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SOCIAL NORMS PROJECT
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EXTERNAL EVALUATOR REPORT

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Table of Contents

Table of Contents	i
List of Tables	ii
List of Figures.....	iii
Executive Summary	iv
Bullying Campaign	v
ATOD Campaign.....	vii
Conclusion.....	ix
Chapter I: Introduction.....	1
Chapter II: Methods	4
Research Question	4
Design Overview.....	5
Data	6
Method of Analysis	9
Chapter III: The Middle School Bullying Social Norms Campaign.....	11
Part I – Assessment of Connell et. al., (2007b) Report	11
Part II – Focus on Process	11
Implementation – Successful Elements and Challenges.....	12
Measures.....	14
Regression Results	17
Chapter IV: The High School ATOD/Substance Use Social Norms Campaign.....	25
Part I – Assessment of Connell et. al., (2007b) Report	25
Part II – Focus on Process	25
Implementation – Successful Elements and Challenges.....	26
Measures.....	30
Regression Results	32
Chapter V: Recommendations and Conclusion	41
Recommendations.....	41
Standardized Implementation	41
Revision to Survey Methodology.....	42
Revision of Survey Instruments.....	43
Conclusion.....	44
References	66
Appendix A: Middle School Social Norms Campaign Implementation Table.....	67
Appendix B: Correlation Matrix of Variables in Bullying Regression Models	70
Appendix C: High School Social Norms Campaign Implementation Table	73
Appendix D: Correlation Matrix of Variables in ATOD Regression Models	76

List of Tables

Table 1. Macro/School Level Measures and Poverty Indicators	46
Table 2. Implementation Measures by Quantity, Quality, and Type	47
Table 3. Bullying Descriptives: Implementation Measures by Quantity, Quality, and Type.....	48
Table 4. Bullying: Scale Reliabilities	49
Table 5. Bullying Descriptives: Middle School Sample	50
Table 6. Bullying Descriptives: Macro/School Level Measures	51
Table 7. Bullying Results: Macro Poverty Scale on Implementation Quality and Quantity	52
Table 8. Bullying Results: Classroom Environment and Feeling Safe in School	53
Table 9. Bullying Results: Self-Reported Victimization and Bullying	54
Table 10. Bullying Results: Perception of Others' Victimization and Bullying	55
Table 11. Bullying Results: Beliefs and Perception of Others' Bullying Beliefs	56
Table 12. ATOD Descriptives: Implementation Measures by Quantity, Quality, and Type	57
Table 13. ATOD: Scale Reliabilities.....	58
Table 14. ATOD Descriptives: High School Sample.....	59
Table 15. ATOD Descriptives: Macro/School Level Measures.....	60
Table 16. ATOD Results: Macro Poverty Scale on Implementation Quality and Quantity	61
Table 17. ATOD Results: Self-Reported Tobacco and Alcohol Use Last 30 Days	62
Table 18. ATOD Results: Utilization of Tobacco and Alcohol Resistance Skills.....	63
Table 19. ATOD Results: Perception of Tobacco and Alcohol Use.....	64
Table 20. ATOD Results: Perception of No Tobacco or Alcohol Use by Others.....	65

List of Figures

Figure 1: Illustration of Research Questions	5
Figure 2. Most Frequent Venue of Student Recall of Bullying Campaign, N=2127	13
Figure 3. Proportion of Student Exposure to Bullying Campaign, By School.....	16
Figure 4. Proportion of Students Reporting Bullying Other Students in last 30 days, By School.....	16
Figure 5. Proportion of Students Victimized by Bullies in last 30 days, By School.....	16
Figure 6. Bullying: Macro Level Poverty Scale Score, by School.....	18
Figure 7. Bullying Results: Summary of Model 3	20
Figure 8. Bullying Results: Summary of Model 4	22
Figure 9. Proportion of Student Exposure to ATOD Campaign, By School	28
Figure 10. Most Frequent Venue of Student Recall of ATOD Campaign, N=2345	28
Figure 11. Proportion of Students Reporting Drank Alcohol in last 30 days, by School.....	29
Figure 12. Proportion of Students Reporting Smoked in last 30 days, by School	29
Figure 13. ATOD: Macro Level Poverty Scale, By School.....	34
Figure 14. ATOD Results: Summary of Model 3	35
Figure 15. ATOD Results: Summary of Model 4	37

Executive Summary

From 2005 to 2007, the New Jersey Department of Education and Rowan University Center for Addiction Studies funded two social norms campaigns conducted at 18 schools in New Jersey. Specifically, a bullying social norms program was conducted in 9 middle schools and an Alcohol, Tobacco and Other Drug (ATOD)/substance use campaign was implemented in 9 high schools. It is hypothesized that youth behaviors and attitudes are strongly influenced by what they believe their peers believe; yet perceptions of peer norms are not realistic (Connell, et al., 2007a; Perkins 2003). Too often these norms are overestimated -- youth over-generalize what others do and what others believe (e.g., everyone smokes – and everyone knows that!) and this information may be used by youth to rationalize their own behaviors and attitudes. The objective of these social norms campaigns were to educate students about the reality of bullying activity and ATOD/substance use by presenting information based on surveys completed by the students in the schools where the campaigns were implemented. Thus the campaign was tailored to include statistics about what their peers actually think and do within the context of their own school. This study hypothesized that armed with the correct information, students would internalize the messages, and respond with commiserate reductions in bullying and ATOD/substance use behaviors and attitudes (Connell, et al., 2007a; Perkins, 2003)

The overall results of this program are explicated in the reports by Connell, et al., issued in August 2007 (2007a) and September 2007 (2007b). This report confirms the findings of Connell, 2007b and examines how implementation of the social norms campaigns impact the outcomes examined in Connell (2007b). Further, there is diversity in the economic circumstances between the New Jersey schools that participated in these campaigns, as captured in a composite scale of six poverty/economic indicators. This scale is positively related to quality of campaign implementation

-- schools that scored higher on the poverty scale conducted higher quality campaigns. Given this, the next step was to determine whether the quality of the campaigns and/or the quantity of strategies employed in the campaign mediated (or lessened) the impact of the economic conditions on the outcomes, once accounting for individual differences among the survey respondents including and the level of self-reported exposure to the campaign. The results are summarized by campaign below.

Bullying Campaign

Two models were required for each outcome – the first examined the macro-level poverty scale on the outcomes while controlling for individual differences, and the second model incorporated measures of the implementation. For the bullying campaign, the model including only the poverty scale while accounting for individual differences informs us that:

- Younger female students with higher grades perceive the classroom environment as more positive than other students;
- Younger students with higher grades feel safer in school than other students;
- Non-white male students with lower grades are more likely to be victims of bullying;
- Older non-white male students with lower grades are more likely to bully others;
- Older non-white female students who have a lower grade performance and who attend schools that score higher on the poverty indicator scale perceive that others are more likely to be bullied;
- Older non-white female students with lower grades, regardless of the economic context of the school they attend, perceive that more peer bullying occurs than other students;
- Older males with lower grades in schools with higher poverty indicators are more likely to view bullying behaviors as acceptable; however,
- Neither race nor gender are significant factors for perceptions of peer's beliefs about bullying -- older students with lower grades in more impoverished schools are more likely to view their peers as seeing bullying beliefs as acceptable.

Adding implementation measures to the first model we conclude¹:

- Younger *white* female students with higher grades and with less exposure to norms campaign which employ more strategies perceive a more positive classroom environment.
- Younger *white female* students with higher grades reporting less exposure to a norms campaign which is lower in quality, and employs more strategies, report feeling safer in school than other students;
- Non-white male students with lower grades who report higher exposure to a norms campaign which employ fewer strategies, are more likely to be victims of bullying;
- Older non-white male students with lower grades who report higher exposure to a lower quality norms campaign which employs fewer strategies, are more likely to bully others;
- Older non-white female students who have a lower grade performance and who attend schools that score higher on the poverty indicator scale who report higher exposure to lower quality campaign with fewer strategies perceive that others are more likely to be bullied;
- Older non-white female students with lower grades *who attend schools with higher poverty indicators*, who report higher exposure to lower quality campaign with fewer strategies perceive of more peer bullying than other students;
- Older males with lower grades in schools, *regardless of the economic context of the school they attend*, and who report higher exposure to a lower quality norms campaign which employs fewer strategies, are more likely to view bullying behaviors as acceptable;
- Older students with lower grades *who attend schools with higher poverty indicators*, who report higher exposure to lower quality campaign with fewer strategies, perceive peers are more likely to view bullying behaviors as acceptable

To summarize, the bullying campaign results indicate that the economic context of the school in which the campaign is implemented impacts the three peer perception outcomes -- perceptions of peer victimization, peer bullying and peer beliefs in the acceptability of bullying behaviors. But school context is not relevant for self-reported bullying, victimization and beliefs about bullying. None of the implementation measures, as captured in the present study, mediate this contextual influence. Further, higher exposure to lower quality norms campaigns that employ fewer strategies result in higher reports of bullying behaviors, beliefs and peer perceptions and higher rates of victimization occur with more exposure to campaigns that utilize fewer strategies, regardless of quality. The fact that increased exposure to the campaign leads to higher victimization and bullying

¹ Significant changes from Model 3 to Model 4 are italicized.

behaviors is not intuitive; however, this could be the result of the campaign raising awareness about bullying, leading to higher self-report. Some of the findings could also be the result of poorly measured variables, and future efforts should consider revising the existing instrument and collecting additional implementation data to help overcome this limitation.

