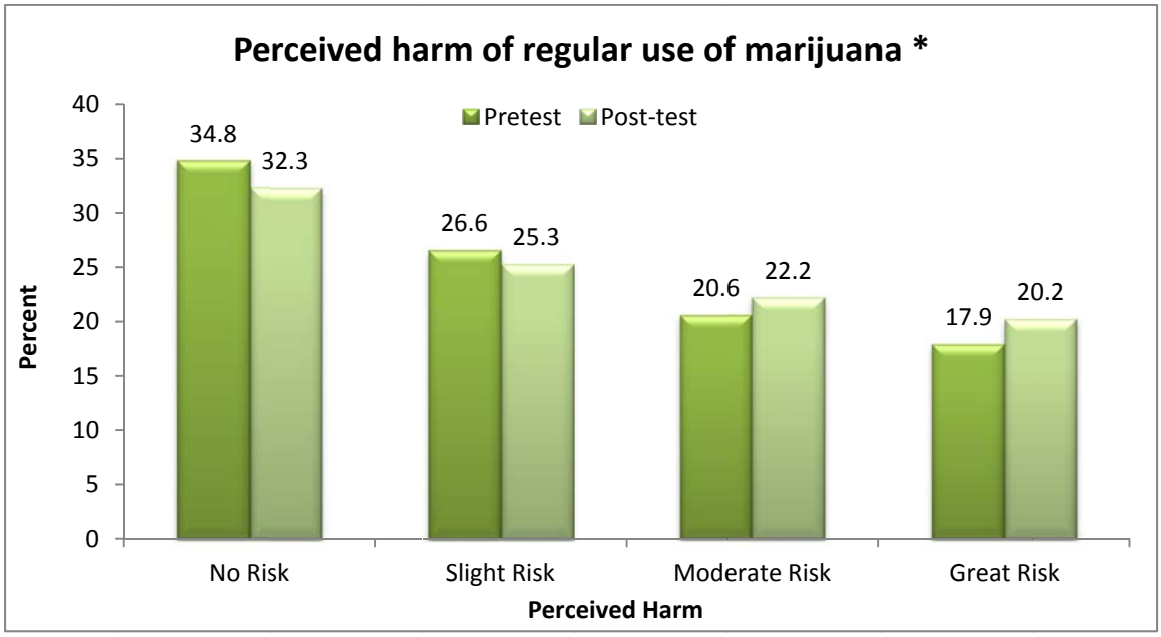
Figure 7. *Talking to a parent or guardian about marijuana*



*p<0.01

Perceived harm of regular use of marijuana. After programming, youth were less likely to believe there is 'slight' to 'no' risk of regular marijuana use and more likely to perceive there is 'moderate' to 'great' risk associated with regular marijuana use (Figure 8).

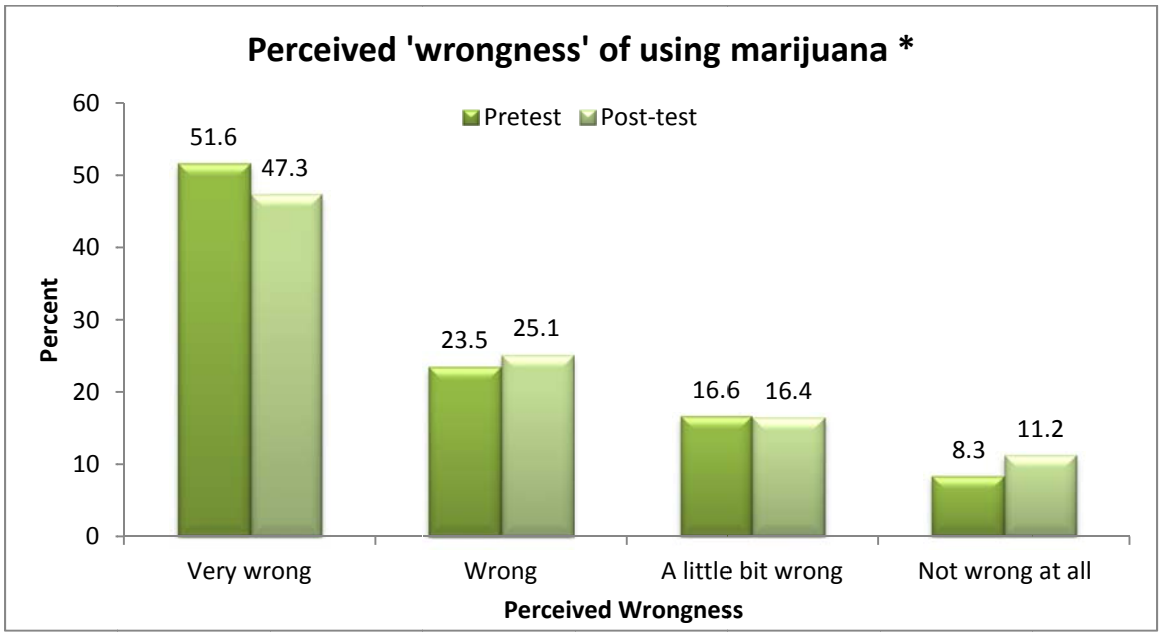
Figure 8. *Perceived harm of regular use (once or twice per week) of marijuana*



*p=0.01 for differences across categories

Perceived 'wrongness' of using marijuana. Youth were significantly **less** likely to think that it was 'wrong' or 'very wrong' for someone their age to use marijuana at post-test than they did at pretest. At post-test, 11.2% of the youth reported that it was 'not wrong at all,' which increased from 8.3% at pretest (Figure 9).

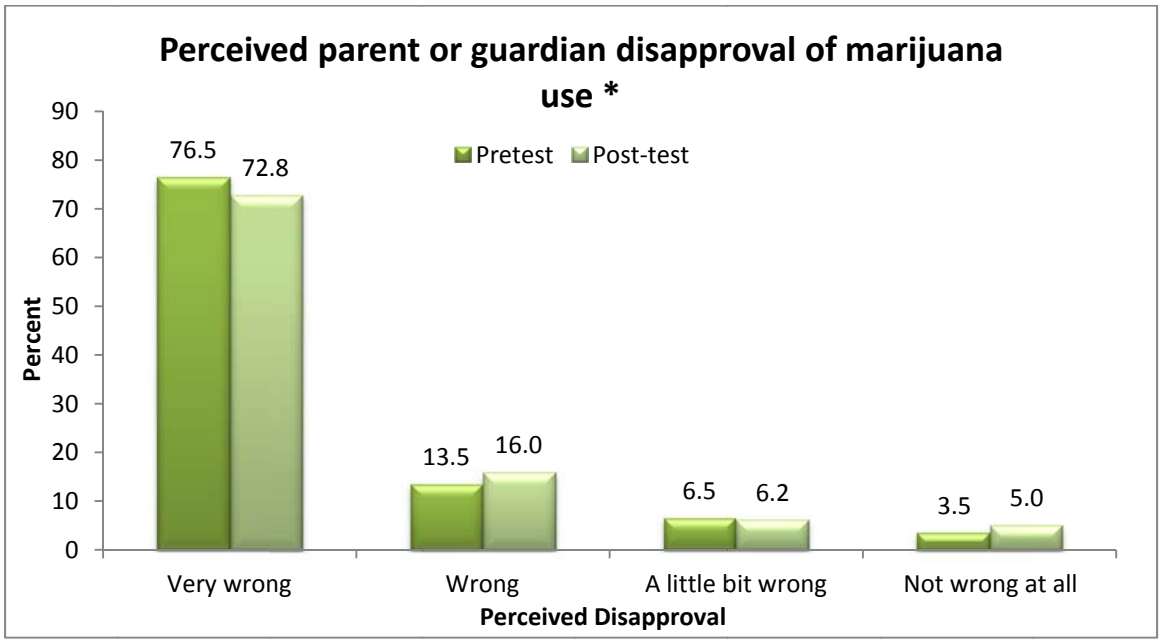
Figure 9. *Perceived 'wrongness' of using marijuana*



*p<0.0001 for differences across categories

Perceived parent or guardian disapproval of using marijuana. Youth reported perceived parent disapproval of marijuana use at very high frequencies at both time points. There was a slight decrease among those who thought their parents would think using marijuana was 'very wrong,' and a slight increase among those who thought their parents would think it was 'not wrong at all.' This indicates somewhat more perceived parental acceptance of potential marijuana use among youth in this age group (Figure 10).

