

School District of Lake County, Florida

TECHNICAL REPORT

**EVALUATION OF THE
TOO GOOD FOR DRUGS--ELEMENTARY SCHOOL
PREVENTION PROGRAM 2006-2007**

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RESEARCH SUMMARY

EVALUATION OF THE *TOO GOOD FOR DRUGS--ELEMENTARY SCHOOL* PREVENTION PROGRAM 2006-2007: LAKE COUNTY, FLORIDA

This report is a summary of an evaluation of the *Too Good for Drugs-Elementary School* prevention program. The School District of Lake County was awarded 'Safe and Drug-Free Schools' funds from the Florida Department of Education to supplement the district's ongoing substance and violence prevention efforts. One component of the entitlement grant focused on implementing the *Too Good for Drugs* (TGF^D) prevention program for elementary students during the 2006-2007 school year.

The purpose of the evaluation was to examine the effectiveness of the *Too Good for Drugs-Elementary School* program in impacting children's classroom behaviors, attitudes toward drugs, perceptions of the harmful effects of drugs, emotional competency skills, social and resistance skills, and goal setting and decision making skills.

The evaluation examined the following questions. First, do *teachers* of students receiving the TGF^D prevention program in comparison to teachers of students in the control group observe: 1) more frequent student use of personal skills, 2) more frequent student use of social skills, 3) more frequent student engagement in positive social behaviors, and 4) less frequent student engagement in inappropriate social behaviors in the classroom? Second, do *students* receiving the TGF^D prevention program in comparison to students in the control group indicate: 1) higher levels of emotional competency skills, 2) higher levels of social and peer resistance skills, 3) higher levels of goal setting and decision making skills, 4) more positive attitudes regarding the inappropriateness of drug use, and 5) greater awareness of the harmful effects of drugs?

Method

Six of the district's 22 elementary schools were randomly selected and recruited for participation. Fifty-four classroom teachers participated in the study--27 in the treatment group and 27 in the control group. One thousand and eleven (1011) students participated in the study. Fifty-three percent of the students were third graders and 47% fourth graders. Forty-nine percent of the students were female, approximately 60% White, 18% African American, 16% Hispanic, and 6% Other (Asian, American Indian and Multiracial). Forty-eight percent of the students receive free or reduced lunch services, 14% exceptional education services, and 11% English language services.

Teachers in the treatment and control group completed checklists assessing student behaviors prior to delivery of the TGF^D prevention program, following program delivery, and again 3-months after program delivery. Students in the treatment and control group completed a survey questionnaire prior to delivery of the TGF^D prevention program, following program delivery, and 3-months later.

Results

Prevention research has identified certain risk factors that increase the likelihood of children and youth engaging in substance use behaviors and certain protective factors that decrease the impact of risk factors. The *TGFD* program incorporates curricula and instructional activities aimed at reducing risk factors and building protective factors. The following risk and protective factors were examined in the study: Personal and Social Skills; Socially Appropriate and Inappropriate Behaviors; Emotional Competency Skills; Social and Resistance Skills; Goal Setting and Decision Making Skills; Perceptions of the Harmful Effects of Drugs; and Attitudes Toward Drugs.

1. Students in the treatment and the control group responded to a survey questionnaire before, following and 3-months after program delivery.

Student responses to protective survey items at the end of program and again at the 3-month follow-up suggest the following:

- (a) Students participating in the *TGFD* program had statistically greater gains or higher levels of **emotional competency skills** in comparison to students in the control group. Positive effects in emotional competency skills were observed three months later. A sample of item content that represents skills in this category includes: 1) I know many different words to describe what I feel inside, 2) I am responsible for choosing to live a safe and healthy life, and 3) I can do almost anything I put my mind to.
- (b) Students participating in the *TGFD* program had statistically greater gains or higher levels of **social and resistance skills** in comparison to students in the control group. Positive effects in social and resistance skills were observed three months later. A sample of item content that represents skills in this category includes: 1) If someone tried to hand me a can of beer, I would just walk away, 2) If a group of kids called me over to try some marijuana, I would just ignore them, and 3) I know many peer refusal strategies to help me avoid pressure to smoke, drink or use marijuana.
- (c) Students participating in the *TGFD* program had statistically greater gains or higher levels of **goal setting and decision making skills** in comparison to students in the control group. Positive effects in goal and decision-making skills were observed three months later. A sample of item content that represents skills in this category includes: 1) Setting a goal helps me figure out what I want to do, 2) When I set a goal, I think about what I need to do to reach my goal, and 3) I make good decision because I stop and think.
- (d) Students participating in the *TGFD* program had statistically greater gains or higher levels of **perceptions of harmful effects of drug use** in comparison to students in the control group. Positive effects for perceptions of harmful effects of drugs were observed three months later. A sample of item content that represents skills in this category includes: 1) Drinking alcohol can make it hard to see, walk and talk, 2) People who smoke cigarettes can quit whenever they want to, and 3) Smoking marijuana improves a person's coordination.

- (e) Students in both the treatment and the control group had very positive attitudes about the inappropriateness of drug use. The average scores across groups ranged from 4.66 to 4.84 on a 5.00-point scale, suggesting a ceiling on the potential effects of program treatment. Considering the students in this sample were served in general education settings, the vast majority of third and fourth graders felt it was wrong to use substances and were not inclined to suggest any interest in the use of tobacco, alcohol or marijuana. A sample of item content that represents attitudes in this category includes: 1) If I have a chance, I might try drinking alcohol, 2) It is wrong for kids to use marijuana, and 3) I might smoke when I get older.
2. In an effort to triangulate data, teacher judgment concerning student behavior was also examined. Classroom teachers were asked to rate each student's behavior related to personal skills, social skills, prosocial behaviors, and inappropriate social behaviors across the three testing periods. If teacher responses are consistent with student responses or vice versa, the study's findings could be interpreted with greater confidence.

Teachers' observations of students at the end of program and again at the 3-month follow-up suggest the following:

- (a) Based on teachers' judgments, students participating in the *TGFD* program had statistically greater gains or higher levels of **personal skills** in comparison to students in the control group. Positive effects for gains in personal skills were observed three months later. A sample of item content that represents skills in this category includes: 1) uses a variety of verbal labels for emotions, 2) stops and thinks before acting, and 3) calms him/herself down when upset.
- (b) Based on teachers' judgments, students participating in the *TGFD* program had statistically greater gains or higher levels of **social skills** in comparison to students in the control group. Positive effects for gains in social skills were observed three months later. A sample of item content that represents skills in this category includes: 1) treats other students with respect, 2) uses positive peer refusal strategies, and 3) interacts well with other students.
- (c) Based on teachers' judgments, students participating in the *TGFD* program had statistically greater gains or engaged in more **prosocial behaviors** in comparison to students in the control group. Positive effects for gains in prosocial behaviors were observed three months later. A sample of item content that represents behaviors in this category includes: 1) helps other students, 2) asks other students to play if they don't have someone to play with, and 3) takes turns, plays fair, and follows rules of the game.
- (d) Based on teachers' judgments, students participating in the *TGFD* program had statistically significant greater gains or engaged in fewer **inappropriate social behaviors** in comparison to students in the control group. Significant differences were not observed at the 3-month follow-up between students in the treatment and the control group for inappropriate behaviors. A sample of item content that represents behaviors in this category includes: 1) yells at other students, 2) gets into a lot of fights at school, and 3) disrupts instruction and/or procedures.

3. Treatment effects were examined for teachers and students participating in the *TGFD* program across gender, socioeconomic status (free or reduced lunch services), and ethnic background. These results offer evidence of the *TGFD* program's usefulness in serving and meeting the needs of diverse student populations.

Teachers' observations of students in the treatment group at the end of program suggest the following:

- (a) Girls and boys experienced significant improvements in their scores on the Teacher Checklist of Student Behavior after participating in the *TGFD* prevention program and 3-months later.
- (b) Economically disadvantaged and non-economically disadvantaged students experienced significant improvements in their scores on the Teacher Checklist of Student Behavior after participating in the *TGFD* prevention program and 3-months later.
- (c) White, African American, and Hispanic students experienced significant improvements in their scores on the Teacher Checklist of Student Behavior after participating in the *TGFD* prevention program and 3-months later.

Treatment student responses to protective survey items at the end of program suggest the following:

- (a) Girls and boys experienced significant improvements in their scores on the Student Survey Questionnaire after participating in the *TGFD* prevention program and 3-months later.
- (b) Economically disadvantaged and non-economically disadvantaged students experienced significant improvements in their scores on the Student Survey Questionnaire after participating in the *TGFD* prevention program and 3-months later.
- (c) White, African American, and Hispanic students experienced significant improvements in their scores on the Student Survey Questionnaire after participating in the *TGFD* prevention program and 3-months later.

In summary, the *TGFD* prevention program evidenced a positive effect on third and fourth graders' behaviors in the classroom up to three months following program delivery. The prevention program was also successful in impacting four of the five protective factors associated with strengthening children's abilities to make positive, healthy decisions—emotional competency skills, social and resistance skills, goal setting and decision making skills, and perceptions of harmful effects of drug use. The *TGFD* program was effective for students regardless of gender, socioeconomic status, and ethnic background.

TABLE OF CONTENTS

RESEARCH SUMMARY	I
INTRODUCTION	4
TGFD PROGRAM DESCRIPTION	4
Figure 1. Logic Model for the TGFD Prevention Program	5
PURPOSE OF THE EVALUATION	6
Evaluation Strategies	7
EVALUATION METHODS	8
Design	8
Sample.....	8
Prevention Program	9
Assessment of Program Implementation	9
Assessment of Program Implementation	9
Instrumentation	10
Teacher Checklist of Student Behavior	10
Student Survey Questionnaire	11
EVALUATION RESULTS	11
PROGRAM IMPLEMENTATION	11
Prevention Lesson Logs	11
Classroom Observations	12
Table 1. Proportion of Observed Behaviors on the Classroom Observation Form	12
Survey of Program Implementation.....	13
TEACHER CHECKLIST OF STUDENT BEHAVIOR	16
Impact of Attrition on Checklist Scores	16
Checklist Pretest Score Equivalence.....	17

Table 2. Characteristics of Treatment and Control Groups on the Teacher Checklist of Student Behavior by Time	18
Impact on Checklist Protective Factors	19
Table 3. Mean and Gain Scores on the Teacher Checklist of Student Behavior Scores by Group and Time	20
Table 4. Multivariate Analysis of Variance and Univariate Analysis of Variance on the Teacher Checklist Behavior Gain Scores by Group and Time	20
Figure 2. Mean Scores and Mean Change Scores on the Personal Skills Scale by Group and Time	21
Figure 3. Mean Scores and Mean Change Scores on the Social Skills Scale by Group and Time	21
Figure 4. Mean Scores and Mean Change Scores on the Prosocial Behaviors Scale by Group and Time	22
Figure 5. Mean Scores and Mean Change Scores on the Inappropriate Behaviors Scale by Group and Time	22
Treatment Effects by Student Characteristics on the Teacher Checklist.....	23
STUDENT SURVEY QUESTIONNAIRE	23
Impact of Attrition on Survey Scores	23
Student Survey Pretest Score Equivalence	24
Impact on Student Survey Protective Factors.....	24
Table 5. Characteristics of Treatment and Control Groups for the Student Survey by Time	25
Table 6. Mean Subscale and Gain Scores on the Student Survey by Group and Time	26
Table 7. Multivariate Analysis of Variance and Univariate Analysis of Variance on the Student Survey Protective Gain Scores by Group and Time.....	27
Figure 6. Student Mean Scores and Change Scores on the Emotional Competency Skills Scale by Group and Time	28
Figure 7. Student Mean Scores and Change Scores on the Social and Resistance Skills Scale by Group and Time	28

Figure 8. Student Mean Scores and Change Scores on Goal Setting and Decision Making Skills Scale by Group and Time	29
Figure 9. Student Mean Scores and Change Scores on the Perceptions of Harmful Effects of Drugs Scale by Group and Time	29
Figure 10. Student Mean Scores and Change Scores on the Attitudes Toward Drugs Scale by Group and Time	30
Treatment Effects by Student Characteristics on the Student Survey	30
CONCLUSION	31

EVALUATION OF THE
TOO GOOD FOR DRUGS--ELEMENTARY SCHOOL
PREVENTION PROGRAM 2006-2007: LAKE COUNTY, FLORIDA

INTRODUCTION

This report is a summary of an evaluation of the *Too Good for Drugs-Elementary School* prevention program (Mendez Foundation, Inc.). The School District of Lake County was awarded *Safe and Drug-Free Schools* (SDFS) funds from the Florida Department of Education in 2006-2007 to supplement the district's ongoing substance and violence prevention efforts. One component of the entitlement grant focused on implementing the *Too Good for Drugs* (TGFD) prevention program to elementary school students. A brief description of the *Too Good for Drugs-Elementary School* prevention program is provided first, followed by the purpose of the evaluation, evaluation design, results, and conclusions.