ATOD Campaign

Again, as with the bullying campaign, two models were computed to examine the ATOD/Substance use campaign on each outcome – the first examined the macro-level poverty scale on the outcomes while controlling for individual differences, and the second model incorporated measures of the implementation. For the ATOD campaign, the model including only the poverty scale while accounting for individual differences informs us that:

- Older students with lower grades report more days of tobacco and alcohol use, irrespective of the school's economic environment;
- Younger non-white students who get good grades and who attend schools scoring lower on the poverty scale use more tobacco and alcohol resistance skills;
- Older students with lower grades in schools with higher poverty indicators have higher perceptions of others' tobacco use
- Older white students with lower grades in schools with higher poverty indicators have higher perceptions of others' alcohol use
- Younger students who get good grades in schools with fewer poverty indicators have higher perceptions of no tobacco use by peers
- Younger non-white students who get good grades in schools with fewer poverty indicators have higher perceptions of no alcohol use by peers

Adding implementation measures to the first model we conclude²:

- Older students with lower grades who report higher exposure to a norms campaign of higher quality, but employ fewer strategies, report more days of tobacco use, irrespective of the school's economic environment;
- Older students with lower grades who report higher exposure to a norms campaign of higher quality, but employ fewer strategies but is conducted *in a school with fewer poverty indicators*, report more days of alcohol use;

² Significant changes from Model 3 to Model 4 are italicized.

- Younger students *of any race* with higher grades who attend a school that conducts a norms campaign of lower quality, but employ more strategies, in a school with fewer poverty indicators, report more utilization of tobacco resistance skills;
- Younger non-white students with higher grades who attend a school that conducts a campaign of lower quality, but employ more strategies, in a school with fewer poverty indicators, report more utilization of alcohol resistance skills;
- Students, *regardless of age*, who have lower grades in higher poverty schools, and who report higher levels of exposure to a higher quality campaign with fewer strategies have higher perceptions of others' tobacco use;
- Older students *of any race* who have lower grades in less impoverished schools, and who report higher levels of exposure to a higher quality campaign with fewer strategies have higher perceptions of others' alcohol use;
- *Female students, regardless of age*, who have higher grades in schools which conduct campaigns of lower quality, but more strategies report higher perceptions of no tobacco use peers, irrespective of their level of exposure to the campaign;
- Younger non-white students, *male or female*, who have higher grades and who report lower levels of exposure in schools which conduct campaigns of lower quality, report higher perceptions of no tobacco use peers, irrespective of the number of strategies in the campaign.

To summarize, the ATOD campaign results indicate that the economic context of the school in which the campaign is implemented impacts the outcomes, however, the quality and/or quantity of campaign implementation can mediate this influence. While the measure of “quality” in this study may not be a valid measure and thus data should be collected from additional stakeholders in the project to get a more comprehensive perspective, from these preliminary data, schools that are located in more impoverished areas may want to consider conducting an ATOD campaign that incorporates a greater number of strategies in order to ascertain if number of strategies has a salient impact on student drinking and smoking behaviors, as indicated in this report.

Looking at the level of campaign exposure and quality of implementation, both are significantly related to an increase in self-reported tobacco and alcohol use as well as increased perceptions of others' tobacco and alcohol use. These findings are seemingly contradictory to the stated objectives of the ATOD campaign, however, the number of strategies employed appear to offset the issues of exposure and implementation quality for three of four of these findings. Students

attending schools employing more campaign strategies reported reductions in both their own behaviors (drinking alcohol or smoking in the last 30 days) and in their perceptions of peer tobacco use. Another unexpected finding was that students in schools with higher quality campaigns, but with fewer strategies, reported a significant decline in student perceptions that their peers never smoke, likewise, in those schools with higher quality campaigns, irrespective of the number of strategies, students reported lower perceptions of peers that never drink. One explanation may be that the campaign educated students about perceptions of peer use to one that was more realistic, although this realism came at the price that a student is now aware that fewer students never engage in alcohol or tobacco use. Lastly, ATOD campaigns of differing quality and/or those which use multiple strategies appear to change the behaviors and perceptions of high school students; how these campaigns are conducted can mediate the impact of aggregate level socio-economic and school factors in higher poverty areas.

Conclusion

Overall, the results of both campaigns leads one to suggest that if the Department of Education and Rowan University Center for Addiction Studies chooses to implement social norms campaigns throughout the state of New Jersey, even for those schools with high poverty indicators, a social norms campaign of high quality and/or utilizing multiple strategies could succeed, despite the barriers often associated with higher distressed communities.

Chapter I: Introduction

The purpose of this report is two-fold. The first is to provide an assessment of the findings reported by Nadine M. Connell, Ph.D., the program evaluator of the New Jersey Department of Education and Rowan University Center for Addiction Studies Social Norms Project. Dr. Connell, along with her co-authors Pamela M. Negro, Dawn M. McGinty and Allison N. Pearce, examined two social norms projects conducted in 18 middle and high schools in New Jersey. A bullying social norms program was conducted in 9 middle schools and an alcohol, tobacco and other drug use (ATOD) or substance use campaign was implemented in 9 high schools from 2005 to 2007. Dr. Connell and co-authors produced two reports for these projects – the first report in August 2007 (Connell, Negro, McGinty, & Pearce, 2007a), and the follow-up “Updated Report” (Connell, Negro, McGinty, & Pearce, 2007b). The Connell et al., (2007a) report provided information about the social norms project overall, including information about the strategies employed by each school during the campaign, and focused on the impact of the campaign on outcomes including behavioral and attitudinal scales and key questions from self-report survey data obtained during the study. Connell et al., (2007b) examined race and gender differences in the pre- and post-test sample composition and in the outcomes. These results were reviewed by this researcher, but they are not duplicated in this report.

The second purpose of this report is to complement the Connell et al., (2007b) Updated Report by providing an in-depth examination of the strategies employed by the schools in their social norms campaigns. Implementation of the campaigns was quantified to provide measures of this process in order to ascertain if variations in the implementation of the social norms campaigns resulted in differing outcomes. The outcomes examined were the same scales and some of the questions examined by Connell et al. (2007a). While Connell et al., (2007b) accounted for variations

in the composition of the schools by including the schools as one of the variables in the regression models, this report looks at several macro level poverty characteristics at the school level (e.g., mobility rate, graduation rates, attendance rates, suspensions, rate of those receiving subsidized lunch) to determine if these factors influence not only the quality and quantity of the implementation of the project, but whether these factors impact the outcomes of interest.

As the Connell et. al., (2007a) report provided an in-depth description of the program, the theoretical basis of the social norms campaign, and detailed descriptions of the outcome measures used in the study, this report does not duplicate this information. Rather, this report focused on the implementation process for each school and incorporated these measures into this analysis. Unlike the Connell et al., (2007b) report, the outcome measures in this report were based solely on the post-test surveys and do not include any of the pre-test survey data. The post-test survey data were relevant because the primary question of this report is how the implementation of the social norms campaigns influenced the outcomes; this report does not consider if or how the subjects in the study changed as a result of the social norms intervention.

This report is structured to reflect both the two different types of social norms campaigns conducted (bullying in the middle schools and ATOD/substance use in high schools) while consolidating the common elements of the study. To that end, the description of the measures obtained specifically for this report, the method of analysis, and the proposed future directions for the project are combined to present the information overall, rather than by campaign. Then each of the campaigns are presented as separate chapters in order to clearly distinguish the implementation and results of the bullying middle school campaign from the implementation and results of the high school ATOD/substance use campaign. Likewise, the assessments of the Connell et al., (2007b) findings for each project are contained in the campaign specific chapters.

The specific research questions, description of the data and method of analysis are specified in chapter 2. The findings of this study are explicated in the social norms campaign specific chapters – bullying in Chapter 3 and the ATOD/substance use in Chapter 4. This report concludes with a discussion in Chapter 5 with limitations and suggestions for future directions.

Chapter II: Methods

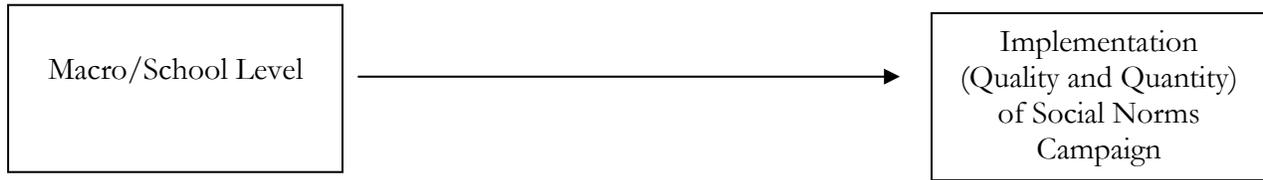
Research Question

The overall question answered by Connell et al., (2007b) is do social norms campaign targeting high risk behaviors (e.g., bullying or ATOD/Substance use) produce attitudinal and/or behavioral changes? Specifically, the Connell et al., study examines the school social norms campaign overall and the student's reported level and types of exposure of the campaign upon the outcomes of the scales and individual behavioral and perceptual questions. In contrast, this study examines how macro/school level socio-economic and demographic and implementation variables impact the student reported survey outcomes. Thus, this report studies situational variations between the schools as this influences program implementation, and in turn, how this impacts outcomes.

Specifically, this report asks the following research questions (see Figure 1):

1. Do macro level socio-economic, demographic and school level variables influence measures of the quality and quantity of the implementation of the social norms campaign?
2. Do macro level socio-economic, demographic and school level variables impact survey outcomes once individual differences of age, race, and grade average are controlled?
3. Does the impact of the macro level variables lessen (or is mediated) when the quality and quantity of the campaign implementation are accounted for, while simultaneously controlling for age, race, gender, average grade, and level of student's self-reported exposure to the campaign?