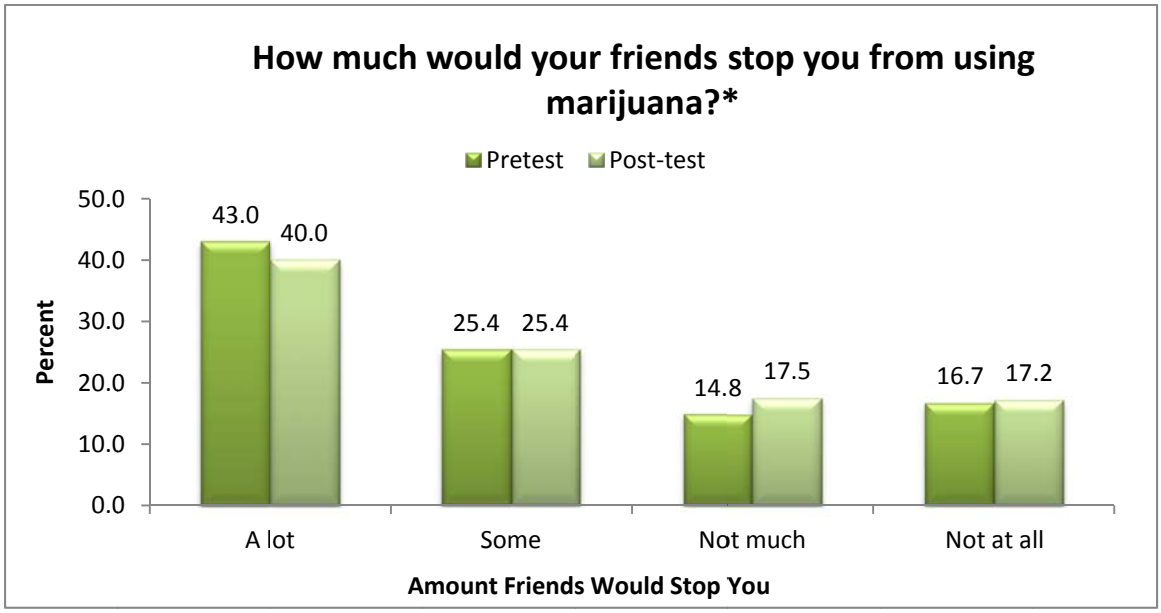
Figure 10. *Perceived parent or guardian disapproval of marijuana use*



*p=0.002 for differences across categories

Peer Influence. Overall, most youth believed their friends would try to stop them 'a lot' from using marijuana; however, they were less likely to think so at post-test. The number of youth reporting that friends would try to stop them 'not much' or 'not at all' increased over time (Figure 11).

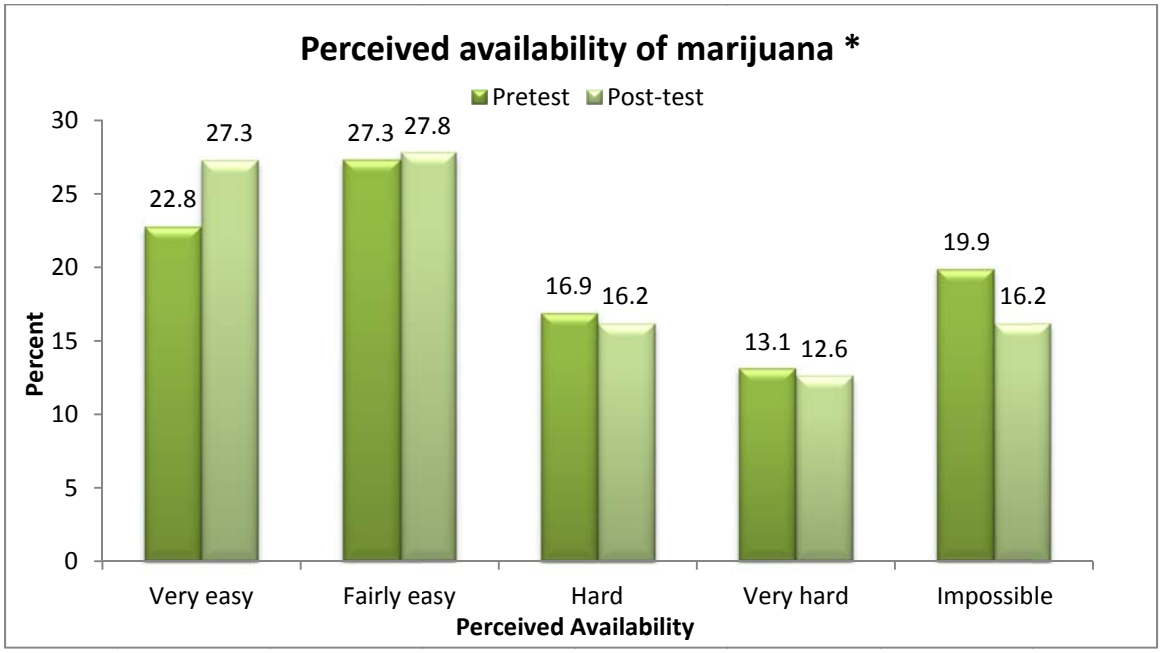
Figure 11. *Peer influence around marijuana use*



*p=0.02 for differences across categories

Accessibility of marijuana. At post-test, more youth reported that obtaining marijuana would be fairly or very easy, and less reported that it would be very hard or impossible, compared to the pretest beliefs (Figure 12).

Figure 12. *Perceived availability of marijuana*



*p<0.0001 for changes across categories

Perceived consequences of marijuana use. When asked about things that have happened to youth while under the influence of marijuana, youth reported increased problems overall between pretest and post-test. The most common problems reported were negative influences on schoolwork and fighting with parents. Increased reports of negative consequences are likely due to the increased ability of many youth to recognize how marijuana use impacted their lives.

Youth were also asked about expectancies youth have around using marijuana. In terms of positive expectancies, youth tended to agree most that use of marijuana would help them relax. Negative expectancies among youth were focused on specific effects on the body such as having a dry mouth or eating more than normal. There was fairly low agreement that using marijuana has generally 'bad effects on people.'

Differences in marijuana use and attitudes by program funding category. The majority of youth participated in a violence prevention program (56.8%). Mentoring, restorative justice, early childhood and before and after school programs comprised only 12.2% so they were categorized into an "all other programs" category due to small sample size. The remaining 31% were in a school dropout prevention program.

The most significant differences were observed among youth in dropout prevention programs compared to other types of programs. Specifically, these youth reported higher rates of ever using marijuana and more use of marijuana in the past 30 days than youth in other program funding categories. Those participating in dropout prevention programs and violence prevention programs perceived using marijuana as less wrong for their age than did youth in mentoring and other programs.