TGFD PROGRAM DESCRIPTION

The *Too Good for Drugs* (Grades K-8) prevention program is a multifaceted, interactive social influence intervention using a universal education strategy. The *TGFD* program at each grade-level consists of: (a) 10 core curriculum lesson units and an interactive student workbook delivered by trained teachers or *TGFD* instructors, (b) Looking for More component at the end of each lesson with suggestions for infusion, recommended reading, videotapes, and additional activities for reinforcing important concepts and skills, (c) parent component consisting of newsletters and Home Workout sheets for families, (d) strategies for involving community partners, and (e) Staff Development Curriculum for Educators. The program is designed to benefit everyone in the school by providing needed education in social and emotional competencies and by reducing risk factors and building protective factors that affect most, if not all, students in these age groups. The logic model for the prevention program is shown in Figure 1. Instructional strategies strongly emphasize cooperative learning activities, role-play situations, and skills building methods such as modeling, practicing, reinforcing, providing feedback, and promoting generalization of skills to other contexts.

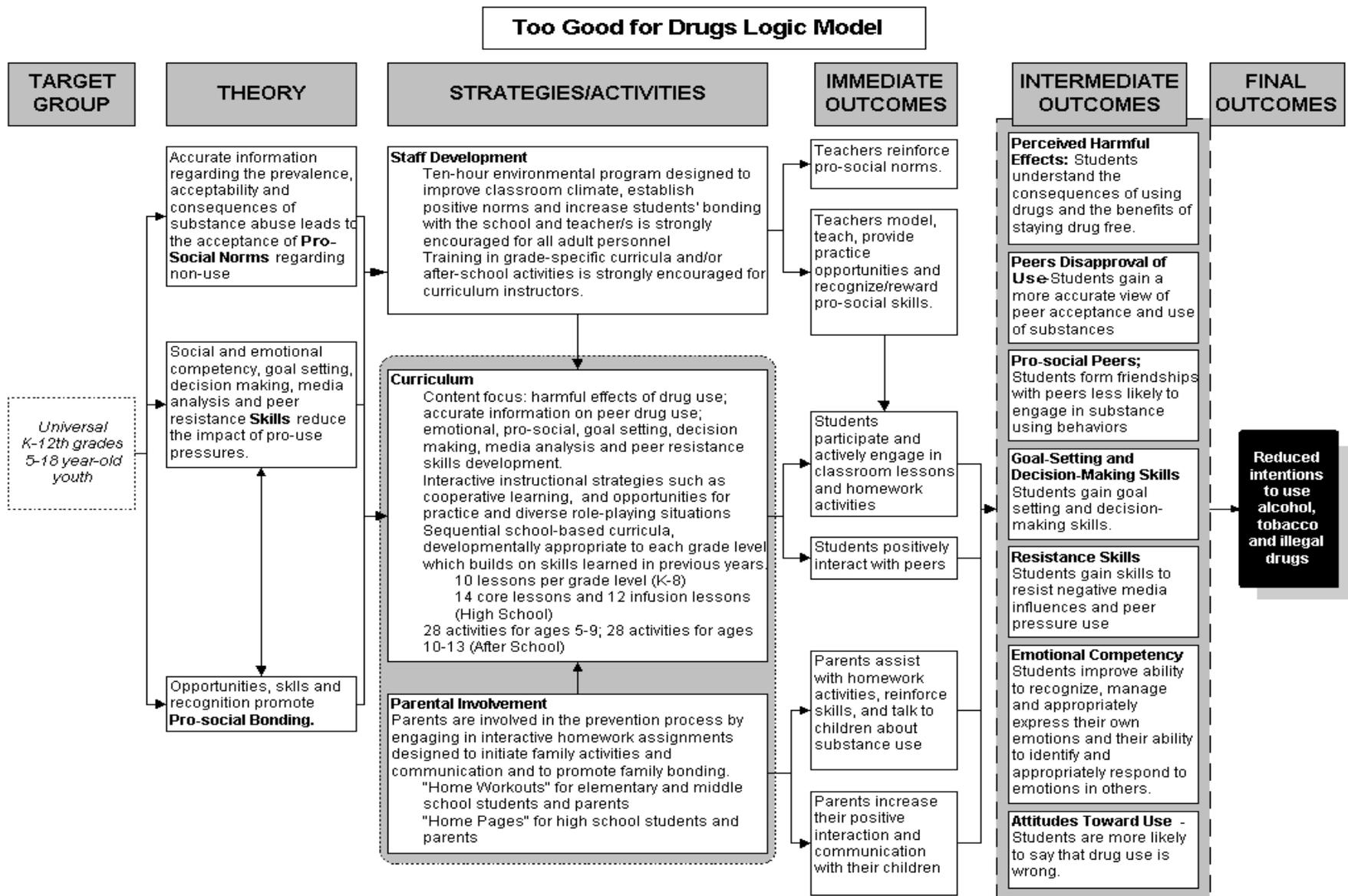


Figure 1. Logic Model for the TGFD Prevention Program

The curriculum for students focuses on developing personal and interpersonal skills to resist peer pressures. Instructional strategies focus on strengthening skill development in goal setting, decision making, bonding with others, respect for self and others, managing emotions, effective communication, and social interactions. The curriculum also provides information about the negative consequences of drug use and the benefits of a non-violent, drug-free life style.

PURPOSE OF THE EVALUATION

Young people's use of alcohol, tobacco and other drugs (ATOD) has been a social, educational and inter- and intra-personal concern for decades. The contributors and reasons for young people's substance use and the consequences to the individual and the communities around them are complex and multifaceted. Effective school-based prevention programs have been identified as one of the important and useful interventions to the overall substance prevention effort. The *Too Good for Drugs-Elementary School* curriculum was developed based on the merging of federal, state and prevention agency guidelines as well as research findings of studies using the social influence and the cognitive-behavioral models for school-based prevention programs.

The purpose of the evaluation was to examine the effectiveness of the *Too Good for Drugs-Elementary School* program in impacting children's classroom behaviors, attitudes toward drug use, perceptions of the harmful effects of drug use, emotional competency skills, social and resistance skills, and goal setting and decision making skills. The evaluation examined the following questions from the perspective of the classroom teacher and the student.

1. Do *teachers* of students receiving the *TGFD* prevention program in comparison to teachers of students in the control group observe:
 - (a) more frequent student use of personal skills,
 - (b) more frequent student use of social skills,
 - (c) more frequent student engagement in positive social behaviors, and
 - (d) less frequent student engagement in inappropriate social behaviors in the classroom?
2. Do *students* receiving the *TGFD* prevention program in comparison to students in the control group indicate:

- (a) higher levels of emotional competency skills,
- (b) higher levels of social and peer resistance skills,
- (c) higher levels of goal setting and decision making skills,
- (d) more positive attitudes regarding the inappropriateness of drug use, and
- (e) greater awareness of the harmful effects of drugs?

Evaluation Strategies

Three areas were of particular interest in the data gathering effort for the evaluation. The first concerned assessing the fidelity and quality of program implementation. The second focused on assessing teachers' perceptions of student behaviors in the classroom before, after, and 3-months following program delivery. The third focused on assessing students' perceptions of skills and attitudes before, after, and 3-months following program delivery. The assessment tools used in the evaluation process are described below.

Classroom Observation of *TGFD* Implementation. Two district-based Safe Schools program specialists and two site-based curriculum resource teachers trained in the *TGFD* program conducted a classroom observation of each teacher delivering prevention lessons. The observation form contained 16 items requiring the observer to indicate whether certain activities and behaviors occurred during the delivery of the lesson unit.

Prevention Activities and Lesson Log. Teachers in both the treatment and control group were requested to record any major social skill development curriculum or drug and violence prevention curriculum delivered to students during the course of the school year. The purpose of the lesson logs was to identify any potential confounding influences on program effects.

Teacher Evaluation of Program Implementation. Elementary school teachers implementing the *TGFD* program were asked to respond to a survey questionnaire regarding the number of program lessons provided, the average length of lessons, the degree structured activities and materials were used, and their perceptions of the lessons' relevance and impact on students.

Teacher Checklist of Student Behavior. Teachers of students participating in treatment and control classrooms were administered a checklist questionnaire prior to the delivery of the *TGFD* program, following program delivery, and 3-months later. Classroom teachers responded to 24 questionnaire items using a 5-point scale ranging from "1 = Never" to "5 = Almost

Always." Survey items asked teachers to assess each student's rate of engagement in personal skills, social skills, positive social behaviors, and negative social behaviors.

Elementary Student Survey Questionnaire. Elementary school students participating in treatment and control classrooms were administered a survey questionnaire prior to the delivery of the *TGFD* program, following program delivery, and 3-months later. Students responded to 30 survey items using a Likert scale ranging from "1 = Strongly Disagree" to "5 = Strongly Agree." Survey items examined students' attitudes towards drug use; perceptions of the harmful effects of drug use; emotional competency skills; social and peer resistance skill; and goal setting and decision making skills.

EVALUATION METHODS

Design

The district's 22 elementary schools were stratified on school ratings based on state criteria of academic performance, learning environment, and student characteristics. Three levels of stratification were selected and two schools from each level were randomly assigned to either the treatment or control condition. Students in three of the elementary schools participated in the prevention program during the second quarter of the school year, and students in the other three schools served as the control sample for the study (receiving regularly scheduled subject area content). It should be noted that students in the control group were not denied access to services; the prevention program was delivered to students after the study at the end of the fourth quarter of the school year.

Sample

Six (27%) of the district's 22 elementary schools were randomly selected and recruited for participation. Fifty-four classroom teachers participated in the study--27 in the treatment group and 27 in the control group. One thousand and eleven (1011) students participated in the study. Fifty-three percent of the students were third graders and 47% fourth graders. Forty-nine percent of the students were female, approximately 60% White, 18% African American, 16% Hispanic, and 6% Other (Asian, American Indian and Multiracial). Forty-eight percent of the students receive free or reduced lunch services, 14% exceptional education services, and 11% English language services.