Question 1:



Question 2:



Question 3:

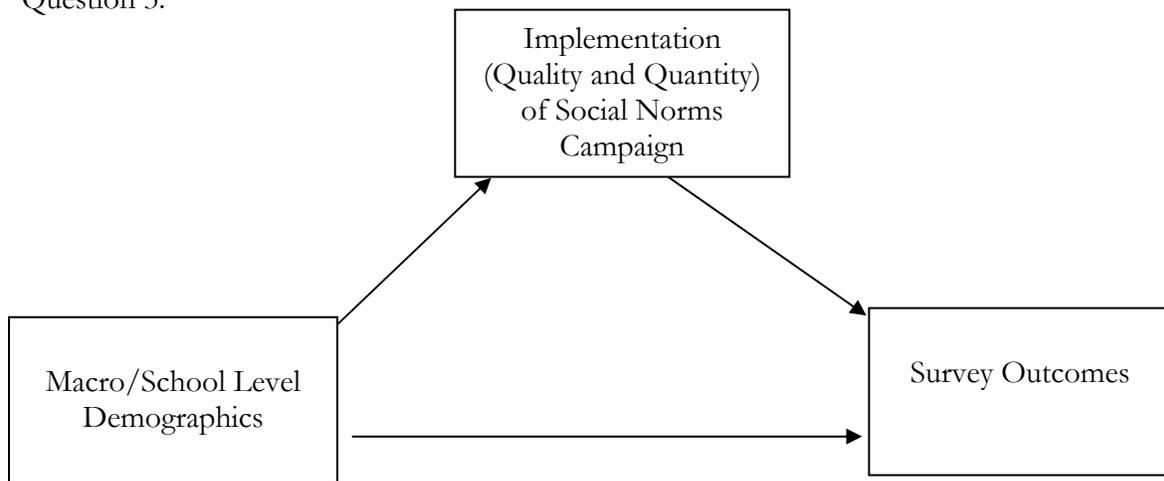


Figure 1: Illustration of Research Questions

Design Overview

Four models were constructed to answer these research questions. The first research question is answered in two models -- the first model (Model 1) regressed a scale capturing the quality implementation campaign on the macro/school level poverty scale. The second model (Model 2) regressed the number of strategies utilized by each school on the macro/school level poverty scale. The second research question is answered in the third model (Model 3), which

examined whether the macro/school level poverty variables, once the individual characteristics of the student (age, white versus non-white, male vs female, and self-reported grade average (or letter grade in the middle school) influence the student's survey outcomes. Finally, Model 4 combines the macro/school level poverty scale and individual demographic variables found in Model 3 with the quality and quantity campaign implementation measures in Models 1 and 2, and the student's self-reported level of campaign exposure into the equation. In this process, Models 1 and 2 assessed the strength of the association between the macro level poverty scale on measures of campaign implementation and Model 3 assessed the strength of association of these macro/school level poverty factors on the survey outcomes while controlling for individual differences. The third research question is answered in Model 4, which examined whether measures of implementation of the social norms campaign mediates the relationship between the macro/school level poverty scale and the outcomes. Variations in implementation quality and quantity and the macro/school level poverty scale are combined into Model 4 along with the outcomes of interest. If the relationship between the macro/school level variables and the outcomes declines with the addition of the measures of campaign implementation, this indicates that how the social norms campaign are implemented can mediate, or lessen, the socio-economic, demographic and school level circumstances in which the program is implemented.

Data

To answer these questions, a number of independent variables are included in this study. The first set of independent variables is the macro/school level socio, economic, and demographic variables (See Table 1 for a list of the variables considered). A composite macro level poverty indicator scale containing the rate of families living below the poverty line in the zip code where the schools are located, the percent of African American students in the school, rate of school mobility,

rate of students who do not graduate (or in the case of the middle schools – rate of those who failed to attend school), rate of those who receive subsidized lunch, rate of those suspended, and rate who have an Individualized Educational Program (IEP). These variables were through the Connell et al., (2007a) data obtained from the New Jersey Department of Education; and from the U.S. Census data (U.S. Census, 2000).

In addition to the macro/school level poverty indicator scale, a number of variables were included to account for differences among the students surveyed. These measures included the age of the student, race (white versus non-white), gender (male versus female) their self-reported average grade or letter grade, and level of exposure to the campaign. This exposure question asked students how often they saw or heard about the campaign information about what most students did and thought (about bullying or ATOD/substance use). Please refer to the campaign specific Chapters 3 and 4 for more information of the variables used in the analysis

The second set of independent variables were the process measures which capture the quality and quantity of the social norms campaign from the school's and the CAS Program Coordinator's perspective. The two process variables utilized in the study are the number of strategies employed by the schools in their social norms campaign and a scale capturing the quality of the implementation. This scale contained 4 items of the CAS Program Coordinator's assessment of the overall quality of the implementation, overall enthusiasm for the project by the school, whether the level of engagement by faculty and/or staff was sufficient to effectively implement the campaign and likewise, and if the level of engagement in the campaign by the Substance Abuse Counselor (SAC) (of the schools who had a SAC) was sufficient to effectively implement the campaign. The measure of program quantity was the total number of strategies utilized by the school. The six strategies available to incorporate in the campaigns include trainings and steering committee meetings, poster distribution, games, contests, and group assemblies or other school wide

activities. While there were alternative measures of the quantity of the campaign, due to issues with multicollinearity³ between the quantity variables, the total number of strategies employed was determined to be the best measure available for inclusion in this analysis. (Please refer to the campaign specific Chapters 3 and 4 for a discussion of the variables used in each of the topic specific analyses.) All of these implementation variables were obtained from either the measures detailed in the Connell, et al., (2007a) Implementation Tables (See Appendices A and C) or from the Rowan University Center for Addiction Studies (CAS) Program Coordinators (see Table 2 for a listing of the variables considered for this report which categorized the available measures by quantity, quality and type of campaign).

The CAS Program Coordinators also provided information ranging from designating the party responsible for administering the program in the school (e.g., the Substance Abuse Counselor, counselor, teacher or a member of the administration (e.g., Principal or Vice Principal)), to their opinion as to whether the campaign was structured (versus not structured) and to whom the program was focused (parents versus students). The CAS Program Coordinators also summarized⁴ how well the programs were implemented generally, and noted some of the challenges, which are incorporated in this report below in the campaign specific Chapters 3 and 4.

³ Multicollinearity occurs when two or more variables are highly related to one another. Inclusion of two or more highly related variables in the same model oftentimes results in masking significant relationships that would be evident if only one of the variables were included (Allison, 1999). A number of variables and combinations of variables were examined using diagnostic tests and were eliminated based on a tolerance statistic lower than .40 and a Variance Inflation Factor (VIF) greater than 2.5, commonly used cut-off points indicating a multicollinearity problem. Among the implementation variables eliminated from the final models were the number of trainings, steering committee meetings, contests and assemblies, and whether the program was structured (versus non-structured), whether the program was targeted at the students (versus the parents) and a variable indicating the type of prize given to students based on monetary value (pens and pencils were the lowest value, electronics had the highest value).

⁴ It is important to note that in several jurisdictions the social norms projects were conducted by the same individual and/or were administered in very similar ways as they were located in the same geographic and/or under the same administrative management regardless of campaign content (bullying versus the substance use). Thus, in some cases, descriptions of the implementation of the programs reflect consistencies across the middle and high school settings despite the different program content.

In addition to the quality and quantity of implementation variables discussed above, the survey outcome variables examined in this report are the scales created by Connell, et al., (2007a) (7 scales for the middle school bullying campaign and 8 scales for the high school ATOD/substance use campaign) and several individual behavioral and perceptual questions. These variables are described more thoroughly in the specific social norms campaign Chapters 3 and 4.

Method of Analysis

The appropriate method of analysis to answer these questions is Ordinary Least Squares (OLS) multiple regression. This type of regression is advantageous due to the ability of the model to combine a number of different variables and assign a relative and unique weight to each so that the effects of the independent variables on the dependent variable allows for the “unique contribution” of each (Allison, 1999, p. 3). OLS regression is an iterative process based on observed data that seeks to find the coefficients which provide the “smallest sum of squared errors” -- resulting in the best and least biased linear prediction of the dependent variable (Allison, 1999, 12). All of the findings presented in this report were determined using OLS regression as the method of analysis.

To ascertain whether the quality and/or quantity of the social norms campaign implementation (the mediating variable or “M”) mediates the influence of the macro/school level scale of indicators or poverty (the independent variable or “X”) on the dependent variable (“Y”) one observes whether the macro level poverty indicator scale remains statistically significant once the implementation measures are incorporated into the model.⁵ If the inclusion of the mediating variable(s) in the model results in reducing the impact of the macro/school variables to a level of non-significance, this is termed “*perfect mediation*” (Preacher & Hayes, 2004, p. 717). Alternatively, if the variable remains significant, yet considerably declines, then the impact of X on Y is considered

⁵ For those interested, refer to Preacher & Hayes, 2004 for a more detailed explanation.

to be “*partially mediated*”. In other words, the relationship is lessened, but not obliterated, by the inclusion of a mediating variable. For this report, while it is desirable to see that all of the impact of socio-economic status (as measured by the macro/school level poverty indicator scale) is ameliorated by the quality and/or quantity of the campaign implementation, that may not be reasonable at this juncture in the program’s progress. While this may occur, indicators of partial mediation would remain encouraging as this would indicate that irrespective of the socio-economic context in which the schools may operate, knowing that the campaign can be effective despite these macro/school level factors (which are generally less amenable to change) is valuable knowledge and may encourage others considering implementing a social norms campaign.