Differences in marijuana use and attitudes by availability of substance use programming. Whether or not youth had been exposed to specific substance use programming was not influential in terms of use of attitudes toward marijuana. In fact, those who had received this type of program exposure were less likely to reduce their marijuana use over time compared to those who were not exposed.

Socioeconomic effects on marijuana use and attitudes. Overall, marijuana use was not associated with any SES indicators. However, student attitudes about marijuana use differed where those attending schools with a higher rate of those on a free or reduced lunch program tended to view youth marijuana use as more wrong. Additionally, free lunch rate, graduation rate, and dropout rate were associated with whether youth reported talking to a parent or guardian about marijuana. In schools where fewer students were on a free or reduced lunch

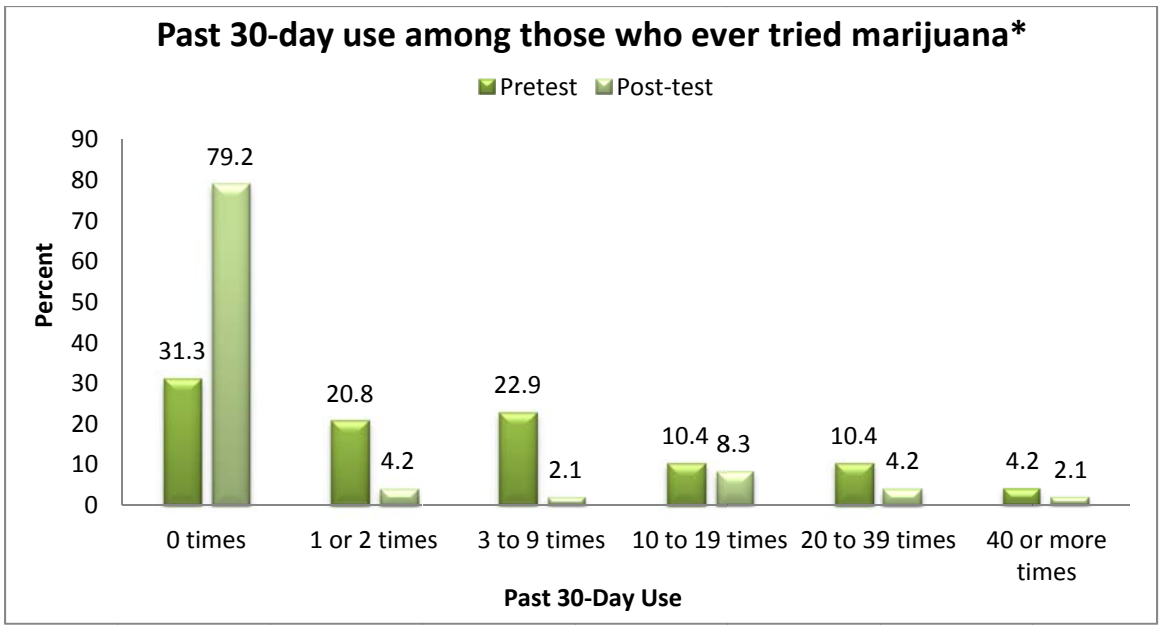
program, where graduation rates were higher, and where dropout rates were lower, youth were more likely to report that they had talked to a parent or guardian about marijuana.

Young Adults Ages 18-25

The majority of young adults ages 18-25 (N=91) reported that they have tried marijuana before (~64%).

Past 30-day use. Of those who reported that they had tried it, most (~85%) had not used marijuana in the past 30 days (Figure 13). Significant decreases in use were reported from pretest to post-test.

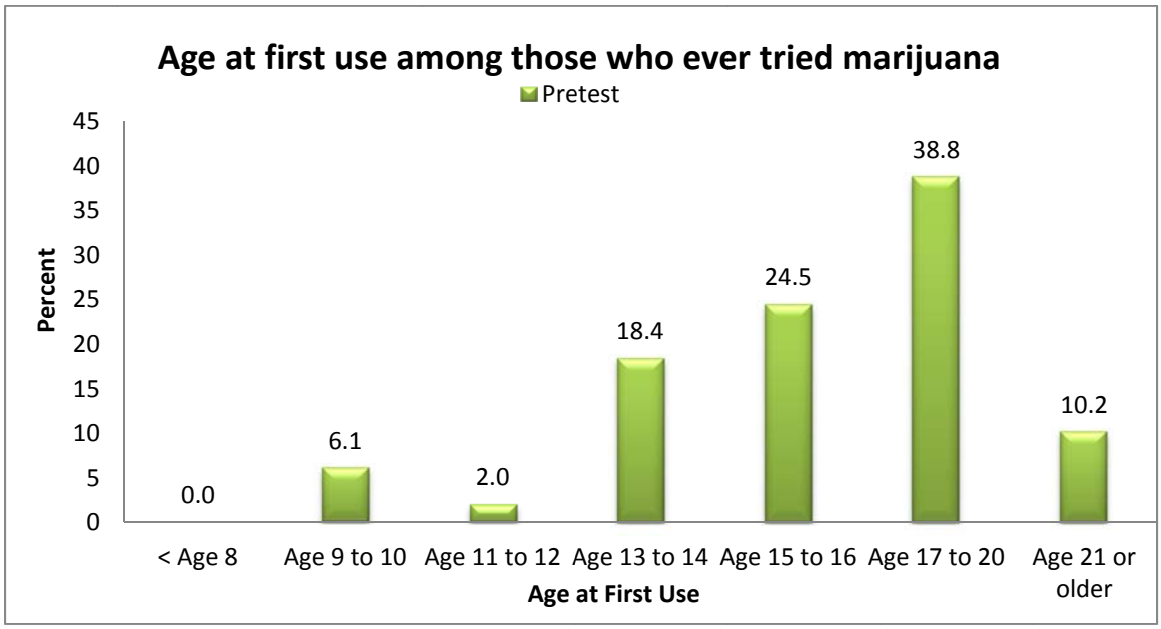
Figure 13. *Past 30-day use among those who ever tried marijuana*



*p<0.01 for significant change

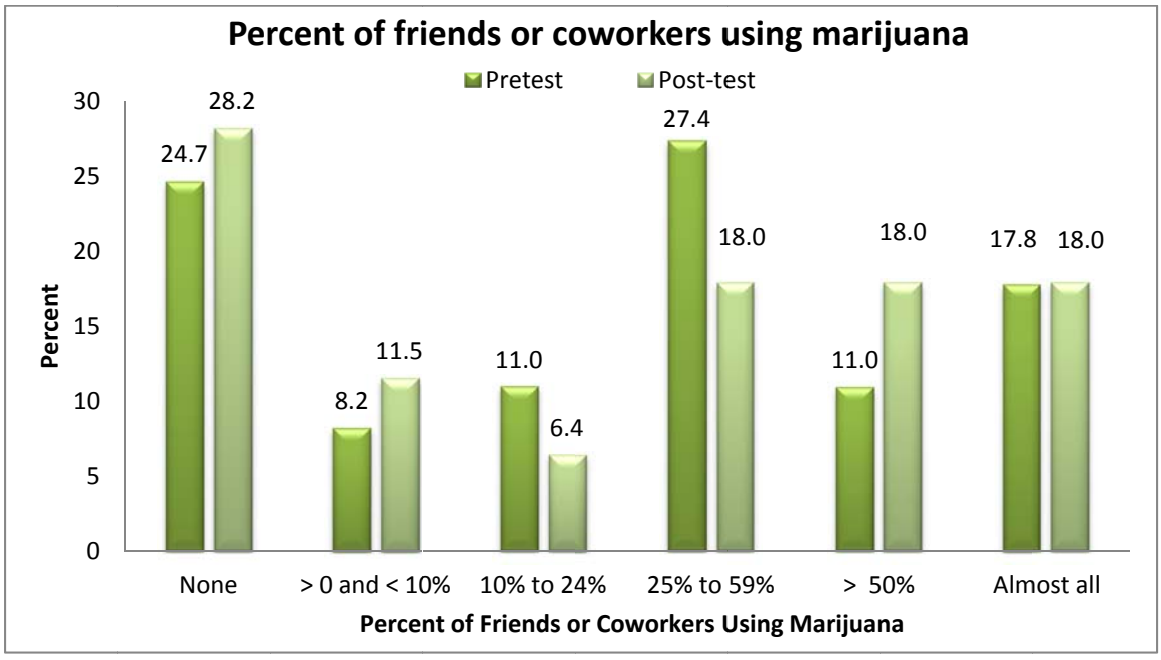
Age at first use. The average age at first use was about 17 to 20 years (Figure 14).