Prevention Program

The *TGFD* curriculum used in the study included 10 lesson units delivered to students participating in the treatment group by classroom teachers. The elementary school prevention curriculum is designed to develop skills in: (a) goal setting, (b) decision making, (c) identifying and managing emotions, (d) effective communication, (e) social skills and peer resistance, and (f) bonding with others. The curriculum also provides information about the negative consequences of drug use and the benefits of a drug-free life style. Teaching methods are highly interactive through the use of role-play, cooperative learning, games, small group activities and class discussions. Students are provided opportunities to be active participants and receive recognition for their contributions and involvement. The teaching methods model and encourage bonding with prosocial others. Students are also encouraged to share the "Home Workouts" with family members to reinforce concepts practiced during the lesson units.

Assessment of Program Implementation

Teachers in the treatment group received a brief training refresher in small groups or individually. Teachers in the treatment and control group completed checklists assessing students' behaviors prior to delivery of the *TGFD* prevention program, following program delivery, and again 3-months after program delivery. Students in the treatment and control group completed a survey questionnaire prior to delivery of the *TGFD* prevention program, following program delivery, and 3-months later. School administrators and teachers located at control sites were requested to refrain from delivering any major prevention curricula or programs in the classroom until the fourth quarter of the year. Teachers received detailed instructions for completing the *Teacher Checklist of Student Behavior*. The average time to complete a checklist for a student ranged from 1.5 to 2 minutes. Curriculum resource teachers who assisted classroom teachers with the *Student Survey Questionnaire* were provided scripted directions for administering the survey.

Assessment of Program Implementation

Three methods were used to gauge quality of program implementation in the treatment group, and potential confounding factors in the control group. First, classroom teachers participating in the *TGFD* program were asked to complete the *Evaluation of Program*

Implementation survey to gauge treatment fidelity and quality of implementation. Second, classroom observations were conducted for teachers delivering the prevention program. Third, teachers in both groups were asked to record multiple or extensive prevention activities conducted in the classroom during the course of the school year.

Instrumentation

The *Teacher Checklist of Student Behavior* and the *Student Survey Questionnaire* were developed based on research findings and contributions from a variety of alcohol, tobacco and other drug prevention agencies and investigators that focus on key risk and protective factors associated with children's ability to resist pressures to use substances and make healthy lifestyle choices. Items on the teacher checklist were piloted in earlier studies using the *Too Good for Drugs-Elementary School* and the *Too Good for Violence-Elementary School* prevention programs. Items on the student survey were piloted in earlier studies using the *Too Good for Drugs-Elementary, Middle, and High School* prevention programs. Teacher responses to checklist items as well as student responses to questionnaire items were examined using a series of item analysis techniques.

Teacher Checklist of Student Behavior

Teachers responded to 24 behavioral items using a 5-point scale ranging from "1 = Never" to "5 = Almost Always." Teacher responses to items were grouped into four protective subscales associated with students' social adaptability. It should be noted that items indicating less socially acceptable behaviors (e.g., yells at other students, pushes or shoves other students) were recoded such that higher scores indicated positive levels of those behaviors. Estimates of reliability for the *Teacher Checklist of Student Behavior* were computed using Cronbach's alpha coefficient Scale ($r_\alpha = .96$), and test-retest using the responses from the control sample ($r_{tt} = .78$). Protective factors were computed using the mean of the item scores for each subscale consisting of: Personal Skills ($r_\alpha = .87$); Social Skills ($r_\alpha = .92$); Positive Social Behaviors ($r_\alpha = .94$); and Inappropriate Social Behaviors ($r_\alpha = .92$). Items on each of the subscales evidenced meaningful contribution to its protective factor, with item-total correlations ranging from $r_{it} = .55$ to $.88$.

Student Survey Questionnaire

Students responded to 30 Likert scale items ranging from "1 = Strongly Disagree" to "5 = Strongly Agree." Item responses were recoded such that higher scores (maximum score 5.00) indicate positive levels of attitudes, perceptions or skills. Student responses were grouped into five protective subscales associated with impacting children's resiliency to social challenges. Estimates of reliability for the *Student Survey Questionnaire* were computed using Cronbach's alpha coefficient Scale ($r_\alpha = .75$), and test-retest using the responses from the control sample ($r_{tt} = .47$). Protective factors were computed using the mean of the item scores for each subscale consisting of: Attitudes toward Drug Use ($r_\alpha = .65$); Emotional Competency Skills ($r_\alpha = .54$); Goal Setting and Decision Making Skills ($r_\alpha = .79$); Social and Peer Resistance Skills ($r_\alpha = .49$); and Harmful Effects of Drugs ($r_\alpha = .42$).

EVALUATION RESULTS

The study results are presented in the following order. First, an examination of the data related to fidelity of program implementation. Second, teacher responses and outcomes based on the *Checklist of Student Behavior*. And last, student responses and outcomes based on the *Survey Questionnaire*.

PROGRAM IMPLEMENTATION

Prevention Lesson Logs

Teachers from the treatment and control group indicated there were two district-wide initiatives in place during the school year. Red Ribbon Week, a school-wide drug awareness and prevention series of events and instruction, occurred during the month of October 2006. State legislation requires that elementary schools provide *Character Education* instruction that emphasizes core ethical values such as attentiveness, patience, initiative, caring, honesty, fairness, respect for self and others, compassion, and equity of opportunity. The delivery of Character Education instruction varied across the study sites. Examples of implementation ranged from monthly lessons provided by the guidance counselor, morning show broadcast lessons with additional time for class review, guest speakers, to lessons provided by classroom teachers. Since Red Ribbon Week and Character Education were implemented in all sites, it is

assumed that any positive influences were relatively equally distributed among the treatment and control groups. Lesson logs completed by teachers in the control group suggest no other extensive drug prevention programs or activities were implemented during the study period.

Classroom Observations

Two district-based Safe Schools program specialists and two site-based curriculum resource teachers conducted one classroom observation for each of the treatment teachers sharing *TGFD* lessons with their students. As shown in Table 1, the results of the observations suggest that all or almost all teachers were prepared for instruction; provided clear directions about how and what to do for each lesson activity; transitioned effectively between activities; defined terms, provided explanations and gave examples; provided all intended lesson activities; used all *TGFD* lesson materials; used strategies to keep students involved and on-task; provided students opportunities to participate in discussions; provided sufficient time for students to practice learned skills; recognized and reinforced student participation; modeled respectful behavior for and among students; listened to student input in a receptive and supportive manner; provided clear prosocial or “no use” feedback to student comments; and created an open and sharing classroom environment. The results also suggest that students were actively engaged in the learning process. Overall, classroom observations suggest teachers delivered the *TGFD* lesson units as intended by the program developer.

Table 1. Proportion of Observed Behaviors on the Classroom Observation Form

Classroom Observation Items	Percent Observed
1. The teacher was prepared for the TGFD lesson.	100%
2. The teacher gave clear directions to students (explaining what & how to do it).	100
3. The teacher effectively transitioned between lesson activities.	100
4. The teacher used strategies to keep all students involved and on-task.	100
5. The teacher defined terms, provided explanations, and/or gave examples.	100
6. The teacher gave students opportunities to participate in discussions.	96
7. The teacher gave students opportunities to practice lesson skills.	100
8. The teacher recognized and rewarded students for participating.	96
9. The teacher modeled mutual respect for and among students.	100
10. The teacher listened to students in an attentive and receptive manner.	100
11. The classroom environment promoted student sharing and discussion.	93
12. The teacher gave clear prosocial or "no use" feedback to students' comments.	100
13. Students were actively engaged in learning/activities.	100
14. The teacher delivered all planned lesson activities (refer to manual).	89
15. The teacher used all planned lesson materials (refer to manual).	85
16. Based on the manual content, the teacher delivered the TGFD lesson as intended.	96

Survey of Program Implementation

Classroom teachers delivering the *TGFD* program were asked to complete the *Evaluation of Program Implementation* questionnaire to gauge treatment fidelity and quality of implementation. The questionnaire asked teachers to indicate the number of lesson units delivered and the average length of time needed to deliver lessons. Teachers were also asked to indicate the extent to which they implemented planned activities for each lesson unit, used the lesson materials and the student interactive workbook, and distributed Home Workout Sheets for families.

- Ninety-two percent of the teachers (25 out of 27) indicated they delivered all 10 **TGFD lesson units**, 4% (1 out of 27) indicated they delivered nine out of the 10 lesson units, and 4% (1 out of 27) indicated they delivered eight out of the 10 lesson units,.
- Eleven percent of the teachers indicated lessons required **46 or more minutes** to deliver, 82% of the teachers indicated lessons required 30 to 45 or more minutes to deliver, and 7% indicated lessons averaged between 25 to 29 minutes.
- Twenty-six percent of the teachers indicated they delivered all of the planned **lesson activities**, 44% almost all of the planned lesson activities, 26% indicated they delivered most of the planned activities, and 4% indicated they delivered some of the planned activities.
- Twenty-nine percent of the teachers indicated they used all of the planned **lesson materials**, 41% almost all of the materials, 26% most of the materials, and 4% indicated they used some of the lesson materials.
- Eighty-one percent of the teachers indicated they used the interactive **student workbook** with lesson units, 14% used the student workbook with almost all lesson units, and 4% with most lesson units.
- Fifteen percent of the teachers indicated they sent home all of the **Workout Sheets** for parents and students, 19% almost all of the Home Workout Sheets, 22% most of the Workout Sheets, and 44% some of the family Workout Sheets.
- All teachers indicated they provided students opportunities to participant during *TGFD* lesson units.

- All teachers indicated they provided students opportunities to practice skills during *TGFD* lesson units.
- All teachers indicated they recognized students for participating during *TGFD* lesson units.
- Ninety-three percent of the teachers indicated the *TGFD* prevention program had a positive impact on their students' behaviors or choices.
- All teachers indicated students enjoyed the program activities.
- Ninety-three percent of the teachers indicated program content and activities were relevant to students' lives.

Teachers were provided the opportunity to respond to open-ended questions at the end of the survey questionnaire. The questions prompted teachers to indicate what challenges they faced in implementing the prevention program, what suggestions they had for minimizing challenges in the future, and what plans they had to reinforce program content and skills.

The most frequent challenge indicated by teachers was related to the time of the year the program was delivered. Eleven of the 27 teachers (41%) made comments about time or pressure in delivering the prevention lessons before state-wide FCAT testing. Five of the 27 teachers (19%) made references to time in general as being a challenge. Twenty-three of the 27 teachers (85%) provided some comment about how they would reinforce prevention lesson concepts and skills in their classes. A sample of teachers' verbatim comments by category is provided below.

Comments Related to the Time of the Year for Program Delivery

"Fitting all lessons in while having to do several mid year assessments and prepare for FCAT. I had to give up FCAT reading and math lessons to cover TGFD."

"This comes at a very bad time for teachers, especially 3rd grade because of FCAT."

"It was challenging to teach it during this time of the year. I prefer teaching it in the spring."

"Trying to fit this in before FCAT. This was precious time."

"My greatest challenge was implementing TGFD before FCAT!! Can we implement the program after FCAT next year?"

*"We would have more time to complete all activities if we were allowed to do it after FCAT."
"Lack of time. FCAT prep and other curricular activities require a full schedule. We have daily routines that should be kept consistent."*

Comments Related to Challenges for Delivering the Program

"Finding time! The materials were easy to follow. Getting copies back in time was sometimes a challenge."