The description of the implementation of the middle school bullying campaign, the measures used in the analysis and the campaign specific results follow in Chapter 3. Likewise, implementation of the high school ATOD/Substance use campaigns, measures and results for the ATOD social norms project are described in Chapter 4.

Chapter III: The Middle School Bullying Social Norms Campaign

Part I – Assessment of Connell et. al., (2007b) Report

I have reviewed the Connell et al., (2007b) report as well as statistical output files and I concur with their findings. Further, the finding in the regression models that there are differences among the schools in the outcomes is consistent with the differences found in both campaign implementation and the situational socio-economic and demographic context of the schools.

As detailed in the final chapter in this report, I agree with the recommendations made by Connell et al., for future directions for this project. All of these recommendations, including the need to revise the survey instruments, changing the survey methodology to provide a way to link the respondent's answers from one survey to the next, and incorporating implementation standards will measurably enhance the reliability and validity of the social norms campaign evaluation.

Part II – Focus on Process

The Connell et al., (2007a) report provided an overview of the bullying social norms campaign including a table which summarized the strategies employed by each school during the campaign (See Appendix A). As noted in the Methods (Chapter 2), this information was coupled with data provided by the Center for Addiction Studies (CAS) Program Coordinators, to provide a measure of perspective about implementation of the bullying campaigns. (See Table 3 for descriptives of the measures of quantity, quality and type of implementation.) A general overview of common successes and challenges in implementation is also provided below, followed by a discussion of variables considered for this report in the Measures section and the results of the analysis are provided at the end of this chapter.

Implementation – Successful Elements and Challenges

Enthusiasm and engagement by school administrators, faculty, and staff were a key component to the successful implementation of the middle school bullying campaigns. The middle schools with such support appeared to incorporate the norms campaign into related curriculum, held many events including frequent assemblies, games, poster and t-shirt contests, and had a variety of give-away or contest prizes. In one instance, the school created social norms campaign public service announcements. Overall, those with administrative support used a variety of ways to present the issues to students. Through the post-test survey, students reported not only the approximate number of times they recall seeing the campaign messages (exposure) but also whether they saw these messages on the posters, in the school newsletter, website, television station or other print media. Students also reported if they were exposed to the campaign through the announcements and assemblies and in discussions with their teachers in class, with other students, and with their parents. Of the 2,765 middle school survey respondents, 2,127 or approximately 76% of students, reported they recalled seeing or hearing the campaign messages. These students observed the messages in a variety of venues, the most frequent of which posters, followed by talking with teachers, and hearing the information at assemblies (see Figure 2).

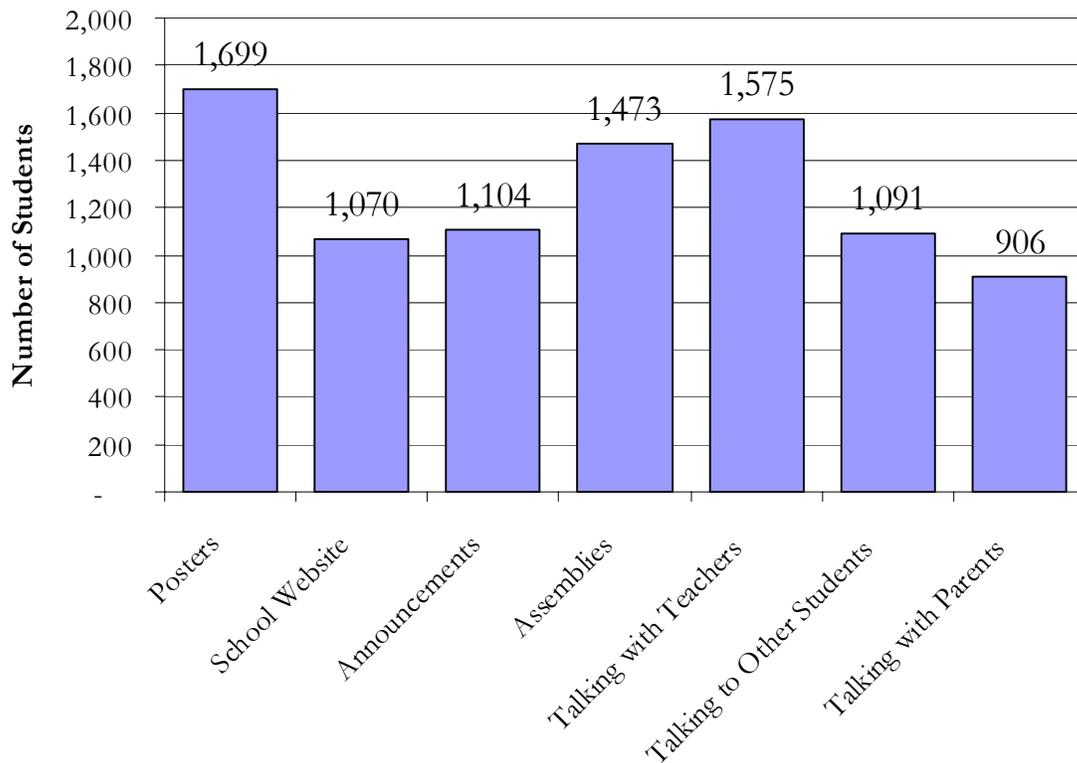


Figure 2. Most Frequent Venue of Student Recall of Bullying Campaign, N=2127

In contrast, those schools that lacked administrative support and/or engagement by teachers not responsible for the campaign hindered implementation. These schools tended to rely on the campaign posters and had few additional events (e.g., limited to a couple of games and/or a contest). It must be noted, however, that as it will become clear in the discussion of the bullying campaign results, the number of strategies utilized by the school is not necessarily related to the quality of the overall campaign. For example, one of the schools rated as having a high quality campaign by the CAS Program Coordinator employed only 4 (of the available 6) strategies, while two schools which employed all 6 strategies were rated as conducting a mid-level quality of implementation. Nonetheless, it appears that generally schools that had more administrative support were able to be versatile and creative in implementing their social norms campaign.

Another apparent challenge to implementation of the campaign was the level of communication and cooperation between the schools and the CAS Program Coordinators. In some schools the person responsible for implementing the campaign was easy to contact and to work with, while in others, this was not the case. It is possible that this lack of access and communication between CAS and the schools hindered the successful implementation of the campaign in these schools. Unfortunately, the data required to explore this issue further is unavailable, thus this may remain a concern for future campaigns. This data limitation is not solely an issue related to the middle school implementation data, but also impacts the assessment of the high school campaign. As such, this will be addressed more fully in Chapter 5.

Measures

For purposes of this study, this researcher replicated the outcome scales created by Connell et al, (2007a, 2007b) based on the post-test survey data. In addition to these outcome scales, two additional scales were created to (the macro level poverty indicators and the quality of implementation scale) for inclusion in this analysis. Diagnostics were conducted on all scales to confirm reliability. See Table 4 for the Cronbach's alpha for each scale (which range from .76 to .93), as well as the average student response on the scale and the minimum and maximum responses. In addition to these scales, a number of individual and school level descriptive measures were considered for analysis.

Table 5 provides a summary of the sample of respondents who participated in the middle school post-test survey. While Connell, et al., (2007b) explored these descriptives at length, I draw the reader's attention to a few of the individual level measures which may influence the outcomes of this study. Generally speaking, this middle school survey was completed by those who generally do well in school; approximately 88% of the survey respondents most often receive either a B or an A

in school. In addition, these students generally feel safe in school. Despite this, 76% of these students report being a victim of bullying in the prior 30 day period. This may be a result of the way this variable was constructed as it was based on the bullying victimization scale which incorporates 7 different measures of behaviors on a continuum of seriousness. The behaviors on this continuum range from being teased in an unfriendly way, to being excluded from a group, to threat of physical injury. Any student responding in the affirmative to any one of the questions on the scale was categorized as a victim of bullying behaviors. (This issue and the procedure used to create the variable is also relevant to the self-reported bullying scale). While creating this measure in this way casts a wide net, it does provide a snapshot of the possible frequency and prevalence of bullying in a middle school environment. Perhaps revising this question to ask the student to clarify whether they define these harms as bullying (rather than the researcher categorizing the respondent as a victim based on a list of 7 divergent behaviors, regardless of the seriousness of those behaviors) may help to refine the proportion of self-reported victimization. This issue is discussed more at length in the limitations and future directions found in Chapter 5 of this document, although the reader may wish to refer to Connell, 2007a and 2007b, for a more detailed exposition of the issue.

Finally, Table 6 provides descriptives for the macro/school level measures. Data sources for these variables were two-fold: first, from the Connell 2007(b) data obtained from the New Jersey Department of Education and the U.S. Census bureau. Secondly, several measures were aggregated from the individual post-test survey responses to provide an overall school rate or proportion. While not all variables listed were included in the final analysis, the reader may find these descriptives of interest in providing an overview of the measures considered.

The macro/school level variables indicate wide variability in the socio-economic and demographic context of the schools participating in the social norms campaigns, and of the individual survey respondents. Of particular interest to the reader may be several individual survey

items that were aggregated to the school level. For instance, in Figures 3, 4, and 5, observe that of the 8 schools with post-test survey data, school A had the highest proportion of students (.86) who reported seeing or hearing the bullying campaign messages (Figure 3). School A also has the lowest proportion of students reporting, in the 30 days prior to completing the survey, bullying behaviors (.50) (Figure 4) and bullying victimization (.69) (Figure 5).