Figure 14. *Age at first use among those who ever tried marijuana*



Peer-related use. The percentage of friends or coworkers who smoked marijuana at least once in the last year was also somewhat high. Nearly one-fifth reported that almost all of their peers used marijuana (Figure 15).

Figure 15. *Percent of friends or coworkers using marijuana*



Reasoning and consequences around marijuana use. Reasons young adults gave for using marijuana fell into one of four groups, including reducing negative feelings, enhancing positive feelings, increasing personal introspection, and avoiding negative consequences. The most common reasons young adults gave for using marijuana were to reduce negative feelings and to enhance introspection. A number of consequences were noted among respondents including external factors such as missing school or work or fighting with friends or family members; internal factors were also noted, such as changes in personality, feeling paranoid or unmotivated, or having a poor memory. Although both types of reported consequences increased from pretest to post-test, young adults were more likely to cite internal factors as the most recently experienced negative consequences to using marijuana. An increase in reports of consequences likely indicates increased awareness among participants about how reported consequences are related to their marijuana use.

Results Related to TGYS Early Childhood and Parent Risk and Protective Factors
(Summarized from data collection/analysis conducted by Parent Possible)

Parent Possible is funded through TGYS as an intermediary agency distributing sub-grants to local providers implementing one or both of the national evidence-based models (PAT and/or HIPPY).

The PAT program is an evidence-based early childhood program that includes home visits, group meetings, health and developmental screenings, and development of resource networks. Parent educators utilize the PAT curriculum to promote positive parent-child interaction from pregnancy through kindergarten. The PAT curriculum is designed to increase parent knowledge of early childhood development, improve parenting practices, provide early detection of developmental delays and health issues, prevent child abuse and neglect, and increase children's school readiness and school success.

HIPPY is also an evidence-based home visitation program for parents of children aged three through Kindergarten. Peer educators work with parents in their homes to provide books, activities, and skills that assist parents in preparing their children for school. The HIPPY curriculum focuses on supporting children's language development, problem solving, logical thinking and perceptual skills. HIPPY's primary goal is to increase vulnerable children's success in school and, ultimately, in life.

For each of the programs, parents were asked to complete a parent/caregiver survey that consists of several items intended to assess knowledge and behavior on a number of parenting practices including child development, health behaviors, and literacy activities. The HIPPY

parent survey consists of several items intended to assess parental outcomes in areas including literacy activities, confidence in parenting activities, knowledge of child development, and knowledge of healthy behaviors. The PAT parent survey has four sections: questions about parental behaviors; questions about parental knowledge; questions specific to literacy/reading activities; and questions about the quality and skills of the parent educator.

The BSRA-3 is a validated scale used to assess a child's readiness for school by evaluating a child's understanding of colors, letters, numbers/counting, sizes/comparison, and shapes. The assessment is appropriate for children aged three through six years. The percent mastery, or percentage of items correct, is used to compute a total school readiness raw score and percentile rank.

Results from the 2016 evaluation indicate positive findings overall in both the HIPPY and PAT programs. Both programs demonstrate positive findings in parental knowledge and confidence, as well as trust and respect of the parent educators. Both programs demonstrated positive findings related to literacy, with the HIPPY program showing positive changes in the use of literacy materials and frequency of literacy activities and the PAT program reporting that parents are using literacy and reading activities almost daily.

The children served by these programs have demonstrated positive gains as well. In general, children's percentile rank in school readiness increased by 10% and children improved in all of the sub-domain categories. There was also a statistically significant decrease in the proportion of children who were delayed or very delayed in their school readiness skills.

In addition to school readiness, there were other positive outcomes including a decrease in the number of parents who reported use of spanking, and an increase in parents gaining more awareness about the importance of healthy childhood behaviors such as nutritious eating and exercise.

As a whole, the HIPPY and PAT programs appear to have an important benefit to the families and children they serve.

Discussion and Recommendations

General Youth Risk and Protective Factors

In summary, research among adolescents indicates that a variety of protective factors work toward preventing or limiting criminal and violent behavior in this population. As shown in Appendix D, positive change on outcomes measured by TGYS has been demonstrated by scientific studies to be linked to decreased involvement with deviant peers, involvement in less serious forms of delinquency, fewer legal contacts, and a lower tendency toward crime and violence, as well as better grades and attachment to school and less school truancy. TGYS-funded programs are designed to strengthen and foster these factors among participating youth.

Using validated and well-performing measurement tools to collect pretest and post-test data, TGYS has demonstrated that participating youth have experienced gains in perceived social support from family, friends, and significant others; an increase in life skills such as resilience and social competence; and a lower overall tolerance of deviant behaviors during FY 2015-16. These gains were particularly strong among those youth who entered programs with less desirable scores on attitudes and behaviors. There were few grantee program or SES category differences in these results, except that restorative justice programs were more successful at reducing tolerance of delinquent behaviors than other types of programs, and mentoring programs excelled at building resilience relative to other types of programs.

Programs that collected data with the Alcohol, Tobacco, and other Drug Use (ATOD) survey instrument and that administered substance use prevention programs were successful in decreasing overall reported substance use among youth, while youth not exposed to this type of program significantly increased their reported use on the ATOD. This increase was specifically related to reported alcohol use. It should be noted that the significant increase in reported use went from a mean of 1.18 at pretest to a mean of 1.36 at post-test, where a score of 1 indicates 'never' used, and 2 indicates 'a few times per year.' Moreover, reported use was very low among all participants.

In contrast to this finding, programs that collected data with the Marijuana Use and Attitudes survey instrument and that administered substance use prevention programs were <u>not</u> more successful in decreasing overall reported marijuana use among youth than those that did not provide such a program. These differences are likely due to the difference in participants that completed the two different surveys. Only 232 youth, in a small number of programs, completed the ATOD survey instrument. Over 1,875 youth, in a large number of programs,

completed the Marijuana Use and Attitudes survey instrument. Thus, it seems that targeted substance use prevention in specific types of programs may be especially useful in reducing overall reported use of substances. It may be more difficult to detect meaningful changes in reported use where substance use prevention activities and program types are widely varied.

Other data demonstrated a significant increase in scores on the bullying, fighting, and victimization scale. This was due in part to girls reporting a nearly 2-fold increase in instances of victimization. Grantee programs that use this scale are most likely the ones who administer programs specifically to bullying and violence prevention. It is thus possible that reported increases are due to a higher awareness of behaviors that could be labeled as bullying and victimization, as opposed to an actual increase in the behaviors themselves.