"The lessons were easy to follow. My biggest challenge was 'time' as usual."

"Time--I felt like there was never enough time to fit everything in."

"In the beginning the kids were afraid to discuss drugs and alcohol out of fear that they would get in trouble."

"Feeling comfortable discussing some of the topics."

Comments Related to Reinforcing Lesson Content

"We refer to 'I feel' constantly so kids won't be so quick to say 'You...'"

"I keep reminding them about good decision making. We compare AUTO to ourselves when we are trying to make good choices since AUTO can't make choices."

"Using I feel messages for conflicts between students."

"I try to incorporate what we have done in the TGF D lessons into the Character Education lessons we do. They go hand-in-hand."

"Use I messages when we are working on conflict resolution. Talk about goals when we discuss report cards, grades and tests. Use news or real life situations to discuss harm of alcohol, tobacco, and non-prescribed drugs."

"As an anchor activity for morning work."

Of interest are the similarities between the level of program implementation and teachers' perceptions of challenges between an evaluation conducted of the TGF D program in 2002-2003 and the current evaluation. Teachers' feedback on the fidelity of program implementation suggests less than full implementation across all lesson units. Although program impact, reported later in this report, shows significant gains for students participating in the prevention program, and research findings suggest prevention programs with less than full implementation may continue to have positive effects on their participants, it raises the question of whether greater benefits could have been achieved if the program content had been delivered as designed by the developers. Item responses suggest that only 26% of the teachers delivered all lesson activities, 29% used all the lesson materials, and 15% distributed all of the Family Workout Sheets. Although the majority of teachers indicated "almost all" in sharing these program

components with students (excluding Home Workout Sheets), “almost all” is not full implementation of the designed program. Positive effects for students may have been stronger if full delivery of the *TGFD* prevention program had occurred across classrooms.

Elementary teachers' comments also suggest they continue to be comfortable or accustomed to delivering prevention programs during the fourth quarter of the school year. With the added focus and pressure on teaching professionals to prepare students for the state's performance assessments, this is not an unusual situation. The question should continue to be raised, however, that if federal, state and local agencies support the need to provide students with an awareness of the risks associated with ATOD use and strengthening protective factors that promote students making healthier life choices, then prevention instruction cannot be limited to a selected time of the year. Focusing on prevention instruction at the end of the school year may begin the process of enhancing students' skills, but leads them into the summer months where many skills atrophy. Reading, mathematics, and science instruction would never be regulated to one time period during the school year because of the certain knowledge that sustainable growth would not occur. Similarly, children's and youth's personal, social and resistance skills are not likely to evidence sustainable growth without active instruction, and ongoing review and practice of concepts and skills throughout the school year. For prevention education to take a meaningful position in the overall context of what students need to learn requires an organizational culture that supports the belief that life skills development is a key component of the learning environment and can be meaningfully embedded in the regular curriculum.

TEACHER CHECKLIST OF STUDENT BEHAVIOR

Impact of Attrition on Checklist Scores

Loss of responses or attrition rates did not vary across the treatment or control condition on the Teacher Checklist of Student Behavior. Only 11 out of 478 checklists (2%) were missing for students in the treatment group, and 14 out of 558 (3%) checklists for students in the control group. Due to student withdrawal or reassignment to other teachers or schools, approximately 2.4% (25) of the study sample could not be matched to pretest scores at the time of the 3-month follow-up. When the student characteristics of the treatment and control groups were examined

between the original sample and the study sample (responses at the 3-month posttest), no substantial differences were present (see Table 2, Section I).

To assess whether the study results could have been impacted if all scores were available, a two-way Multivariate Analysis of Variance (MANOVA) was conducted using the behavior subscale scores as the dependent variables, and the treatment condition and attrition as independent variables. Mean behavior subscales for the treatment and attrition condition are shown in Table 2 (Section II). The findings from the analysis suggest there were no significant differences between pretest behavior subscale scores for students with or without posttest scores, or for students in the treatment or control group. The findings suggest students with missing posttest scores (attrition) were rated similarly by teachers before program delivery as students who had posttest scores.

Checklist Pretest Score Equivalence

Although schools were stratified and randomly assigned to the treatment or control group, the evaluator wanted to assess whether teachers held similar perceptions of student behaviors prior to the delivery of the program. Teacher responses to the *Teacher Checklist of Student Behavior* were examined using a one-way MANOVA procedure with the treatment condition (treatment and control groups) as the independent variable, and scores on the behavioral subscales as the dependent variables. A significant between groups effect was observed between pretest scores for the treatment and control group (see Table 2, Section III).

Follow-up Analysis of Variances (ANOVAs) were computed to determine which behavior subscales were contributing to the differences between the treatment and control group prior to program delivery. The findings suggest that teachers in the treatment group held significantly more positive perceptions of students demonstrating social skills in comparison to teachers in the control group ($F = 5.97, p = .0147$). Teachers in the treatment group also held significantly more positive perceptions of students engaging in fewer inappropriate social behaviors (scores recoded with higher scores indicating lower rates of inappropriate social behaviors) in comparison to teachers in the control group ($F = 14.14, p \leq .0002$). No significant differences were observed between teachers' perceptions in the treatment and control condition for students demonstrating personal skills or engaging in prosocial behaviors.

Table 2. Characteristics of Treatment and Control Groups on the Teacher Checklist of Student Behavior by Time

	Pretest n = 1036		3-Month Follow-Up n = 1011	
	Treatment (n = 478)	Control (n = 558)	Treatment (n = 467)	Control (n = 544)
I. Demographics				
Female	49%	48%	50%	49%
White	55%	63%	55%	64%
African American	17%	19%	17%	19%
Hispanic	19%	12%	19%	12%
Other	9%	6%	9%	5%
Free/Reduced	44%	51%	44%	51%

II. Test of Equivalence of Attrition Rates by Group

	Wilks'	df	F	p
Multivariate Between Effects				
Group	.994	4, 1029	1.52	.1931
Attrition	.997	4, 1029	0.88	.4768
Group by Attrition	.994	4, 1029	1.65	.1606

Pretest Mean Scores

	Study Sample n = 1011		Attrition Group n = 25 (2.4% loss of total)	
	Treatment	Control	Treatment	Control
Personal Skills	3.21	3.17	3.53	3.19
Social Skills	3.72	3.59	3.98	3.42
Prosocial Behaviors	3.55	3.48	4.03	3.29
Inappropriate Behaviors	4.44	4.24	4.55	4.54

III. Test of Prescore Equivalence on the Behavior Checklist

	Wilks'	df	F	p
Multivariate Between Effects				
Treatment	.983	4, 1006	4.44	.0015

(Means scores for treatment and control conditions reported above under 'Study Sample')

Note. Dependent variables measured on a rating scale ranging from 1.00 to 5.00. Other = Asian/Pacific Islander, American Indian and Multiracial; Wilks' = Wilks' Lambda test of multivariate differences; df = degrees of freedom; F = F test statistic; p = probability level.

The findings suggest teachers in the treatment group tended to score student behaviors at higher levels in two of the four subscale areas than teachers in the control group prior to the delivery of the prevention program. Since pre-program scores were not equal between groups, gain scores were used to adjust for differences between groups and reduce error within groups.

Impact on Checklist Protective Factors

Gain scores for each of the four behavior subscales were examined using a MANOVA repeated measures design. Posttest and the 3-month follow-up gain scores were computed by subtracting pretest scores from the posttest scores. The mean scale scores and mean gain scores by group and time of checklist administration are provided in Table 3. A significant multivariate effect was observed for the treatment condition.

Shown in Table 4 are the results of the follow-up ANOVAs conducted to identify which of the four behavior subscales were contributing to differences between the treatment and control group as well as differences over time (posttest and 3-month follow-up). The results of the post hoc analyses suggest teachers' observations of students in the treatment group evidenced in comparison to teachers' observations of students in the control group significantly larger gains or improvements in each of the four behavior scales. As shown in Figures 2-5, students participating in the *TGFD* program evidenced more frequent use of personal skills ($d = .61$), more frequent use of social skill ($d = .46$), more frequent engagement in prosocial behaviors ($d = .57$), and less frequent engagement in inappropriate social behaviors in the classroom ($d = .21$). The benefits of the *TGFD* program for students continued to be observed by teachers at the 3-month follow-up for three of the four behavior scales--personal skills ($d = .51$), social skills ($d = .41$), and prosocial behaviors ($d = .51$). Observations of students in both the treatment and the control group for inappropriate social behaviors tended to range between 'rarely' to 'never', suggesting infrequent engagement in aggressive and disruptive behaviors in the school setting.

Table 3. Mean and Gain Scores on the Teacher Checklist of Student Behavior Scores by Group and Time

<u>Behavior Scales</u>	<u>Time</u>	<u>Treatment</u>				<u>Control</u>			
		<u>Scale Score</u>		<u>Gain Score</u>		<u>Scale Score</u>		<u>Gain Score</u>	
		<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Personal Skills	Posttest	3.77	0.91	0.56	0.80	3.27	0.87	0.10	0.69
	Follow-Up	3.74	0.99	0.53	0.85	3.29	0.92	0.12	0.76
Social Skills	Posttest	4.10	0.87	0.38	0.79	3.63	0.85	0.05	0.66
	Follow-Up	4.10	0.89	0.38	0.82	3.65	0.90	0.06	0.74
Prosocial Behaviors	Posttest	4.00	0.96	0.46	0.84	3.49	0.92	0.00	0.79
	Follow-Up	3.99	0.99	0.44	0.90	3.50	0.97	0.02	0.80
Inappropriate Behaviors	Posttest	4.53	0.72	0.10	0.69	4.20	0.92	-0.04	0.62
	Follow-Up	4.47	0.79	0.04	0.73	4.21	0.91	-0.03	0.71

M = Mean; SD= Standard Deviation.

Table 4. Multivariate Analysis of Variance and Univariate Analysis of Variance on the Teacher Checklist Behavior Gain Scores by Group and Time

	<u>Wilks'</u>	<u>df</u>	<u>F</u>	<u>p</u>
Multivariate Between Effects				
Treatment Condition	.881	8, 1002	16.92	.0001
Univariate <i>F</i> Tests Using Gain Scores by Group and Time				
<u>Posttest</u>				
Personal Skills		1, 1009	95.54	.0001
Social Skills		1, 1009	54.57	.0001
Prosocial Behaviors		1, 1009	77.71	.0001
Inappropriate Social Behaviors		1, 1009	11.27	.0008
<u>3-Month Follow-Up Test</u>				
Personal Skills		1, 1009	65.66	.0001
Social Skills		1, 1009	43.04	.0001
Prosocial Behaviors		1, 1009	62.92	.0001
Inappropriate Social Behaviors		1, 1009	1.91	ns

Wilks' = Wilks' Lambda test of multivariate differences; df = degrees of freedom; F = *F* test statistic; *p* = probability level; ns = no significant difference.