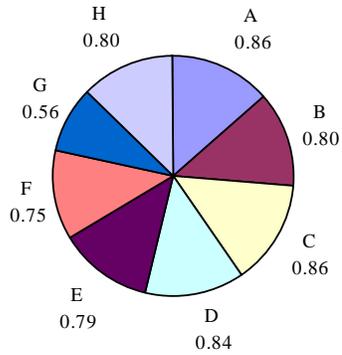


Figure 3. Proportion of Student Exposure to Bullying Campaign, By School

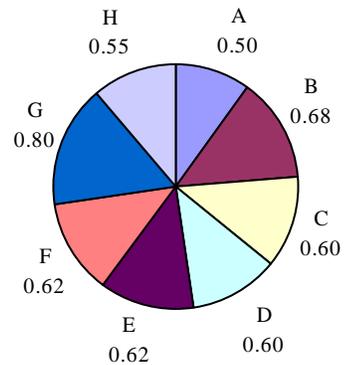


Figure 4. Proportion of Students Reporting Bullying Other Students in last 30 days, By School

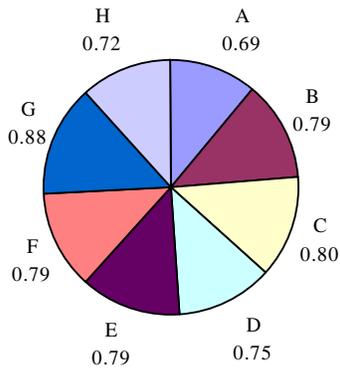


Figure 5. Proportion of Students Victimized by Bullies in last 30 days, By School

Tables 3, 5 and 6 provide a descriptive overview of the samples and the variables considered for this report. However, not all of the variables were included in the regression analysis for a variety of reasons including multicollinearity and because some variables were not significantly related to

the outcomes examined. Further, in regard to reporting the results of the regression analysis, I opted to report and discuss some, rather than all of the outcomes. This occurred when the results of the analysis conducted were not particularly interesting (e.g., failed to reach statistical significance) or in those cases where the results of one outcome substantively duplicated a pattern found within other outcomes. This discussion follows.

Regression Results

In the examination under consideration, there were three questions:

1. Do macro level socio-economic, demographic and school level variables influence measures of the quality and quantity of the implementation of the middle school bullying social norms campaign?
2. Do macro level socio-economic, demographic and school level variables impact survey outcomes once individual differences of age, race, and grade average are controlled?
3. Does the impact of the macro level variables lessen (or is mediated) when the quality and quantity of the campaign implementation are accounted for, while simultaneously controlling for age, race, gender, average grade, and level of student's self-reported exposure to the campaign?

To answer these questions required analysis of four different models for each of the outcomes. This analysis was conducted using the middle school data and incorporated the macro level poverty scale, the quality of implementation scale, and the total number of strategies employed in the social norms campaign. The analysis also incorporated controls for individual differences of age, race (coded 1 for white, 0 for non-white), gender (coded 1 for male, 0 for female), the letter grade the respondent most often received, and how often the student recalled seeing or hearing the campaign survey information (campaign exposure). The 7 outcome scales examined were classroom

environment, self-reported victimization of bullying and perpetrating bullying behavior, perceptions of other student’s victimization and bullying behaviors, the survey respondent’s own beliefs about bullying and their perception of others’ bullying beliefs. Finally, the analysis also included the individual item from the survey about the degree to which the student felt safe in school. The specific variables (correlation matrices are provided in Appendix B) in each of the four models were:

Model 1: Macro Poverty Scale, Quality of Implementation Scale

Model 2: Macro Poverty Scale, Number of Campaign Strategies

Model 3: Macro Poverty Scale, Age, White, Male, Letter Grade, Survey Outcomes

Model 4: Macro Poverty Scale, Age, White, Male, Letter Grade, Campaign Exposure, Quality of Implementation Scale, Number of Campaign Strategies, Survey Outcomes

In conducting this analysis, this researcher observed that there were substantial and substantive differences in the results when 82 observations from School F were included. It became clear that this school scores much higher on the macro level poverty indicator scale than the remaining schools (See Figure 6). While the purpose of this analysis is to determine the influence of situational and socio-economic factors contained within the macro poverty scale, the inclusion of this outlier school inhibits our ability to generalize the study findings to other less impoverished schools. Thus, the results provided herein exclude School F, but are available upon request.

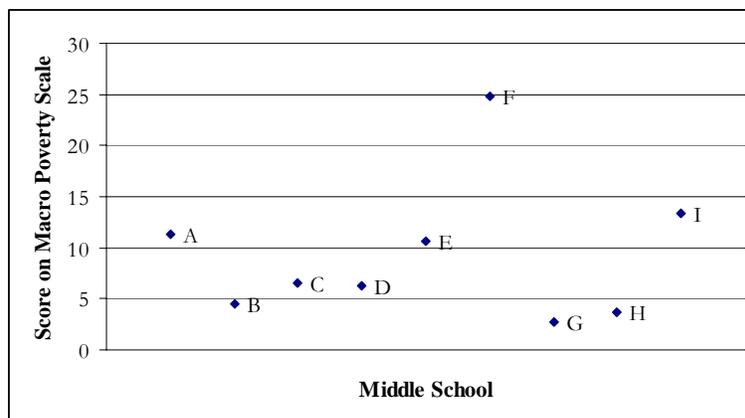


Figure 6. Bullying: Macro Level Poverty Scale Score, by School

Table 7 provides the results related to the relationships between the macro poverty scale and the quality of implementation (Model 1) and quantity of implementation (Model 2). This table indicates that the measures of poverty contained in the macro level poverty scale have a significant relationship with implementation quality, but is unrelated to the number of strategies employed in the campaign. The relationship is in the positive direction, thus indicating higher indicators of poverty are related to higher quality of implementation. While data are not available to explore more fully why this relationship exists, it may be that the schools in higher poverty areas prioritized the social norms campaign in accordance with their perception of the breadth of the bullying problems in their schools. It is also possible, given that the measure of quality in this study was based solely on feedback from the CAS Program Coordinator, that in fact this assessment of quality is inaccurate or incomplete and thus is a result of measurement error. This lack of information will be addressed more fully in the final chapter of this report in the recommendations for incorporating additional measures of program implementation in future campaigns.

Figure 7 summarizes the significant findings for Model 3 (detailed in Tables 8 to 11) for the bullying campaign, accounting for both the economic context of the school and for individual differences among the student respondents including their race, gender, age, and grades for the following outcomes.

Respondents Report:	School	Respondent			
	Poverty Scale	Age	Race	Gender	School Grades
Perceive More Positive Classroom Environment	NS ⁺	Younger	NS ⁺	Female	Higher
Feeling Safe in School	NS ⁺	Younger	NS ⁺	NS ⁺	Higher
More Likely Victim of Bullying	NS ⁺	NS ⁺	Non-White	Male	Lower

Respondents Report:	School	Respondent			
	Poverty Scale	Age	Race	Gender	School Grades
More likely to Bully Others	NS ⁺	Older	Non-White	Male	Lower
Higher Perceptions of Peer Victimization	Higher Poverty	Older	Non-White	Female	Lower
Higher Perception of Peer Bullying	Higher Poverty	Older	Non-White	Female	Lower
Higher Pro-Bullying Beliefs	NS ⁺	Older	NS ⁺	Male	Lower
Higher Perception of Peer Pro-Bullying Beliefs	Higher Poverty	Older	NS ⁺	NS ⁺	Lower

NS⁺ = Not a significant factor

Figure 7. Bullying Results: Summary of Model 3

Tables 8 to 11, organized by outcome, contain the Model 3 and Model 4 regression results. Common findings, across various outcomes, include that with the exception of self-reported victimization of bullying (Table 9), age is related to all outcomes. Younger students are significantly more likely to view the classroom environment more positively, and feel safer in school than older students (Table 8). However, older students are more likely to bully others (Table 9), to believe that bullying behaviors are acceptable (Table 10), and to perceive that others are likeminded in both their bullying behaviors (Table 10) and beliefs (Table 11). Another common finding across these outcomes is that non-white students are more likely to report they are victims or perpetrators of bullying (Table 9). Non-white students also have higher perceptions of peer victimization and of peer bullying (Table 10).

With regard to gender differences, male students are less likely to view the classroom environment as positive, and once campaign implementation factors are incorporated in the model, male students are less likely to feel safe in school (Model 4, Table 8). Perhaps this is related to the

finding that boys in this sample are also more likely to report being a victim of and engaging in bullying behaviors, (Table 9) and are more likely to be accepting of bullying behaviors (Table 11). Interestingly, male students are significantly less likely than girls to perceive their peers as being either victims or bullies (Table 10) and gender is unrelated to perceptions of others' beliefs about bullying behaviors (Table 11).

Being a good student, across all outcomes, is significantly related to bullying behaviors, beliefs and related peer perceptions. Students who receive a higher grade are more likely to positively view the classroom environment and to feel safer in school (Table 8); they are less likely to be either a victim or a perpetrator of bullying (Table 9); and they are less likely to hold that bullying behaviors are acceptable (Table 11). Likewise, kids who perform better in school perceive others as they perceive themselves – they are less likely to perceive their peers as victims or perpetrators of bullying (Table 10), and are less likely to think that their peers have pro-bullying attitudes (Table 11).