Marijuana Use and Attitudes

Overall, the trajectory of reported use of and attitudes toward marijuana are what would be expected among the ages surveyed based on other research. Children in grades 1 to 5 reported healthy attitudes toward marijuana, in that they believed it to be socially and physically undesirable. Their perceptions became even more positive after participating in TGYS programs.

Within the other age groups, there was a quite low percentage of youth in middle and high school who reported ever having tried marijuana (25%), with increases commensurate with age; in other words, youth in older grades were more likely to have tried it, and over half of 18 to 25 year-olds reported having used it before. Youth in grades 6-12 who had talked with a parent or guardian in the past 30 days were less likely to have tried marijuana, and reported use was less frequent among those who had tried it.

Although overall reported use in all age groups was quite low, attitudes toward marijuana use and its effects were strikingly moderate. Specifically, although youth in grades 6 to 12 agreed marijuana use among those in their age group is wrong (50% agreed) and their parents or guardians would strongly disapprove of use (75% agreed), about one-third of youth this age believed that regular use poses ‘no risk’ to people in general, and this perception did not change over time. One-fifth of youth believed their friends would not try to stop them from using marijuana, and fewer believed their friends would disapprove at post-test than at pretest. There was also an increased perception over time that marijuana would be ‘very easy’ for someone their age to get if desired. Similarly, one-fifth of young adults ages 18-25 reported that almost all of their peers use marijuana. Participants did not indicate especially negative expectancies around using marijuana, and expectancies were more positive among those who

had tried marijuana before. Few incidences of negative consequences of marijuana use were reported.

Several variables were assessed to determine their relationship to marijuana assessment results. From a program funding category perspective, those youth in dropout prevention programs appeared to be at higher risk for acceptance and use of marijuana. SES was not related to reports of marijuana use.

It is important to note that data on some measurement instruments demonstrated little or no change in the overall sample but did demonstrate improvement in the risk-identified group. **Because TGYS programs provide primarily universal programming and prevention services, all participants would not be expected to have low pretest scores and experience marked improvement over time.** The fact that results show that overall sample scores on the outcomes of interest remained stable or improved, and that risk-group scores markedly improved is a positive finding. Moreover, it indicates that currently funded TGYS programming appears to be effective at serving both the general population and those who may be more at risk.

Taken together, results indicate that an emphasis on specific adjustments to programming, described below, may be helpful to the overall group.

As demonstrated by results on the ATOD instrument, efforts aimed at reduction of substance use could be influential among youth in grades 6-12. Where substance use prevention did not appear to be particularly useful, it is possible that youth who did not improve already had a history of use, based on reported age of first use. Overall low reported use of marijuana, and substances in general, as well as skepticism about the acceptability of using substances, were strong findings. However, there is clearly a growing level of youth acceptance, peer support, and availability around the use of marijuana. Prevention of this substance may require additional or alternative types of effort. Qualitative data collected among youth during FY 2014-15 suggest that providing or enhancing skills for resisting substance use, making one's own decisions even in the face of peer substance use, and understanding the risks and negative consequences of use will be important to focus on beginning in middle school programming. Additional research around which specific strategies may work best is needed.

Beyond taking the preventative measures mentioned above, increasing life skills such as conflict management, healthy risk-taking, and effective decision-making will be helpful in cultivating healthy attitudes toward violence and substance use. This connection has been demonstrated in numerous research studies (e.g., Hodder et al., 2011; Stepp et al., 2011). Additionally, current TGYS data indicate that youth with stronger life skills were more likely to agree that marijuana

can produce negative effects on users. Results indicated that reports of youth bullying and victimization increased over time in programs, especially among girls. Youth who are being victimized are in a situation that is more difficult to control because it is dependent, in part, on other people's behavior. Learning about effective ways to prevent or cope with these behaviors, as well as having a reliable adult to consult with and receive regular guidance from, is imperative to this group. In particular, training parents or other 'askable' adults to communicate with youth about these issues in a straightforward and unscripted way may be extremely influential for youth.

Appendix A. Data Quality

Instrument	Pretests Submitted	Post-tests Submitted	Matched Pres and Posts	α Pretest*	α Post-test*
Alcohol, Tobacco and Other Drug Use	387	348	248	N/A**	N/A**
Attitudes toward Delinquency	540	457	371	0.94	0.92
Bullying, Fighting, and Victimization	636	351	233	0.89	0.91
Grade Point Average	307	248	233	N/A**	N/A**
Life-Effectiveness	1315	701	586	0.88	0.90
Marijuana Assessment Grades 1-5	864	496	434	N/A**	N/A**
Marijuana Assessment Grades 6-12	3950	2513	1876	N/A**	N/A**
Marijuana Assessment Ages 18-25	227	125	91	N/A**	N/A**
Resilience	3926	2248	1439	0.86	0.87
Perceived Social Support	210	274	85	0.89	0.95
School Bonding	371	197	154	0.69	0.76
School Engagement	336	317	130	0.97	0.97
Self-Efficacy Grades 3-5	14	13	12	N/A**	N/A**
Self-Efficacy Grades 6-12	551	378	238	0.79	0.80
Social Competence	138	118	105	0.98	0.98

*Cronbach's α (alpha) is used as an estimate of the reliability of a survey instrument. It can be viewed as the expected correlation of two tests that measure the same construct; so, it can be used as a measure of how well an instrument measured a construct at 2 time points. It has a maximum value of 1.0, and any value above 0.7 is considered to reflect acceptable reliability.

**For some instruments, Cronbach's is either not applicable as a measure of reliability, or the sample size was not large enough to calculate this statistic.

Attrition

Attrition occurs when members of the pretest survey group are not part of the post-test survey group, due to missing data, leaving a program, or otherwise not being available for post-testing.

Attrition bias refers to systematic differences between groups in withdrawals from a survey sample of participants. For example, if those who do not complete a post-test are systematically found to be of a specific ethnicity, or systematically scored lower on their pretests, overall findings may be biased accordingly.

Attrition was assessed among all instruments and no systematic differences were detected.

Appendix B. Instrument Descriptions

ATOD Use and Attitudes

Questions	Response Scale
About how often (if ever) do you:	Behavior is rated on a 5-Point Scale as: 1=Never, 2=A few times a year, 3=Once a month to a few times a month 4=Once a week to a few times a week 5=Once a day to more than once a day Attitudes are rated on a 4-Point Scale as: 1=No risk 2=Slight risk 3=Moderate risk 4=Great risk
1. Drink beer, wine, wine coolers, or liquor (more than just a few sips)?	
2. Drink until you get drunk?	
3. Smoke cigarettes?	
4. Smoke marijuana (grass, pot) or hashish (hash)?	
5. Take prescription drugs that aren't yours?	
How much do you think people risk harming themselves (physically or in other ways) if they:	
6. Smoke one or more packs of cigarettes per day?	
7. Try marijuana once or twice?	
8. Smoke marijuana regularly?	
9. Take one or two drinks of an alcoholic beverage (beer, wine, liquor) nearly every day?	

Attitudes toward Delinquency

Questions	Response Scale
How wrong is it to:	4-point Likert Scale 1 through 4 1=Not wrong 4=Very wrong
1. To start a fistfight or shoving match?	
2. To shoplift from a store?	
3. To damage or mark up public or private property on purpose?	
4. To lie to a teacher to cover up something you did?	
5. To take things that don't belong to you?	
6. To stay out all night without permission?	
7. To damage school property on purpose?	
8. To lie to your parents about where you have been or who you were with?	

9. To skip school without permission?	
10. To hit someone because you didn't like what they said or did?	
11. To be in a fight with members of a gang?	
12. To carry a weapon, like a knife or gun?	
13. To have a serious fight at school?	