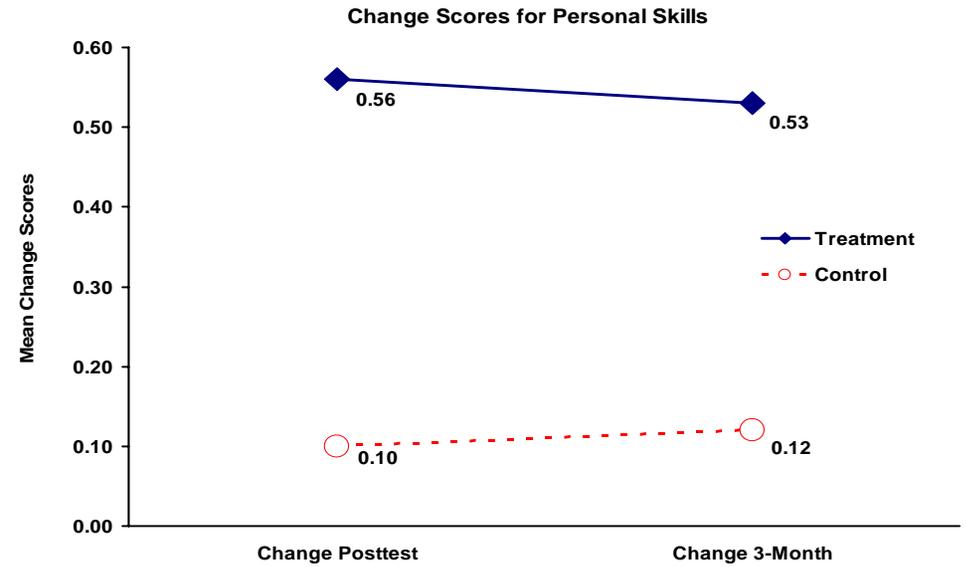
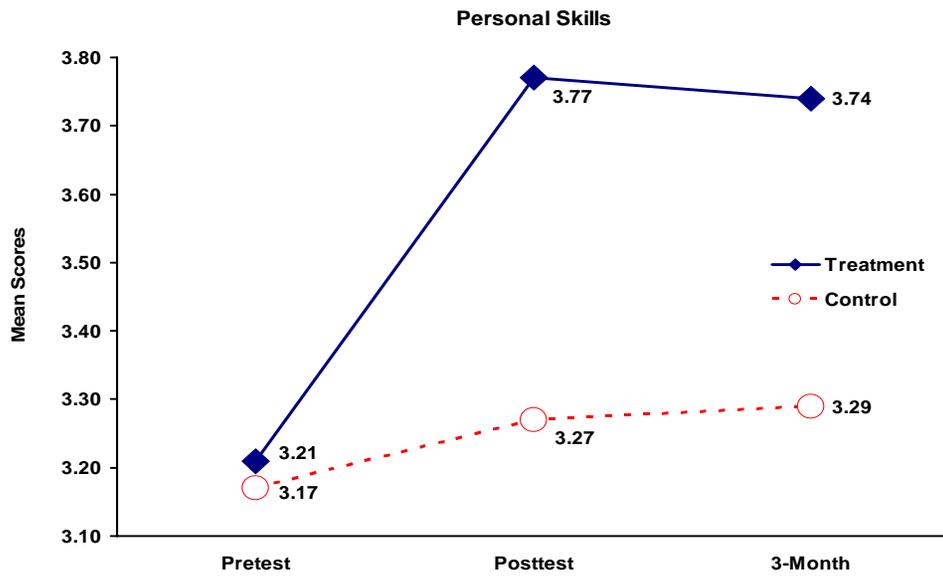


Figure 2. Mean Scores and Mean Change Scores on the *Personal Skills* Scale by Group and Time

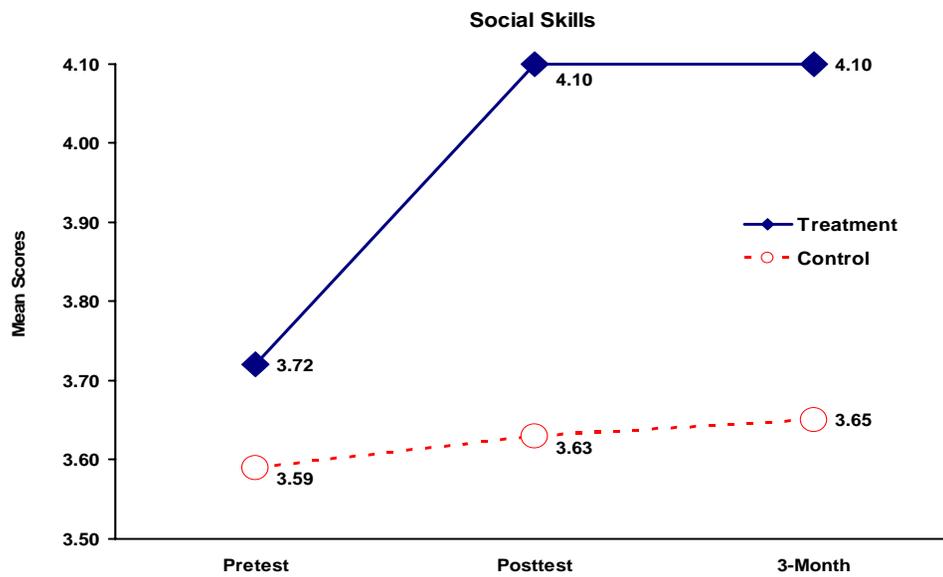


Figure 3. Mean Scores and Mean Change Scores on the *Social Skills* Scale by Group and Time

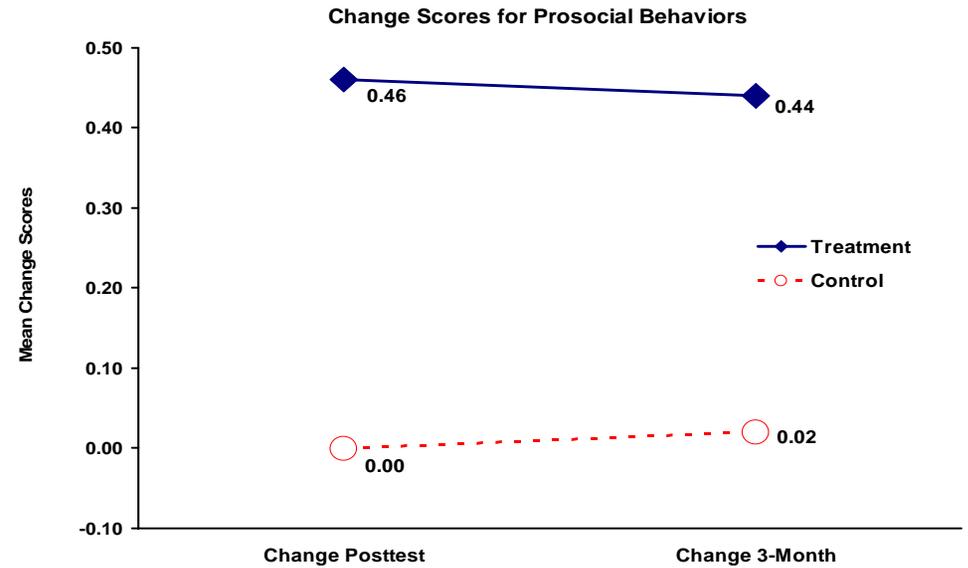
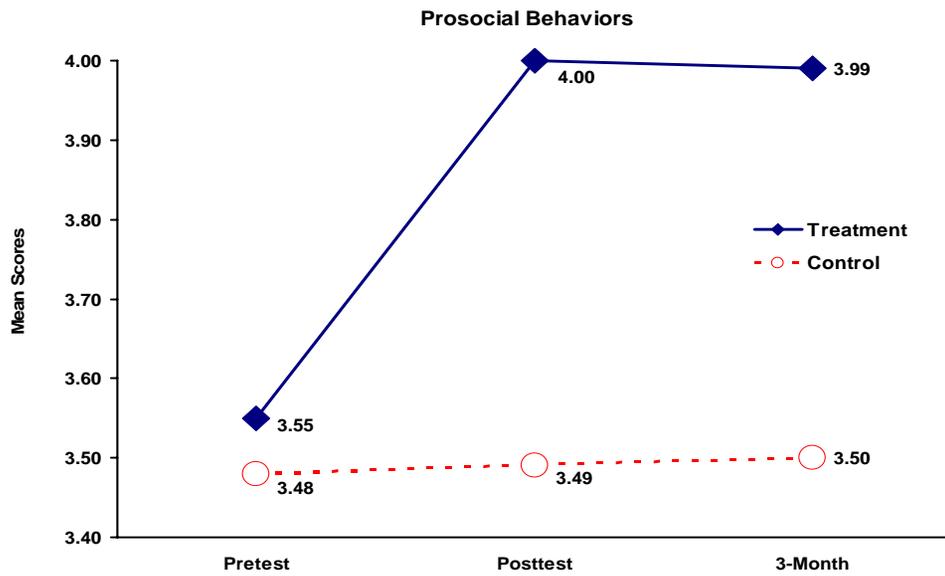


Figure 4. Mean Scores and Mean Change Scores on the *Prosocial Behaviors* Scale by Group and Time

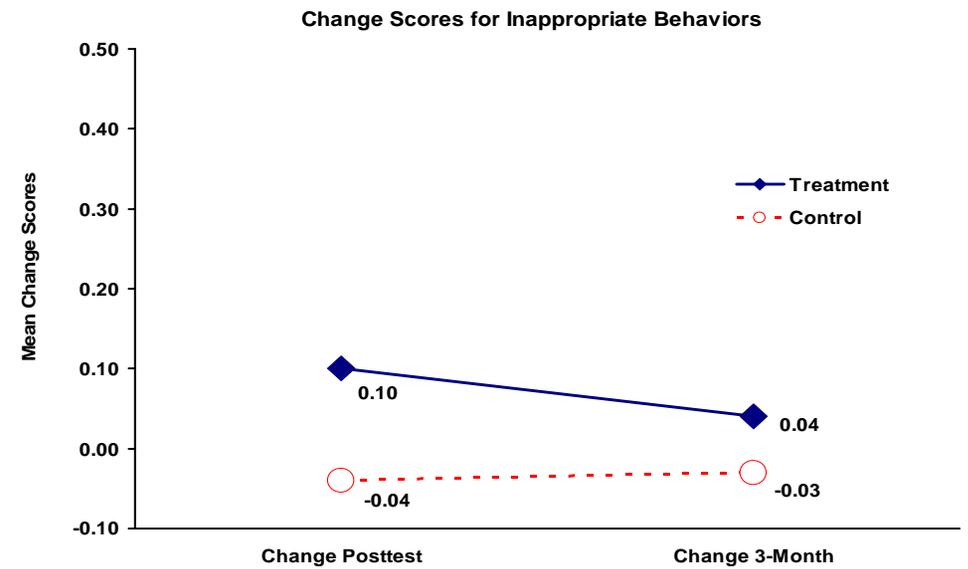
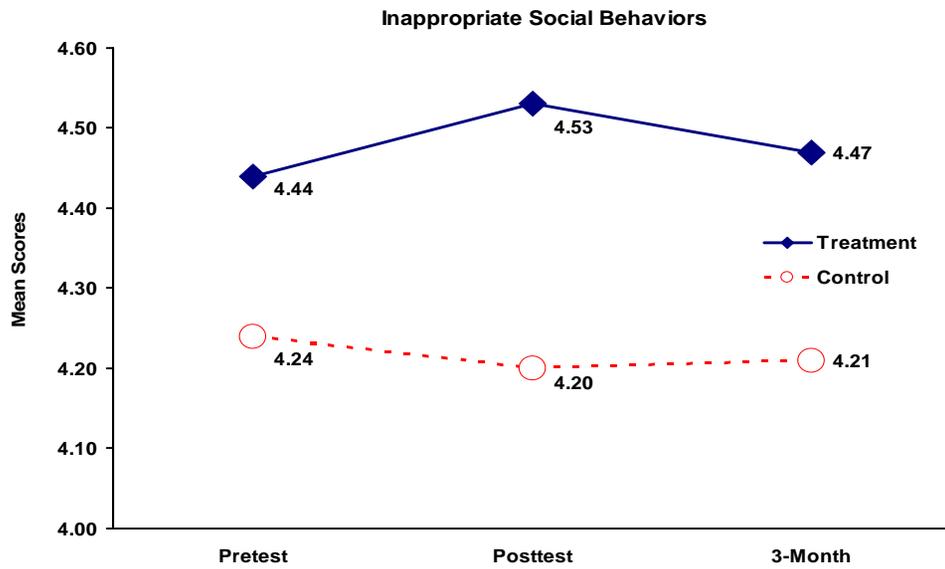