Understanding how these differences in age, gender, race and school performance impact the outcomes, we turn to answering the second question in this study (Model 3) – do the macro level poverty indicators remain significantly related to the outcomes once we take these individual differences into account? The answer for all of the self-reported bullying behavioral and belief scales is no; school situational context is no longer relevant for these outcomes. In terms of self-reported behaviors, non-white male students who get lower grades in school are more likely to be victim of a bully and older non-white male students who perform poorly in school are more likely to victimize their peer regardless of their school environment. Likewise, older male students who get poor grades are more likely to view bullying behaviors as acceptable. However, for perceptions of peer's behaviors and beliefs related to bullying, the macro level poverty indicators remain significant after controlling for individual differences of the survey respondents (Tables 10 and 11). Students attending schools that have higher scores on the poverty indicators scale are more likely to perceive

that other students view bullying behaviors as acceptable, they perceive their peers are subject to higher levels of victimization, and perceive that peers are more likely to engage in bullying behaviors. In short, context matters in how these students view their peers. We add to Model 3 the measures related to the quality and quantity of implementation, as well as level of reported campaign exposure (Model 4 from Tables 9, 10, 11) to ascertain if these factors still impact survey outcomes. Figure 8 summarizes these results:

Respondents Report:	School	Respondents				Implementation		
	Poverty Scale	Age	Race	Gender	Grades	Campaign Exposure	Campaign Quality	Quantity
Perceive More Positive Classroom Environment	NS ⁺	Younger	White	Female	Higher	Less Exposure	NS ⁺	More Strategies
Feeling Safe in School	NS ⁺	Younger	White	Female	Higher	Less Exposure	Lower Quality	More Strategies
More Likely Victim of Bullying	NS ⁺	NS ⁺	Non-White	Male	Lower	Higher	NS ⁺	Fewer Strategies
More likely to Bully Others	NS ⁺	Older	Non-White	Male	Lower	Higher	Lower Quality	Fewer Strategies
Higher Perception of Peer Victimization	Higher Poverty	Older	Non-White	Female	Lower	Higher	Lower Quality	Fewer Strategies
Higher Perception of Peer Bullying	Higher Poverty	Older	Non-White	Female	Lower	Higher	Lower Quality	Fewer Strategies
Higher Pro-Bullying Beliefs	NS ⁺	Older	NS ⁺	Male	Lower	Higher	Lower Quality	Fewer Strategies
Higher Perception of Peer Pro-Bullying Beliefs	Higher Poverty	Older	NS ⁺	NS ⁺	Lower	Higher	Lower Quality	Fewer Strategies

NS⁺ = Not a significant factor

Figure 8. Bullying Results: Summary of Model 4

There is an observable pattern related to level of campaign exposure – with more exposure, students feel less safe in school and view all aspects of bullying (victim, perpetrator, beliefs and perceptions of others’ victimization, behaviors and beliefs) in the opposite direction than hypothesized. Students feel more victimized, report more offending, and find bullying behaviors more acceptable with increased exposure to the social norms campaign. Observing the converse and considering variations in program implementation – students reporting lower levels of exposure to higher quality campaigns which utilize more strategies report significantly fewer bullying behaviors (Table 9) and are also less likely to perceive that peers perceive bullying behaviors as acceptable (Table 11). In contrast, students reporting higher exposure to a lower quality campaign in schools with fewer strategies perceive more bullying on the part of their peers (Table 10). A higher number of implementation strategies employed in the campaign is significantly related to reducing reports of victimization for those who report higher levels of exposure to the campaign (Table 9). In contrast, students who report lower levels of exposure to lower quality campaigns with more strategies feel safer in school; while those with less exposure to campaigns engaging more strategies perceive a more positive classroom environment (Table 8)).

We are now ready to approach the final question in this study -- once we take into account measures of the campaign, do the economic circumstances of the schools still impact the survey outcomes -- does the context still matter? To answer this question we refer back to Model 3 and observe the outcomes where the macro level poverty scale remained significant once individual differences were controlled, and observe if there is a change in the macro poverty scale in Model 4. The three outcomes that meet these criteria are perception of others’ victimization, perceptions of other’s bullying, and perceptions of other’s beliefs about bullying. We find that measures of campaign implementation do not mediate (or lessen) the situational circumstances in the schools.

Students attending schools with higher indicators of poverty report higher perceptions of peer victimization, peer bullying, and peer beliefs irrespective of implementation and campaign exposure.

In conclusion, the bullying campaign, when viewed through the prism of process and context renders several interesting results. The fact that increased exposure to the campaign leads to higher victimization and bullying behaviors is not intuitive; however, this could be the result of the campaign raising awareness about bullying, leading to higher self-report. Again, as noted previously, some of the findings could also be the result of poorly measured variables, and future efforts should consider revising the existing instrument and collecting additional implementation data to help overcome this limitation.

Chapter IV: The High School ATOD/Substance Use Social Norms Campaign

Part I – Assessment of Connell et. al., (2007b) Report

I have reviewed the Connell et al., (2007b) report as well as statistical output files and I concur with the findings. Further, the finding in the regression models that there are differences among the schools in the outcomes is consistent with the differences found in both campaign implementation and the situational socio-economic and demographic context of the schools.

As detailed in the final chapter in this report, I agree with the recommendations made by Connell et al., for future directions for this project. All of these recommendations, including the need to revise the survey instruments, changing the survey methodology to provide a way to link the respondent's answers from one survey to the next, and incorporating implementation standards will measurably enhance the reliability and validity of the social norms campaign evaluation.

Part II – Focus on Process

The Connell et al., (2007a) report provided an overview of the ATOD/substance use social norms campaign including a table which summarized the strategies employed by each school during the campaign (See Appendix C). As noted in Methods (Chapter 2), this information was coupled with data provided by the Center for Addiction Studies (CAS) Program Coordinators, so to provide perspective about implementation of the ATOD/substance use campaigns. (See Table 12 for descriptives of the measures of quantity, quality and type of implementation.) A general overview of common successes and challenges in implementation is also provided below, followed by a discussion of variables considered for this report in the Measures section, and the results of the analysis are provided at the end of this chapter.

Implementation – Successful Elements and Challenges

As it was true for the bullying campaign, enthusiasm and engagement by school administrators, faculty, and staff was a key component to the successful implementation of the high school ATOD/substance use campaigns. Unfortunately, only 4 of the high schools appeared to have good or strong administrative/faculty support, while the level of enthusiasm at 3 of the schools was extremely poor. In one case which exhibits good administrative support, the school actively engaged the students to talk with other students to obtain parental consent to complete the surveys, and administrators conducted outreach to those parents who initially refused consent. They also incorporated a variety of giveaways including t-shirts and lanyards into the campaign and the overall enthusiasm was good. For several other schools, however, both campaigns (bullying and ATOD) were conducted by the same individual, but the level of support varied between the middle and high schools even in these jointly run campaigns. This may be due, at least in part, to a stronger focus on the middle school bullying campaigns. For instance, at one school/district, the individual responsible for conducting the social norms campaigns was able to recruit another teacher to assist in the middle school, but failed to find administrative or faculty support within the high school. Perhaps as a consequence, some of these schools had greater participation and/or better quality entries in the middle school poster/flyer contests than did the high school contests. Another high school failed to have community support and, according to the CAS Program Coordinator, the campaign suffered from lack of student engagement into the project.

While a number of the ATOD campaigns appeared to lack support and engagement, there were more variations in the implementation of the high school campaigns than there were in the middle school campaigns. For instance, in referring to Table 12, (ATOD quality, quantity and type of implementation), note that while the middle schools focused their campaign exclusively on students, 3 of the 8 high school campaigns were targeted toward parents, and/or the community.

These campaigns were viewed as less structured by the CAS Program Coordinator than those targeted at the students, and in 2 of 3 of these schools, the campaign was conducted by an administrator (e.g., the Principal or Vice Principal(s) rather than the SAC, a counselor or a teacher -- the individuals who generally coordinated the programs targeted at students).

Readers may be interested to know that notes for School B from the High School Implementation Table (Connell et al., 2007a) (or refer to Appendix C) indicate that the focus of the campaign was targeted toward not only parents, but also the faculty, and the community. The stated goal was to establish and ensure that these groups shared a common language as it related to the social norms campaign. While the school coordinator was enthusiastic about the project at first, other issues unrelated to the social norms campaign resulted in shifting priorities; consequently, there was a paucity of community support. Another difference between the high schools is found in the giveaway prizes – while all of the middle schools purchased or obtained a giveaway or contest prize, in some of the high schools there were either no prizes, or few, but more expensive, prizes (e.g., book bags, t-shirts and electronic entertainment devices such as an IPOD or CD player).

Consistent with the bullying campaigns, and again, as it will become clear in the discussion of the ATOD/Substance use campaign results, the total number of strategies utilized in the campaign is not necessarily related to the overall quality of the campaign. For instance, there are three schools which were rated as running a high quality campaign by the CAS program Coordinator, yet they employed only 4 (of the available 6) strategies, while another school utilized all 6 strategies and was later rated as conducting a campaign of mid-level quality.

It is important to note, however, that the differences between the high schools and the middle school campaigns could be a result of the high schools focusing on activities that may be more age appropriate. For instance, at one school, the ATOD survey information was relayed to students during basketball games; and several other schools incorporated the campaign during

school pep rallies. The pep rallies may have occurred less frequently than the activities conducted at middle schools, but observing the aggregated school level data of students who reported they recalled the ATOD social norms messages, the rates of exposure are generally better in the high school than the proportion of student exposure recall in the middle school bullying campaign (see Figure 9). On average, the aggregated exposure rate of recall for high school was 85% compared to the aggregated exposure rate of 78% of middle school students.

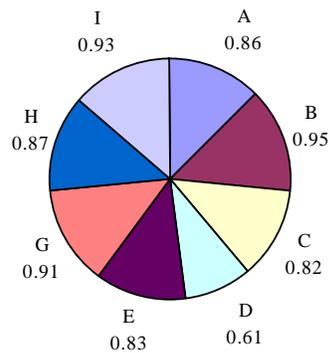


Figure 9. Proportion of Student Exposure to ATOD Campaign, By School

In addition, of the 2,345 high school students reporting they recalled the ATOD campaign messages, the most frequent venue recalled was posters, followed by talking with other students and viewing other print media (Figure 10).