Bullying, Fighting and Victimization Scale

Subscales	Questions	Response Scale
Bullying	1. I teased other students	8-point Likert Scale 1 through 8 1=Never 8=7 or more times
Bullying	2. In a group I teased other students.	
Bullying	3. I upset other students for the fun of it.	
Bullying	4. I excluded others.	
Bullying	5. I encouraged people to fight.	
Bullying	6. I spread rumors about others.	
Bullying	7. I was mean to someone when angry.	
Bullying	8. I helped harass other students.	
Bullying	9. I started arguments or conflicts.	
Fighting	10. I got in a physical fight.	
Fighting	11. I got into a physical fight when angry.	
Fighting	12. I threatened to hit or hurt another student.	
Fighting	13. I hit back when someone hit me first.	
Fighting	14. I fought students I could easily beat.	
Victimization	15. Other students made fun of me.	
Victimization	16. Other students picked on me.	
Victimization	17. Other students called me names.	
Victimization	18. I got hit and pushed by other students.	

Life Effectiveness Scale

Questions	Response Scale
1. I plan and use my time well.	6-point Scale 1 through 6 1=Not like me at all 6=Exactly like me
2. Goals are important to me.	
3. I do not waste time.	
4. I have specific goals to aim for.	
5. I am successful in social situations.	
6. I work hard at solving what's causing my problems.	
7. I like to be busy and actively involved in things.	
8. I understand issues of personal space, touch, and appropriate behavior towards other people.	
9. I behave appropriately towards other people.	
10. I avoid unnecessary conflicts with others.	

Marijuana Attitudes Assessment among Grades 1-5

Questions	Response Scale
1. My parents have talked to me about marijuana.	1=Yes 2=No
2. I would be sad if my friends used marijuana.	
3. If I used marijuana my friends would not like me.	
4. My parents would be sad if I used marijuana.	
Do you think that a kid who used marijuana would:	
5. Have more friends?	
6. Do badly in school?	
7. Be hurting their brain or body?	

Marijuana Use and Attitudes Assessment among Grades 6-12

Questions	Response Scale
1. I resolve my conflicts with other people.	5-Point Likert Scale 1 through 5 1=Strongly disagree 5=Strongly agree
2. I avoid unnecessary conflicts with others.	
3. Other people look up to the way I handle conflict.	
4. During the last 30 days, have you talked with at least one of your parents about the effects of marijuana use? (Either adoptive, biological, stepparents, or guardians, whether or not they live with you)	1=Yes 2=No
5. Have you ever talked with at least one of your parents about the effects of marijuana use? (Either adoptive, biological, stepparents, or guardians, whether or not they live with you)	1=Yes 2=No
6. Below are some messages about marijuana. Which have you ever seen or heard (check any that apply)?	7-Point Scale 1=Above the Influence 2=Don't be a Lab Rat 3=Good to Know Colorado 4=What's Next? 5=Drive High, Get a DUI 6=Speak Now 7=None of these
7. How much do you think people risk hurting themselves if they use marijuana regularly (once a week or more)?	4-Point Likert Scale 1 through 4 1=Great risk 4=No risk
8. How wrong do you think it is for someone your age to use marijuana?	4-Point Likert Scale 1 through 4 1=Very wrong 4=Not wrong at all
9. How wrong do you think your parents or guardians feel it would be for you to use marijuana?	
10. Please indicate your agreement with the following statements:	5-Point Likert Scale 1 through 5 1=Strongly disagree 5=Strongly agree
a. Marijuana makes it harder to think about do things (harder to concentrate or understand; slows you down when you move)	
b. Marijuana helps a person relax and feel less tense (helps you unwind and feel calm)	
c. Marijuana helps people get along better with others and it can help you talk more or feel more romantic	

d. Marijuana makes a person feel more creative and perceive things differently (music sounds different; things seem more interesting)	
e. Marijuana generally has bad effects on a person (you become angry or careless; after feeling high you feel down)	
f. Marijuana has effects on a person's body and gives a person cravings (get the munchies/hungry; have a dry mouth; hard to stop laughing)	
11. How much would your friends try to stop you from using marijuana?	4-Point Likert Scale 1 through 4 1=A lot 4=Not at all
12. How easy do you think it would be to get marijuana if you wanted some?	5-Point Likert Scale 1 through 5 1=Probably impossible 5=Very easy
13. Have you ever tried marijuana (pot, grass, hash, edibles, etc.)?	1=Yes 2=No
14. How old were you the first time you used marijuana?	7-Point Scale 1=I've never used marijuana 2=8 years old or younger 3=9 to 10 years old 4=11 or 12 years old 5=13 or 14 years old 6=15 or 16 years old 7=17 years or older
15. During the past 30 days, how many times did you use marijuana?	6-Point Scale 1=0 times 2=1 or 2 times 3=3 to 9 times 4=10 to 19 times 5=20 or 39 times 6=40 times or more
16. How likely is it that you will use marijuana, even once or twice, over the next 12 months?	4-point Likert Scale 1 through 4 1=I definitely will not 4=I definitely will
17. During the past 30 days, have any of the following things happened to you when you were under the influence of marijuana?	4-Point Scale 1=No 2=Yes: 1-2 times

a. Got in trouble at school?	3=Yes: 3-9 times 4=Yes: 10 or more times
b. Hurt yourself?	
c. Couldn't remember what happened?	
d. Hurt your schoolwork?	
e. Fought with your parents?	
f. Damaged a friendship?	
g. Hurt someone else?	

Marijuana Use and Attitudes Assessment among Ages 18-25

Questions	Response Scale
1. Have you smoked one or more cigarettes in the past year?	1=Yes 2=No
2. If you answered "yes" to number 1 above, what was your usual frequency of smoking when you did smoke cigarettes in the last 12 months?	5-Point Scale 1=Every day 2=5 to 6 days per week 3=3 to 4 days per week 4=1 to 2 days per week 5=Once a month or less
3. How often did you drink any kind of alcoholic drink in the last 12 months?	6-Point Scale 1=Every day/almost every day 2=3 or 4 times per week 3=1 or 2 times per week 4=Once a month 5=Less than once a month 6=Did not drink in the last 12 months
4. What percent of your friends, colleagues or coworkers smoked marijuana at least once in the last year?	6-Point Scale 1=None 2=Fewer than 10% 3=At least 10% but fewer than 25% 4=25% to 50% 5=More than half of them 6=Almost all of them
5. Below is a list of reasons that a person might give for using marijuana, or for not using marijuana. Think about how much you	

agree or disagree with a reason. There are no “right” or “wrong” answers. a. To be sociable	5-Point Likert Scale 1 through 5 1=Strongly disagree 5=Strongly agree
b. Friends would object to my using marijuana	
c. Because it makes social gatherings more fun	
d. Because it improves parties and celebrations	
e. To forget about my problems	
f. Because it helps me when I feel depressed or nervous	
g. Marijuana impairs my judgment	
h. To cheer me up when I am in a bad mood	
i. To forget my worries.	
j. Because I like the feeling	
k. Marijuana can cause a person to feel tired	
l. To get high	
m. Marijuana can cause a person to feel depressed	
n. Because it gives me a pleasant feeling	
o. Because it is fun	
p. To know myself better	
q. Because it helps me be more creative and original	
r. To understand things differently	
s. To expand my awareness	
6. Below are some messages about marijuana please mark the ones that you have seen or heard:	7-Point Scale 1=Above the Influence 2=Don’t be a Lab Rat 3=Good to Know 4=Drive High, Get a DUI 5=Marijuana and You 6=Speak Now 7=None of these
7. Have you ever tried marijuana (pot, grass, hash, edibles, etc.)	1=Yes 2=No
8. Have you used marijuana (pot, grass, hash, edibles, etc.) in the last 12 months?	1=Yes 2=No