Figure 5. Mean Scores and Mean Change Scores on the *Inappropriate Behaviors* Scale by Group and Time

Treatment Effects by Student Characteristics on the Teacher Checklist

To examine whether the prevention program had positive effects for students across gender, socioeconomic status (free or reduced lunch services), and ethnic background, correlated *t*-tests were computed using pretest and posttest scores of teacher observations of students' behaviors. The findings suggest that teachers observed higher rates of skills and behaviors for girls and boys after program delivery and 3-months later ($p \leq .0001$). Teachers' observations also indicated both economically disadvantaged and non-economically disadvantaged students experienced significant improvement in skills and behaviors ($p \leq .0001$). In addition, White, African American and Hispanic students had significantly higher Teachers Checklist of Student Behavior scores after program delivery and 3-months later in comparison to pretest scores ($p \leq .01$). Sample sizes for students from other ethnic backgrounds were too small to include in the analyses. Overall, the findings suggest that students participating in the *TGFD* program experienced significant improvement in skills and behaviors regardless of gender, socioeconomic status, or ethnic background.

STUDENT SURVEY QUESTIONNAIRE

Impact of Attrition on Survey Scores

The Student Survey sample at the time of the pretest contained 1015 students, 21 (2%) fewer respondents than the teacher checklist sample ($n = 1036$). The difference in sample size for the student survey is attributed to absences during the pretest administration period. Teachers on the other hand could complete checklists regardless of whether students were present in the classroom.

Attrition rates for the survey posttests did not vary substantially across the treatment or control condition, with an 8% (39 out of 472) loss of respondents for the treatment group, and a 10% (54 out of 543) loss of respondents for the control group (see Table 5, Section I). Recalling that teachers could not complete Checklists of Student Behavior for 2.4% ($n = 25$) of the respondents because students were no longer present in their classrooms, the loss of data for the student survey was quite small. A two-way MANOVA was computed using the treatment and attrition conditions as independent variables, and students' pretest scores on the protective factors

as dependent variables. As shown in Table 5 (Section II), no significant main effects or interaction effect were found for the group (treatment or control), attrition, or group by attrition conditions. The findings for attrition provide strong confidence that the loss of student data for the posttests was not biased relative to students' initial scores on the protective subscales. Loss of student respondents for the second and third testing periods may be attributed primarily to random miscoding errors, absenteeism during the follow-up testing periods, and student mobility.

Student Survey Pretest Score Equivalence

Student responses to the survey were examined using a one-way MANOVA procedure with the treatment condition (treatment and control group) as the independent variable, and pretest scores on the protective subscales as the dependent variables. No significant differences were observed between pretest scores for the treatment and control group (see Table 5, Section III). The findings suggest students in the treatment and control groups had similar scores prior to program delivery in the protective areas of Emotional Competency Skills, Social and Resistance Skills, Goal Setting and Decision Making Skills, Perceptions of Harmful Effects of Drug Use, and Attitudes Toward Drugs.

Impact on Student Survey Protective Factors

Gain scores for each of the five protective subscales were examined using a MANOVA repeated measures design. Posttest and the 3-month follow-up gain scores were computed by subtracting pretest scores from the posttest scores. The mean scale scores and mean gain scores by group and time of student survey administration are provided in Table 6. A significant multivariate effect was observed for the treatment condition.

Shown in Table 7 are the results of the follow-up ANOVAs conducted to identify which of the five protective subscales were contributing to differences between the treatment and control group as well as differences over time (posttest and 3-month follow-up). The results of the post hoc analyses suggest students in the treatment group evidenced in comparison to students in the control group significantly larger gains or improvements in four of five of the protective subscales. Students participating in the *TGFD* program evidenced more positive changes in perceptions of emotional competency skills ($d = .30$), perceptions of social and peer

Table 5. Characteristics of Treatment and Control Groups for the Student Survey by Time

	Pretest <u>n = 1015</u>		3-Month Follow-Up <u>n = 922</u>	
	Treatment (n = 472)	Control (n = 543)	Treatment (n = 433)	Control (n = 489)
I. Demographics				
Female	50%	48%	50%	49%
White	56%	65%	55%	65%
African American	17%	19%	18%	18%
Hispanic	19%	11%	19%	12%
Other	8%	5%	8%	5%
Free/Reduced	44%	51%	44%	50%

II. Test of Equivalence of Attrition Rates by Treatment Condition

	<u>Wilks'</u>	<u>df</u>	<u>F</u>	<u>p</u>
Multivariate Between Effects				
Group	.996	5, 1002	0.76	.5757
Attrition	.997	5, 1002	0.64	.6725
Group x Attrition	.998	5, 1002	0.38	.8626

Pretest Mean Scores

	Study Sample <u>n = 922</u>		Attrition Group <u>n = 93</u> (9.2% loss of total)	
	Treatment	Control	Treatment	Control
Emotional Competence	4.03	4.06	3.96	3.97
Social & Resistance	3.61	3.57	3.52	3.52
Goal & Decision Making	4.33	4.43	4.37	4.37
Perceptions of Harm	3.91	3.95	3.78	3.92
Attitudes Toward Drugs	4.66	4.69	4.56	4.70

III. Test of Prescore Equivalence on the Student Survey

	<u>Wilks'</u>	<u>df</u>	<u>F</u>	<u>p</u>
Multivariate Between Effects				
Treatment	.989	5, 916	1.87	.0965

(Means scores for treatment and control conditions reported above under 'Study Sample')

Note. Dependent variables measured on a rating scale ranging from 1.00 to 5.00. Scores were reverse coded with a score of 5.00 indicating the most positive response. Other = Asian/Pacific Islander, American Indian and Multiracial; Wilks' = Wilks' Lambda test of multivariate differences; df = degrees of freedom; F = F test statistic; p = probability level.

resistance skills ($d = .36$), perceptions of goal setting and decision making skills ($d = .31$), and perceptions of the harmful effects of tobacco, alcohol and marijuana use ($d = .33$). Third and fourth graders in both groups had very high scores (4.66-4.79) before and after program delivery regarding the inappropriateness of drug use (Attitudes Toward Drugs). This is not an unexpected outcome considering elementary students are less likely to be exposed to peers who smoke, drink or experiment with other drugs. School and family efforts to support children's continued disapproval of drug use will help prepare them for when they enter higher grade-levels where peer ATOD use is more prevalent and attitudes toward use more tolerant.

As shown in Figures 6-10, the benefits of the *TGFD* program for students continued to be evidenced at the 3-month follow-up in the four protective areas of emotional competency ($d = .20$), social and peer resistance skills ($d = .18$), goal setting and decision making skills ($d = .21$), and the harmful effects of tobacco, alcohol and marijuana use ($d = .20$).

Table 6. Mean Subscale and Gain Scores on the Student Survey by Group and Time

<u>Protective Scales</u>	<u>Time</u>	<u>Treatment</u>				<u>Control</u>			
		<u>Scale Score</u>	<u>Gain Score</u>						
		<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Emotional Competency Skills	Posttest	4.30	0.60	0.27	0.66	4.14	0.57	0.08	0.62
	Follow-Up	4.25	0.59	0.22	0.66	4.15	0.57	0.09	0.63
Social and Resistance Skills	Posttest	3.96	0.69	0.35	0.77	3.66	0.59	0.09	0.67
	Follow-Up	3.86	0.64	0.25	0.73	3.69	0.61	0.12	0.70
Goal Setting and Decision Making Skills	Posttest	4.56	0.62	0.24	0.68	4.47	0.62	0.04	0.61
	Follow-Up	4.51	0.64	0.18	0.66	4.47	0.65	0.04	0.68
Perceptions of Harmful Effects of Drugs	Posttest	4.25	0.59	0.35	0.72	4.06	0.64	0.12	0.66
	Follow-Up	4.23	0.60	0.32	0.73	4.13	0.62	0.18	0.65
Attitudes Toward Drugs	Posttest	4.79	0.45	0.13	0.62	4.79	0.51	0.06	0.60
	Follow-Up	4.78	0.47	0.12	0.57	4.79	0.42	0.11	0.60

M = Mean; SD= Standard Deviation.

Table 7. Multivariate Analysis of Variance and Univariate Analysis of Variance on the Student Survey Protective Gain Scores by Group and Time

	<u>Wilks'</u>	<u>df</u>	<u>F</u>	<u>p</u>
Multivariate Between Effects				
Treatment	.931	10, 911	6.75	.0001
Univariate <i>F</i> tests for Gain Scores for Group Effects by Time				
<u>Posttest (Time 2)</u>				
Emotional Competence		1, 920	20.07	.0001
Social & Resistance		1, 920	29.93	.0001
Goal & Decision Making		1, 920	21.76	.0001
Harmful Effects of Drugs		1, 920	25.74	.0001
Attitudes Toward Drugs		1, 920	3.51	ns
<u>3-Month Follow-Up Test (Time 3)</u>				
Emotional Competence		1, 920	9.12	.0026
Social & Resistance		1, 920	7.86	.0052
Goal & Decision Making		1, 920	9.54	.0021
Harmful Effects of Drugs		1, 920	9.17	.0025
Attitudes Toward Drugs		1, 920	0.15	ns

Wilks' = Wilks' Lambda test of multivariate differences; df = degrees of freedom; F = F test statistic; p = probability level; ns = not significant.