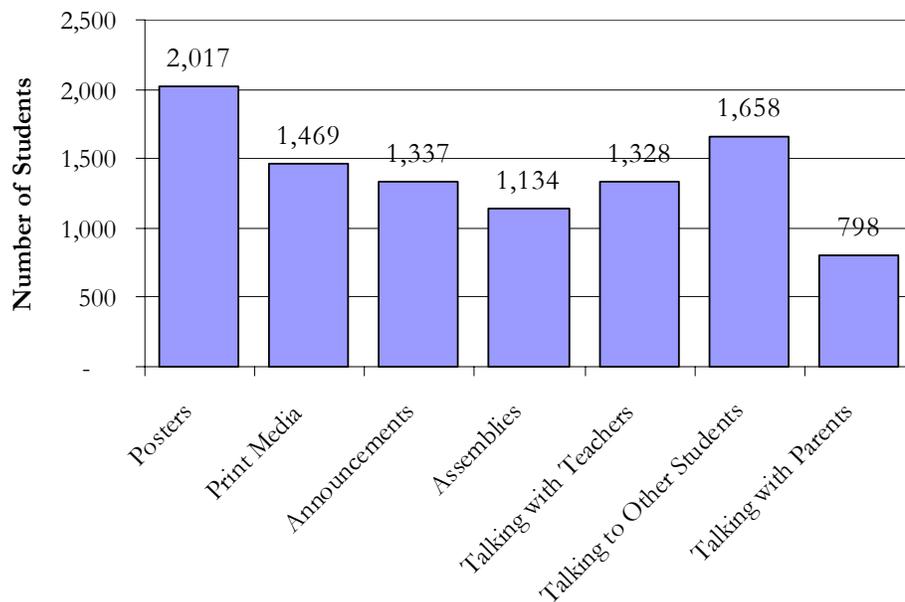


Figure 10. Most Frequent Venue of Student Recall of ATOD Campaign, N=2345

Figures 11 and 12 displays the proportion of students who reported they drank more than a few sips of alcohol in the 30 days prior to completing the post-test survey, and the proportion of students who reported they smoked in the 30 days prior to the survey. When reviewing these figures, please note that schools B, C, E, H and I held either a junior or senior prom prior to administration of the post-test survey, thus possibly inflating reported drinking behaviors beyond what would occur throughout the remainder of the school year. Caution should be exercised in over-generalizing these results.

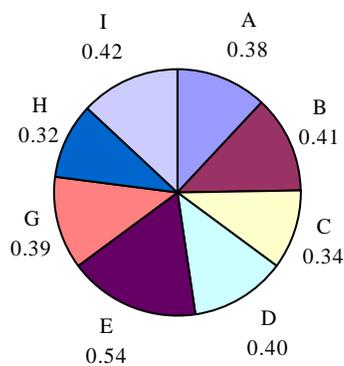


Figure 11. Proportion of Students Reporting Drank Alcohol in last 30 days, by School

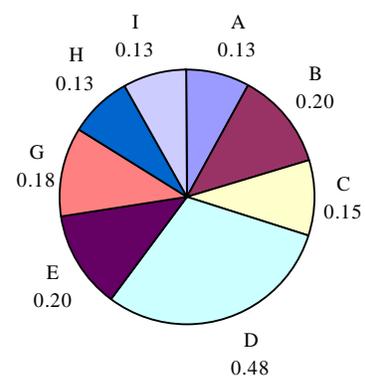


Figure 12. Proportion of Students Reporting Smoked in last 30 days, by School

Referring back to Figure 9, note that most of the high schools report similar exposure rates with one exception – School D. The exposure rate for school D was .61 (compared to the other schools which report campaign exposure rates ranging from .82 to .95). While the rate of drinking for School D appears equivalent to other schools, the rate of smoking for School D is substantially higher than other schools. However, observing the frequency distribution for those that report smoking in the last 30 days (available from the author upon request) we note that there are several issues with these data. First, this school had very few students who completed the post-test (fewer than 50). Second, of these students, approximately 32% reported smoking for 14 or more days in the

last 30. Of the remaining in the sample, 52% did not smoke at all and 16% reported smoking 10 days or fewer. It appears that a few students within this small sample of students have skewed these results. This implies, possibly erroneously, that this school has vastly higher rates of student smoking when compared to the other schools.

Again, akin to the situation found in the middle schools, the issue of level of communication and cooperation between the schools and the CAS Program Coordinators was less than optimal in several of the high schools. In some schools the person responsible for implanting the campaign was easy to contact and work with, while in others, this was not the case. It is possible that this lack of access and communication between CAS and the schools may have hindered the successful implementation of the campaign. Unfortunately, the data required to explore this issues more deeply is unavailable, thus this issue may remain a concern in future campaigns. This data limitation is not solely an issue related to the high school implementation data, but also impacts the assessment of the middle school campaign. As such, this will be addressed more fully in Chapter 5.

Measures

The outcome scales created by Connell et al, (2007a, 2007b) were replicated using the post-test survey data. In addition to these outcome scales, two additional scales were created to (the macro level poverty indicators and the quality of implementation scale) for inclusion in this analysis. Diagnostics were conducted on all scales to confirm reliability. See Table 13 for the Cronbach's alpha for each scale (which range from .57 to .94), as well as the average student response on the scale and the minimum and maximum responses. In addition to these scales, a number of individual and school level descriptive measures were considered for analysis.

Table 14 provides a summary of the sample of respondents who participated in the high school post-test survey. While Connell, et al., (2007b) explored these descriptives at length, I draw

the reader's attention to a few of the individual level measures which may influence the outcomes of this study. Similar to the middle school, the students who completed the post-test have a fairly high grade point average of over 3.0; these are A or B average students. Secondly, there is a fair amount of variability in the substance use behaviors of these students, but overall, the students who completed the survey are not particularly heavy smokers (on average the students smoke fewer than 3 days per month). Finally, while there does appear to be a substantial proportion of the sample reporting alcohol use (39% report having drunk alcohol in the last 30 days), the average frequency of use is less than 2 days per month. (Again, caution should be exercised in interpreting this result due to the number of schools that surveyed students after the prom occurred.)

Finally, Table 15 provides descriptives for the macro/school level measures. These data were obtained from Connell 2007(b)/New Jersey Department of Education and the U.S. Census bureau. A number of the measures were aggregated from the individual post-test survey responses to provide an overall school proportion. While not all variables were included in the final analysis, the reader may find these descriptive of interest in providing an overview of the measures considered.

Mirroring the middle school sample, the macro/school level variables indicate wide variability in the socio-economic and demographic context of the schools participating in the social norms campaigns and of the individual survey respondents. Of particular interest to the reader may be several individual survey items – at the school level, on average, students reported they perceive that 52% of their peers never smoked tobacco, and 35% have never drunk alcohol. However, the range is wide – from a low of 32% to a high of 70% never smoked and from 27% to 46% for perception that fellow students never drank.

Tables 12, 14, and 15 provide a descriptive overview of the samples and the variables considered for this report. However, not all of the variables were included in the regression analysis

for a variety of reasons including multicollinearity and that some variables were not significantly related to the outcomes examined. Further, in regard to reporting the results of the regression analysis, I opted to report and discuss some of the outcomes, rather than all of the outcomes. This happened when the results of the analysis conducted were not particularly interesting (e.g., failed to reach statistical significance) or in those cases where the results of one outcome substantively duplicated a pattern found within other outcomes. This discussion follows

Regression Results

The three questions under consideration in this examination were:

1. Do macro level socio-economic, demographic and school level variables influence measures of the quality and quantity of the implementation of the high school ATOD/substance use social norms campaign?
2. Do macro level socio-economic, demographic and school level variables impact survey outcomes once individual differences of age, race, and grade average are controlled?
3. Does the impact of the macro level variables lessen (or is mediated) when the quality and quantity of campaign implementation are accounted for, while simultaneously controlling for age, race, gender, average grade, and level of student's self-reported exposure to the campaign?

To answer these questions required analysis of four different models for each of the outcomes. This analysis was conducted using the high school data and incorporated the macro poverty scale, quality of implementation scale, and the total number of strategies employed in the social norms campaign. The analysis also incorporated controls for individual differences of age, race (coded 1 for white, 0 for non-white), student's average grade, and how often the student recalled seeing or hearing the campaign survey information (campaign exposure). Gender (coded 1

for male, 0 for female) was included in two of the survey outcomes (perception of no tobacco and no alcohol use by others) however gender was omitted from other models as it never reached statistical significance. The 8 outcome scales analyzed were classroom environment, perceptions of others' tobacco use, perceptions of others' alcohol use, perceptions of others' marijuana use, perceptions of others' illicit drug use, the negative consequences of drinking, and utilization of smoking and drinking resistance skills. The analysis also included four individual items from the survey including self-reported tobacco and alcohol use in the 30 days prior to completing the post test survey and the respondent's perception of no tobacco or alcohol use by others.