9. About how old were you the first time you used marijuana?	7-Point Scale 1=8 years old or younger 2=9 or 10 years old 3=11 or 12 years old 4=13 or 14 years old 5=15 or 16 years old 6=17 to 20 years old 7=21 years old or older
10. How many years have you been using marijuana?	5-Point Scale 1=< 1 year 2=1-2 years 3=2-5 years 4=5-10 years 5=>10 years
11. During the past 30 days, how many times did you use marijuana?	6-Point Scale 1=0 times 2=1 or 2 times 3=3 to 9 times 4=10 to 19 times 5=20 to 39 times 6=40 or more times
12. How often did you use marijuana in the last 12 months?	6-Point Scale 1=Every day/almost every day 2=3 to 4 times per week 3=1 to 2 times per week 4=Once a month 5=Less than once a month 6=Did not use marijuana in the last 12 months
13. How many times did the following things happen to you while you were smoking marijuana or because of your marijuana use during the last year? a. Missed out on other things because you spent too much money on marijuana.	5-Point Scale 1=Never 2=1-2 times 3=3-5 times 4=6-10 times 5=More than 10 times
b. Went to work or school high or stoned	
c. Noticed a change in your personality	
d. Missed a day (or part of a day) of school or work	
e. Tried to cut down on smoking marijuana	
f. Suddenly found yourself in a place that you could not remember getting to	

g. Had a fight or argument with a friend	
h. Had a fight or argument with a family member	
i. Felt paranoid or overtly nervous in everyday life	
j. Felt unmotivated to do things you needed to do in your everyday life	
k. Noticed that your memory was not as good as it used to be	
l. Lost some physical coordination in everyday activities	
m. Had trouble thinking clearly in everyday activities	

Perceived Social Support Scale

Subscales	Questions	Response Scale
Support from significant other	1. There is a special person who is around when I am in need.	7-Point Likert Scale 1 through 7 1=Very strongly disagree 7=Very strongly agree
Support from significant other	2. There is a special person with whom I can share my joys and sorrows.	
Support from family	3. My family really tries to help me.	
Support from family	4. I get the emotional help and support I need from my family.	
Support from significant other	5. I have a special person who is a real source of comfort to me.	
Support from friends	6. My friends really try to help me.	
Support from friends	7. I can count on my friends when things go wrong.	
Support from family	8. I can talk about my problems with my family.	
Support from friends	9. I have friends with whom I can share my joys and sorrows.	
Support from significant other	10. There is a special person in my life who cares about my feelings.	
Support from family	11. My family is willing to help me make decisions.	
Support from friends	12. I can talk about my problems with my friends.	

Resilience Scale

Questions	Response Scale
1. I feel proud that I have accomplished things in my life.	7-Point Likert Scale 1 through 7 1=Strongly disagree 7=Strongly agree
2. I am determined.	
3. I can get through difficult times because I've experienced difficulty before.	
4. I have self-discipline.	
5. I keep interested in things.	
6. I can usually find something to laugh about.	
7. In an emergency, I'm someone people can generally rely on.	
8. My life has meaning.	
9. When I'm in a difficult situation, I can usually find my way out of it.	

School Performance-Direct School Records

Questions	Response Scale
1. What was the overall Grade Point Average (GPA) of the student? If there is no overall GPA, choose the GPA for one primary class (English or Math).	Grantees complete questions at pre- and post-test using data obtained directly from schools
2(a). How many total school days in this quarter/trimester/semester?	
2(b). How many full-day unexcused absences in this quarter/trimester/semester?	
3. For high school students only: Did the child graduate in the past year?	

School Performance-School Bonding Scale (Grades 3-6)

Questions	Response Scale
1. How often do you feel that the school work you are assigned is meaningful and important?	5-Point Likert Scale 1 through 5 1=Almost always 5=Never
2. How interesting are most of your courses to you?	5-Point Likert Scale

	1 through 5 1=Very interesting 5=Very dull
3. How important do you think things you are learning in school are going to be for your later life?	5-Point Likert Scale 1 through 5 1=Very Important 5=Not at all important
4. Now thinking back over the past year in school, how often did you try your best in school?	5-Point Likert Scale 1 through 5 1=Almost always 5=Never
5. How much do you care if your homework is done correctly?	5-Point Likert Scale 1 through 5 1=Very much care 5=Do not care at all
6. How much does it matter to you what your grades are?	5-Point Likert Scale 1 through 5 1=Matters very much 5=Does not matter at all
7. How much education do you want to have before you stop going to school?	5-Point Scale 1=Want to finish middle school 2=Want to finish high school 3=Want to take some college courses 4=Want to finish a 2-year college 5=Want to finish a 4-year college
8. How often do you take part in class discussions?	5-Point Likert Scale 1 through 5 1=Almost always 5=Never
9. How often do you pay attention to what your teachers are saying?	5-Point Likert Scale 1 through 5 1=Almost always 5=Never
10. How often do you get your homework done?	5-Point Likert Scale 1 through 5 1=Almost always 5=Never

School Performance-School Engagement Scale (Grades 6-12)

Subscales	Questions	Response Scale
Productivity	1. My family knows how I am doing in school.	5-Point Likert Scale 1 through 5 1=Very strongly disagree 5=Very strongly agree
Belonging	2. I like most of my teachers.	
Productivity	3. If I do not know what something means, I do something to figure it out.	
Productivity	4. I study at home.	
Aspirations	5. I plan to pursue more education after high school.	
Productivity	6. There is someone in my family who helps me when I have trouble completing my homework.	
Belonging	7. Most days, I look forward to going to school.	
Productivity	8. I pay attention to my teachers.	
Productivity	9. When I am doing school work, I make sure I understand what I am learning.	
Productivity	10. There is a special person in my life who cares about my feelings.	
Aspirations	11. My family is willing to help me make decisions.	
Aspirations	12. I can talk about my problems with my friends.	
Belonging	13. I am proud to be a student at this school.	
Productivity	14. When learning new things, I try to connect them to things I already know.	
Productivity	15. When I have an assignment due, I keep working until it is finished.	
Aspirations	16. Getting good grades is important to me.	
Aspirations	17. It is important to me to be successful in a job.	
Productivity	18. I talk to my family about problems I have at school.	
Belonging	19. There is a lot I can learn from my teachers.	
Belonging	20. Teachers help me to be successful at school.	

Productivity	21. I know how to study for tests.	
Belonging	22. I feel like a part of my school.	

Self-Efficacy Scale - Grades 3-6

Questions	Response Scale
1. I can manage to solve difficult problems if I try hard enough.	5-Point Likert Scale 1 through 5 1=Never 5=Often
2. If someone tries to keep me from getting what I want, I can find a way to get what I want.	
3. It is easy for me to stick to my goals and reach them.	
4. I am confident that I could do a good job dealing with unexpected events.	
5. Thanks to my talents and skills, I know how to handle unexpected situations.	
6. I can solve most problems if I try hard enough.	
7. I can stay calm when facing difficulties because I can handle them.	
8. When I have a problem, I can find several ways to solve it.	
9. If I am in trouble, I can think of a solution.	
10. I can handle whatever comes my way.	

Self-Efficacy Scale - Grades 6-12

Questions	Response Scale
1. When I make plans, I am certain I can make them work.	5-Point Likert Scale 1 through 5 1=Disagree strongly 5=Agree strongly
2. If I can't do a job the first time, I keep trying until I can.	
3. When I have something unpleasant to do, I stick to it until I finish it.	
4. When I decide to do something, I go right to work on it.	
5. Failure just makes me try harder.	