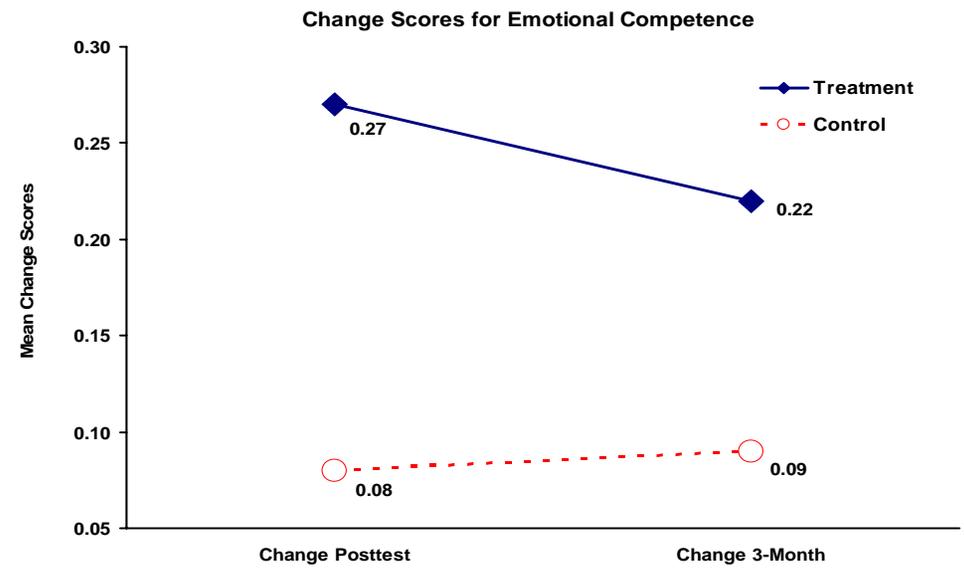
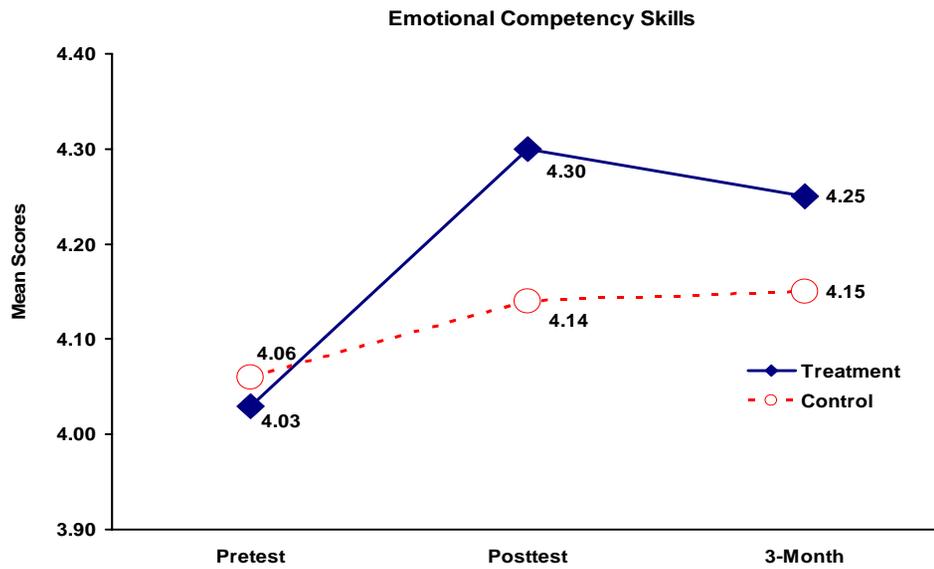


Figure 6. Student Mean Scores and Change Scores on the *Emotional Competency Skills* Scale by Group and Time

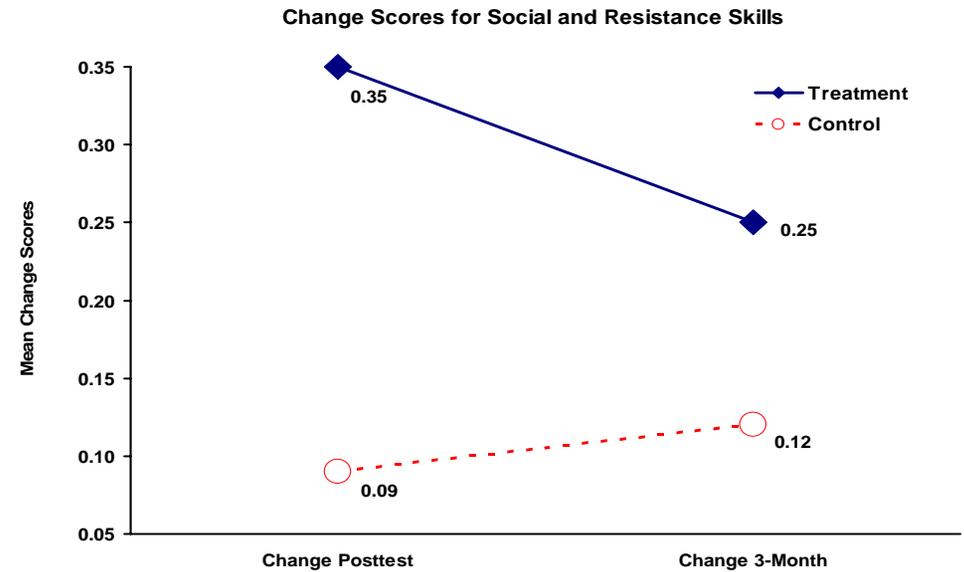
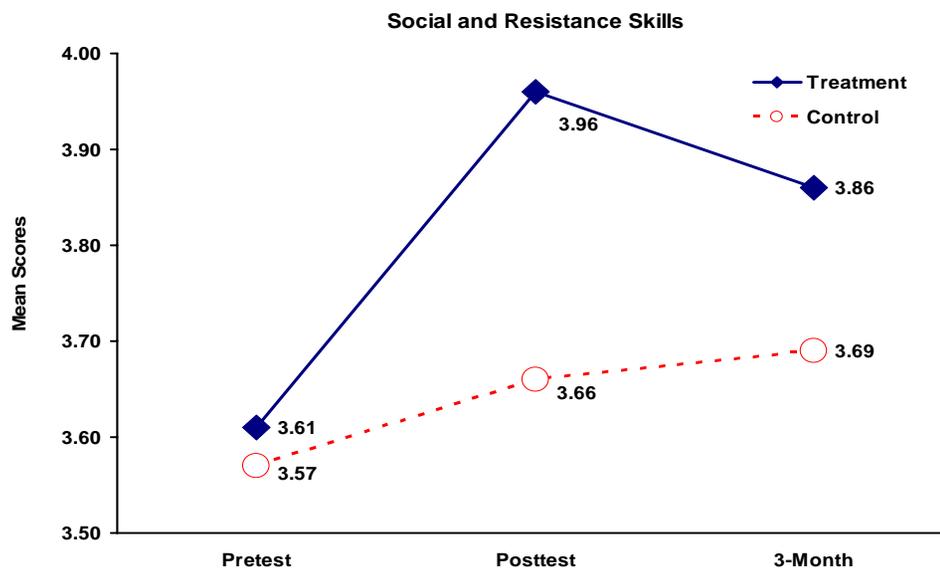


Figure 7. Student Mean Scores and Change Scores on the *Social and Resistance Skills* Scale by Group and Time

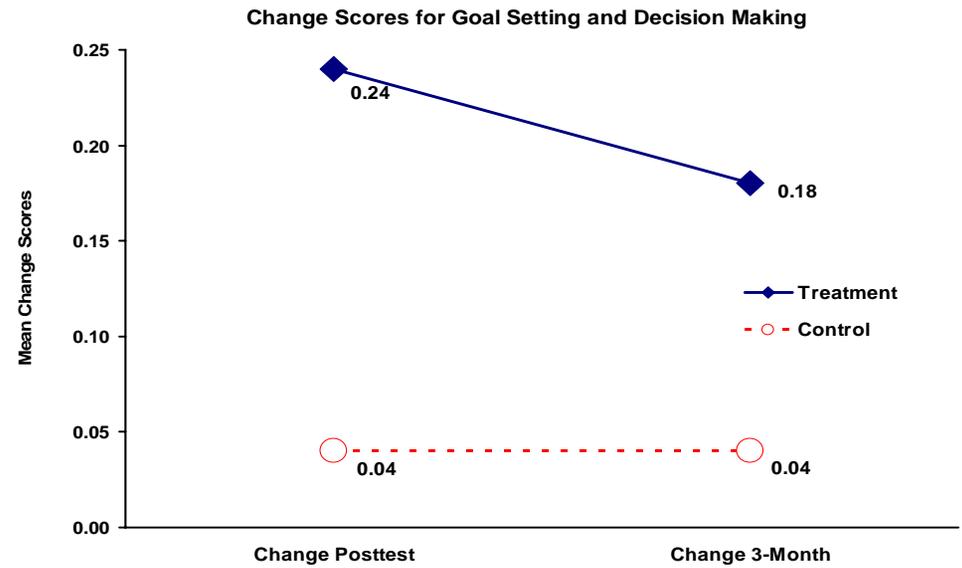


Figure 8. Student Mean Scores and Change Scores on *Goal Setting and Decision Making Skills Scale* by Group and Time

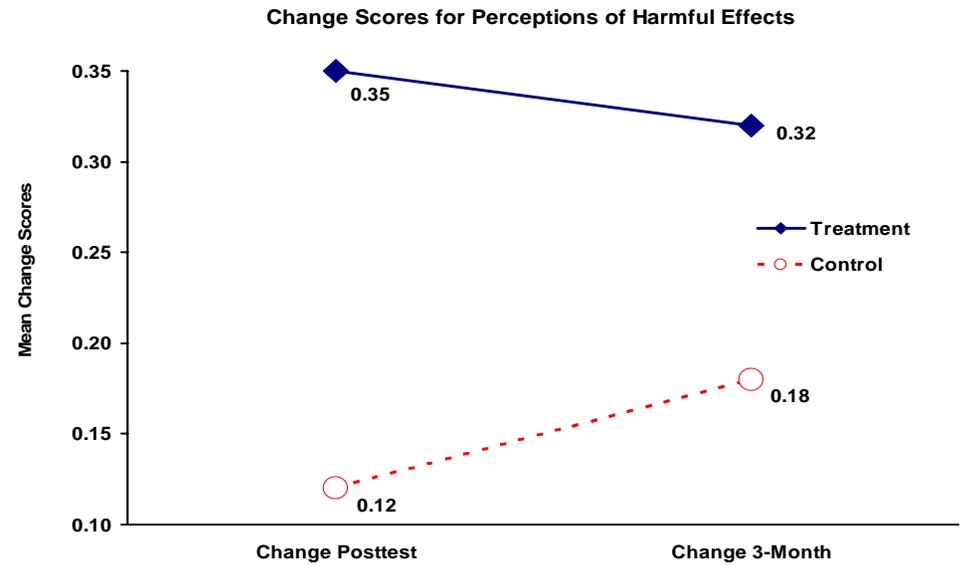
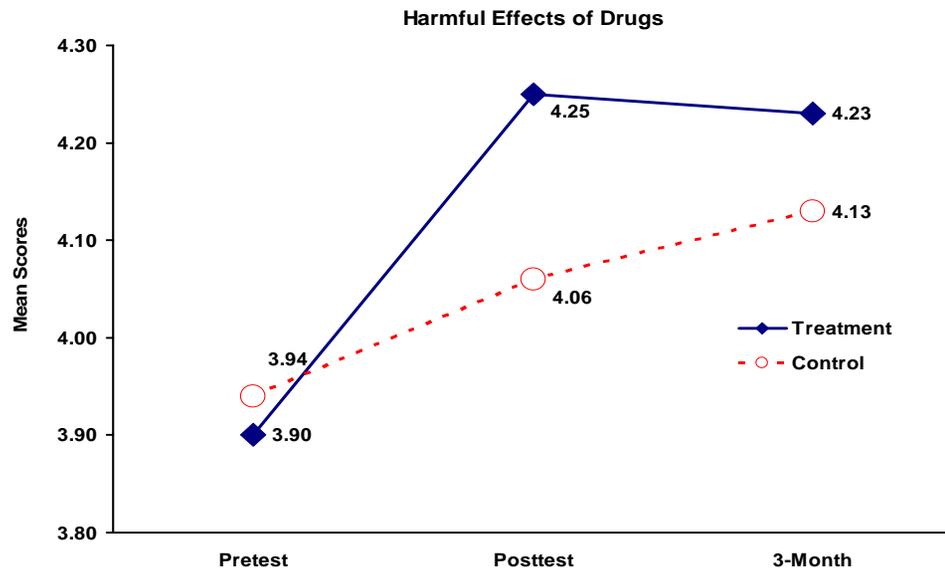


Figure 9. Student Mean Scores and Change Scores on the *Perceptions of Harmful Effects of Drugs Scale* by Group and Time

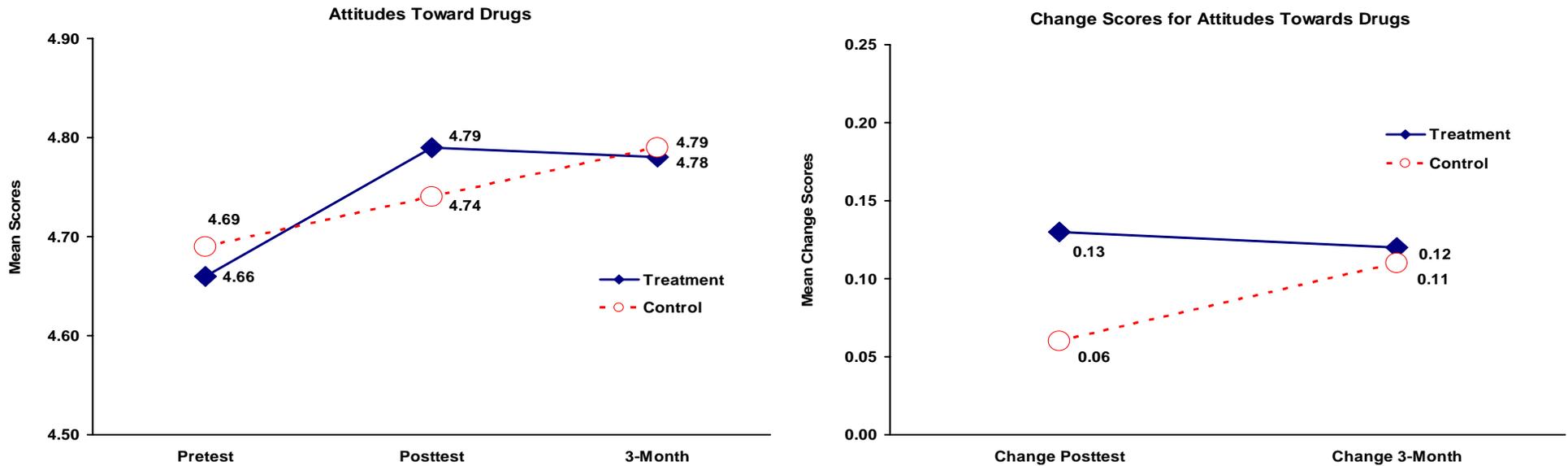


Figure 10. Student Mean Scores and Change Scores on the *Attitudes Toward Drugs* Scale by Group and Time

Treatment Effects by Student Characteristics on the Student Survey

To examine whether the prevention program had positive effects for students across gender, socioeconomic status, and ethnic background, correlated *t*-tests were computed using student survey pretest and posttest scores. The findings suggest that both girls and boys evidenced significant gains or improvement in their scores on the Student Survey Questionnaire after program delivery and 3-months later ($p \leq .0001$). Economically disadvantaged and non-economically disadvantaged students also experienced significant improvement after program delivery and 3-months later ($p \leq .0001$). In addition, White, African American and Hispanic students had significantly higher scores after program delivery and 3-months later in comparison to pretest scores ($p \leq .0001$). Sample sizes for students from other ethnic backgrounds were too small to include in the analyses. Overall, the findings suggest that students participating in the *TGFD* program experienced significant improvement regardless of gender, socioeconomic status, or ethnic background.

CONCLUSION

The purpose of the evaluation was to examine the effectiveness of the *Too Good for Drugs-Elementary School* program in impacting children's classroom behaviors, attitudes toward drug use, perceptions of the harmful effects of drug use, emotional competency skills, social and resistance skills, and goal setting and decision making skills.

Six of the district's 22 elementary schools were randomly selected and recruited for participation. Fifty-four classroom teachers participated in the study--27 in the treatment group and 27 in the control group. One thousand and eleven (1011) students participated in the study. Fifty-three percent of the students were third graders and 47% fourth graders. Forty-nine percent of the students were female, approximately 60% White, 18% African American, 16% Hispanic, and 6% Other (Asian, American Indian and Multiracial). Forty-eight percent of the students receive free or reduced lunch services, 14% exceptional education services, and 11% English language services.

Teachers in the treatment and control group completed checklists assessing student behaviors prior to delivery of the *TGFD* prevention program, following program delivery, and again 3-months after program delivery. Students in the treatment and control group completed a survey questionnaire prior to delivery of the *TGFD* prevention program, following program delivery, and 3-months later.

Prevention research has identified certain risk factors that increase the likelihood of children and youth engaging in substance use behaviors and certain protective factors that decrease the impact of risk factors. The *TGFD* program incorporates curricula and instructional activities aimed at reducing risk factors and building protective factors. The following risk and protective factors were examined in the study: Personal and Social Skills; Socially Appropriate and Inappropriate Behaviors; Emotional Competency Skills; Social and Resistance Skills; Goal Setting and Decision Making Skills; Perceptions of the Harmful Effects of Drugs; and Attitudes Toward Drugs.

1. Students in the treatment and the control group responded to a survey questionnaire before, following and 3-months after program delivery.

Student responses to protective survey items at the end of program and again at the 3-month follow-up suggest the following:

- (a) Students participating in the *TGFD* program had statistically greater gains or higher levels of **emotional competency skills** in comparison to students in the control group. Positive effects in emotional competency were observed three months later. A sample of item content that represents skills in this category includes: 1) I know many different words to describe what I feel inside, 2) I am responsible for choosing to live a safe and healthy life, and 3) I can do almost anything I put my mind to.
- (b) Students participating in the *TGFD* program had statistically greater gains or higher levels of **social and resistance skills** in comparison to students in the control group. Positive effects in social and resistance skills were observed three months later. A sample of item content that represents skills in this category includes: 1) If someone tried to hand me a can of beer, I would just walk away, 2) If a group of kids called me over to try some marijuana, I would just ignore them, and 3) I know many peer refusal strategies to help me avoid pressure to smoke, drink or use marijuana.
- (c) Students participating in the *TGFD* program had statistically greater gains or higher levels of **goal setting and decision making skills** in comparison to students in the control group. Positive effects in goal and decision-making skills were observed three months later. A sample of item content that represents skills in this category includes: 1) Setting a goal helps me figure out what I want to do, 2) When I set a goal, I think about what I need to do to reach my goal, and 3) I make good decisions because I stop and think.
- (d) Students participating in the *TGFD* program had statistically greater gains or higher levels of **perceptions of harmful effects of drug use** in comparison to students in the control group. Positive effects for perceptions of harmful effects of drugs were observed three months later. A sample of item content that represents skills in this category includes: 1) Drinking alcohol can make it hard to see, walk and talk, 2) People who smoke cigarettes can quit whenever they want to, and 3) Smoking marijuana improves a person's coordination.

(e) Students in both the treatment and the control group had very positive attitudes about the inappropriateness of drug use. The average scores across groups ranged from 4.66 to 4.84 on a 5.00-point scale, suggesting a ceiling on the potential effects of program treatment. Considering the students in this sample were served in general education settings, the vast majority of third and fourth graders felt it was wrong to use substances and were not inclined to suggest any interest in the use of tobacco, alcohol or marijuana. A sample of item content that represents attitudes in this category includes: 1) If I have a chance, I might try drinking alcohol, 2) It is wrong for kids to use marijuana, and 3) I might smoke when I get older.

2. In an effort to triangulate data, teacher judgment concerning student behavior was also examined. Classroom teachers were asked to rate each student's behavior related to personal skills, social skills, prosocial behaviors, and inappropriate social behaviors across the three testing periods. If teacher responses are consistent with student responses or vice versa, the study's findings could be interpreted with greater confidence.

Teachers' observations of students at the end of program and again at the 3-month follow-up suggest the following:

(a) Based on teachers' judgments, students participating in the *TGFD* program had statistically greater gains or higher levels of **personal skills** in comparison to students in the control group. Positive effects for gains in personal skills were observed three months later. A sample of item content that represents skills in this category includes: 1) uses a variety of verbal labels for emotions, 2) stops and thinks before acting, and 3) calms him/herself down when upset.

(b) Based on teachers' judgments, students participating in the *TGFD* program had statistically greater gains or higher levels of **social skills** in comparison to students in the control group. Positive effects for gains in social skills were observed three months later. A sample of item content that represents skills in this category includes: 1) treats other students with respect, 2) uses positive peer refusal strategies, and 3) interacts well with other students.

(c) Based on teachers' judgments, students participating in the *TGFD* program had statistically greater gains or engaged in more **prosocial behaviors** in comparison

to students in the control group. Positive effects for gains in prosocial behaviors were observed three months later. A sample of item content that represents behaviors in this category includes: 1) helps other students, 2) asks other students to play if they don't have someone to play with, and 3) takes turns, plays fair, and follows rules of the game.

- (d) Based on teachers' judgments, students participating in the *TGFD* program had statistically significant greater gains or engaged in fewer **inappropriate social behaviors** in comparison to students in the control group. Significant differences were not observed at the 3-month follow-up between students in the treatment and the control group for inappropriate behaviors. A sample of item content that represents behaviors in this category includes: 1) yells at other students, 2) gets into a lot of fights at school, and 3) disrupts instruction and/or procedures.

- 3. Treatment effects were for students participating in the *TGFD* program across gender, socioeconomic status (free or reduced lunch), and ethnic background. These results offer evidence of the *TGFD* program's usefulness in serving and meeting the needs of diverse student populations.

Teachers' observations of students in the treatment group at the end of program suggest the following:

- (a) Girls and boys experienced significant improvements in their scores on the Teacher Checklist of Student Behavior after participating in the *TGFD* prevention program and 3-months later.
- (b) Economically disadvantaged and non-economically disadvantaged students experienced significant improvements in their scores on the Teacher Checklist of Student Behavior after participating in the *TGFD* prevention program and 3-months later.
- (c) White, African American, and Hispanic students experienced significant improvements in their scores on the Teacher Checklist of Student Behavior after participating in the *TGFD* prevention program and 3-months later. Sample sizes for students from other ethnic backgrounds were too small to include in the analyses.

Treatment student responses to protective survey items at the end of program suggest the following:

- (a) Girls and boys experienced significant improvements in their scores on the Student Survey Questionnaire after participating in the *TGFD* prevention program and 3-months later.
- (b) Economically disadvantaged and non-economically disadvantaged students experienced significant improvements in their scores on the Student Survey Questionnaire after participating in the *TGFD* prevention program and 3-months later.
- (c) White, African American, and Hispanic students experienced significant improvements in their scores on the Student Survey Questionnaire after participating in the *TGFD* prevention program and 3-months later.

In summary, the *TGFD* prevention program evidenced a positive effect on third and fourth graders' behaviors in the classroom up to three months following program delivery. The prevention program was also successful in impacting four of the five protective factors associated with strengthening children's abilities to make positive, healthy decisions—emotional competency skills; social and resistance skills; goal setting and decision making skills; and perceptions of harmful effects of drug use. The *TGFD* program was effective for students regardless of gender, socioeconomic status, and ethnic background.