6. I am a self-reliant person.	

Social Competence Scale

Subscales	Questions	Response Scale
Social Competence	1. Functions well even with distractions.	5-Point Likert Scale 1 through 5 1=Not at all 5=Very well
Social Competence	2. Can accept things not going his/her way.	
Social Competence	3. Copes well with failure.	
Social Competence	4. Is a self-starter.	
Social Competence	5. Works/plays well without adult support.	
Social Competence	6. Accepts legitimate imposed limits.	
Social Competence	7. Expresses needs and feelings appropriately.	
Social Competence	8. Thinks before acting.	
Social Competence	9. Resolves peer problems on his/her own.	
Social Competence	10. Stays on task.	
Social Competence	11. Can calm down when excited or all wound up.	
Social Competence	12. Can wait in line patiently when necessary.	
Social Competence	13. Very good at understanding other people's feelings.	
Social Competence	14. Is aware of the effect of his/her behavior on others.	
Social Competence	15. Works well in a group	
Social Competence	16. Plays by the rules of the game.	
Social Competence	17. Pays attention.	
Social Competence	18. Controls temper when there is a disagreement.	
Social Competence	19. Shares materials with others.	
Social Competence	20. Cooperates with peers without prompting.	
Social Competence	21. Follows teacher's verbal directions.	
Social Competence	22. Is helpful to others.	

Social Competence	23. Listens to others' points of view.	
Social Competence	24. Can give suggestions and opinions without being bossy.	
Social Competence	25. Acts friendly toward others.	

Appendix C. Instruments Used by Each Grantee*

Survey Instrument	Grantee	Totals
Alcohol, Tobacco and Other Drugs (ATOD)	Chaffee County Department of Human Services Friends First I Have a Dream of Boulder County North Range Behavioral Health	4
Attitudes towards Delinquency	Chaffee County Department of Human Services City of Commerce City Denver Youth Program Mental Health America of Colorado Victim Offender Reconciliation Program (VORP)	5
Bullying, Fighting and Victimization	Bright Future Foundation of Eagle County Playworks Education Energized San Miguel Resource Center The Conflict Center	4
Direct School Records/Grade Point Average	Colorado Youth for a Change Denver Urban Scholars Gunnison Hinsdale Youth Services Summit County Government YESS Institute	5
Life Effectiveness	Boys and Girls Clubs of Metro Denver (All)	1
Perceived Social Support	Aurora Community Connection Clayton Early Learning Colorado Youth at Risk Ethiopian Community Development Council Live the Victory Mesa County School District 51 Partners in Routt County, Inc. YWCA of Boulder	8
Resilience	Access After School Art from Ashes Asian Pacific Development Center Aurora Youth Options Bright Future Foundation of Eagle County Chaffee County Department of Human Services City of Aurora CitiWILD Colorado Youth Matter (All) Colorado Seminary Environmental Learning for Kids Ethiopian Community Development Council Florence Crittenton Full Circle	23

	Goodwill Industries Gunnison County Mentors Rocky Mountain Youth Corps San Miguel Resource Center Safehouse Progressive Alliance for Nonviolence TEENS, Inc. Mile High Youth Corps Whiz Kids Tutoring YMCA of Boulder Valley	
School Bonding	America SCORES Live the Victory Playworks Education Energized	3
School Engagement	Big Brothers Big Sisters of Colorado Chaffee County Department of Human Services Ethiopian Community Development Council Generation Schools Network Live the Victory Mi Casa Resource Center Mesa County School District 51 TEENS, Inc. YWCA of Boulder	9
Self-Efficacy (Grades 3-6)	Ethiopian Community Development Council Summit County Government	2
Self-Efficacy (Grades 6-12)	Colorado Uplift Ethiopian Community Development Council Groundwork Denver, Inc. Live the Victory Onward! Su Teatro, Inc. Summit County Government Turning Point YESS Institute	9
Social Competence	Chaffee County Department of Human Services Scholars Unlimited	2
Parents as Teachers (PAT) Post-only Survey Home Instruction for Parents of Preschool Youngsters (HIPPY) Pre-post Bracken School	Catholic Charities Pueblo Community Coalition for Families and Children Family Star La Llave Mountain Resource Center Rocky Mountain Parents as Teachers	6

Readiness Assessment; BSRA-3		
Method of Data Collection		
Online Data Collection		43%
Paper Data Collection		49%
Mix Online & Paper Data Collection		8%

*In addition to the listed instruments, each grantee was required to use one of the Marijuana Assessments commensurate with the age-range served.

Appendix D. Literature-Based Connections between Survey Tool Constructs and TGYS Goals

Survey Tool	TGYS Goal	Literature Reference
Resilience & Life Effectiveness Scales	Youth with high levels of resilience and social competence decrease their involvement with deviant peers throughout adolescence, which in turn predicts less serious forms of delinquency in early adulthood. Those with more resilience and social competence also tend to do better in school.	Hodder et al., 2011; Stepp et al., 2011
Perceived Social Support Scale	Both self-efficacy and social connectedness are protective against, and limit delinquent behaviors and violence among adolescents.	Kort-Butler, 2010; Stoddard et al., 2011; Yu & Gamble, 2010
Direct School Records	Kids with lower academic performance offend more frequently, commit more serious and violent offenses, and persist in their offending over time.	Borowsky et al., 2002; Maguin & Loeber, 1996
School Engagement & Bonding Scales	Higher degrees of behavioral and emotional school engagement predict significantly lower risk of substance use and involvement in delinquency among youth.	Benner et al., 2013; Li et al., 2011; Savolainen et al., 2012; Smith & Snyder, 2015
Self-Efficacy Scales	Both self-efficacy and social connectedness are protective against, and limit delinquent behaviors and violence among adolescents.	Kort-Butler, 2010; Mileviciute et al., 2014; Stoddard et al., 2011
Bullying, Fighting, and Victimization Scale	Higher levels of bullying and fighting are linked to more violent behavior among youth; being victimized is associated with substance abuse, low academic achievement and school truancy.	DeLisi et al., 2015; Hong et al., 2014; Kim et al., 2011
ATOD Use and Attitudes	Decreasing substance use and increasing perceived risk of substances are protective against both teen and adult violence, as well as teen dating violence.	Temple et al., 2013; Epstein-Ngo et al., 2013
Attitudes toward Delinquency	Positive attitudes about delinquent behavior (i.e., perceiving these behaviors as wrong) help teens resist activities related to violence, such as bullying and delinquency.	Herrenkohl et al., 2009
Colorado Criminal Contacts/Re-offenses	This tool was created specifically for TGYS, under the assumption that fewer legal contacts are linked to less crime and violence among youth.	
Social Competence	Youth with high levels of resilience and	Stepp et al., 2011

Scale	social competence decrease their involvement with deviant peers throughout adolescence, which in turn predicts less serious forms of delinquency in early adulthood. Those with more resilience and social competence also tend to do better in school.	
Parenting Practices Interview	Improved parenting skills can prevent later substance abuse, delinquency and violence and improve school readiness among young children. Better parenting is also instrumental in preventing child abuse and neglect.	Gershater-Molko et al., 2002; Peterson et al., 1997; Webster-Stratton et al., 2008; Webster-Stratton & Taylor, 2001
Marijuana Use and Attitudes Assessments	These tools were created specifically for TGYS. Although not all programs target substance use, there is scientific evidence that an increase in youth protective factors of interest to TGYS is associated with lower risk of overall substance use.	Torrealday et al., 2008

Appendix E. References

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