The specific variables (correlation matrices are provided in Appendix D) in each of the four models were:

Model 1: Macro Poverty Scale, Quality of Implementation Scale

Model 2: Macro Poverty Scale, Number of Campaign Strategies

Model 3: Macro Poverty Scale, Age, White, Average Grade, *Gender, Survey Outcomes

Model 4: Macro Poverty Scale, Age, White, Average Grade, *Gender, Campaign Exposure, Quality of Implementation Scale, Number of Campaign Strategies, Survey Outcomes

In conducting this analysis, this researcher observed that there were substantial and substantive differences in the results when 437 observations from School C were included. It became clear that this school scores much higher on the macro level poverty indicator scale than the remaining schools (See Figure 13). While the purpose of this analysis was to determine the influence of the macro level poverty indicators on program implementation, the inclusion of this outlier school inhibits our ability to generalize the study findings to other less impoverished schools. Thus, the results provided herein exclude School C, but are available upon request.

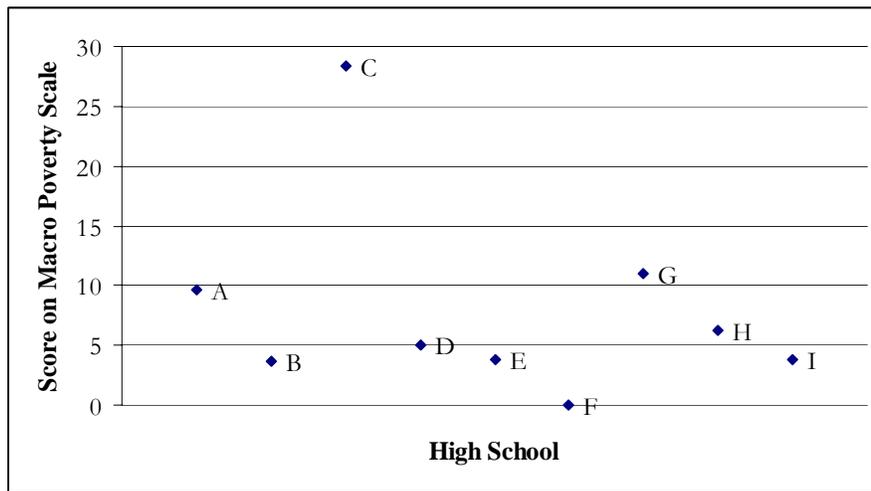


Figure 13. ATOD: Macro Level Poverty Scale, By School

Table 16 provides the results related to the relationships between the macro poverty scale and the quality (Model 1) and quantity of implementation (Model 2). This table indicates that the measures of poverty contained in the macro level poverty scale have a significant relationship with the implementation quality of the ATOD/substance use campaign, but is unrelated to the number of strategies employed in the campaign. The relationship is in the positive direction thus indicating the higher level of poverty, the higher quality of implementation. Again, as noted in the middle school bullying campaign results, while data are not available to assess why this relationship exists, it may be that the schools in higher poverty areas prioritized the social norms campaign in accordance with their perception of the breadth of problems with substance use in their schools. It is also possible, given that the measure of quality in this study was based solely on feedback from the CAS Program Coordinator, that in fact this assessment of quality is inaccurate or incomplete. This issue will be addressed more fully in the final chapter of this report in the recommendations for incorporating additional measures of program implementation in future campaigns.

Figure 14 summarizes the significant findings for Model 3 (detailed in Tables 17 to 20) regression results for selected outcomes for the ATOD campaign, accounting for both the economic context of the school and for individual differences among the student respondents

including their race, gender, age, and grades for the selected outcomes. The outcomes presented and discussed for the high school ATOD campaign are the perceptions of other’s tobacco use, perceptions of others’ alcohol use, utilization of tobacco resistance skills, utilization of alcohol resistance skills, and four individual items of self-reported tobacco and alcohol use and perceptions of peer abstinence from smoking and drinking.

Respondents Report:	School	Respondent			
	Poverty Scale	Age	Race	Gender	School Grades
More Days of Tobacco Use in last 30 days	NS ⁺	Older	NS ⁺	N/A	Lower
More Days of Alcohol Use in last 30 days	NS ⁺	Older	NS ⁺	N/A	Lower
More Utilization of Tobacco Resistance Skills	Lower Poverty	Younger	Non-White	N/A	Higher
More Utilization of Alcohol Resistance Skills	Lower Poverty	Younger	Non-White	N/A	Higher
Higher Perception of Others’ Tobacco Use	Higher Poverty	Older	NS ⁺	N/A	Lower
Higher Perception of Others’ Alcohol Use	Higher Poverty	Older	White	N/A	Lower
Higher Perception of No Tobacco use by others	Lower Poverty	Younger	NS ⁺	NS ⁺	Higher
Higher Perception of No Alcohol use by others	Lower Poverty	Younger	Non-White	NS ⁺	Higher

NS⁺ = Not a significant factor

N/A = Not included in the Model

Figure 14. ATOD Results: Summary of Model 3

Common findings across these outcomes include that age is related to all outcomes. Older students surveyed are more likely to report smoking and drinking in the prior 30 days (Table 17), more likely to perceive that peers smoke and drink (Table 19), and are less likely to think that peers never smoke or drink (Table 20). Older students are also significantly less likely to utilize either

tobacco or alcohol resistance skills (Table 17). Race is a significant factor in a few outcomes – non-white students are more likely to utilize either alcohol or tobacco resistance skills (Table 18), and are significantly less likely to perceive that their peers never drink alcohol (Table 20). White students are more likely to perceive that peers drink more heavily (Table 19). Performing well in school is significantly related across all outcomes – students with higher grades report smoking and drinking less often (Table 17), are more likely to engage in utilization of resistance skills (Table 18), are less likely to perceive that others smoke or drink (Table 19) and are more likely to believe that peers never drink or smoke (Table 20).

Turning to the second question in this study (Model 3) – do the macro level poverty indicators remain significantly related to the outcomes once individual differences are taken into account? The answer for all outcomes except for self-reported drinking and tobacco use is yes; situational context remains relevant even after controlling for age, race, gender and grades. For self-reported alcohol and tobacco use (Table 17), as previously noted above, the predictors of engagement in these behaviors are age and performance – not where the student goes to school.

We add to Model 3 the measures related to the quality and quantity of implementation, as well as level of reported campaign exposure (Model 4 detailed in Tables 17 to 20) to ascertain if these factors still impact survey outcomes. Figure 15 summarizes these results:

Respondents Report:	School	Respondents				Implementation		
	Poverty Scale	Age	Race	Gender	Grades	Campaign Exposure	Campaign Quality	Quantity
More Days of Tobacco Use in last 30 days	NS ⁺	Older	NS ⁺	N/A	Lower	Higher	Higher Quality	Fewer Strategies
More Days of Alcohol Use in last 30 days	Lower Poverty	Older	NS ⁺	N/A	Lower	Higher	Higher Quality	Fewer Strategies

Respondents Report:	School	Respondents				Implementation		
	Poverty Scale	Age	Race	Gender	Grades	Campaign Exposure	Campaign Quality	Quantity
More Utilization of Tobacco Resistance Skills	Lower Poverty	Younger	NS ⁺	N/A	Higher	NS ⁺	Lower Quality	More Strategies
More Utilization of Alcohol Resistance Skills	Lower Poverty	Younger	Non-white	N/A	Higher	NS ⁺	Lower Quality	More Strategies
Higher Perception of Others' Tobacco Use	Higher Poverty	NS ⁺	NS ⁺	N/A	Lower	Higher	Higher Quality	Fewer Strategies
Higher Perception of Others' Alcohol Use	Lower Poverty	Older	NS ⁺	N/A	Lower	Higher	Higher Quality	Fewer Strategies
Higher Perception of No Tobacco use by others	NS ⁺	NS ⁺	NS ⁺	Female	Higher	NS ⁺	Lower Quality	More Strategies
Higher Perception of No Alcohol use by others	Higher Poverty	Younger	Non-White	NS ⁺	Higher	Lower	Lower Quality	NS ⁺

NS⁺ = Not a significant factor

N/A = Not included in the Model

Figure 15. ATOD Results: Summary of Model 4

Looking at the level of campaign exposure and quality of implementation, both are significantly related to an increase in self-reported tobacco and alcohol use (Table 17) as well as increased perceptions of others' tobacco and alcohol use (Table 19). These findings are seemingly contradictory to the stated objectives of the ATOD campaign, however, the number of strategies employed appear to offset the issues of exposure and implementation quality for three of four of these findings. Students attending schools employing more campaign strategies reported reductions in both their own behaviors (drinking alcohol or smoking in the last 30 days) and in their perceptions of peer tobacco use.

Another unexpected finding was that students in schools with higher quality campaigns, but with fewer strategies, reported a significant decline in perceptions by students that their peers smoke, and in those schools with higher quality campaigns, irrespective of the number of strategies, students reported lower perceptions of peers that never drink. One explanation may be that the campaign educated students about perceptions of peer use, but perhaps not in the way expected. While the campaigns are designed to norm perspectives from unrealistically high (“everybody drinks!”) to reality (8 of 10 students NEVER smoke) it may be that the campaign reached those who had previously erroneously believed that no one ever smoked, but they now understand from the campaign that some students do smoke. Finally, the quality of program implementation was also significantly related to utilization of tobacco and alcohol resistance skills – students in schools that employed more strategies utilized more tobacco and drinking resistance skills. However, those students engaged in higher quality campaigns used fewer resistance skills. It could be that students in schools with higher quality campaigns had less need for resistance skills, and for those schools where there were more strategies, there was a consequent increase in the student’s capacity to “resist” peer pressure to smoke or drink without requiring an active engagement of a resistance skill. If this is an issue of question construction or instrument revision, then this is an empirical question, and one worth pursuing if use of such skills is a priority to the program.⁶

We are now ready to approach the final question in this study -- once we take into account measures of the campaign, do the economic circumstances of the schools still impact the survey outcomes; in other words -- does the context still matter? To answer this question we refer back to Model 3 in Tables 17 to 20 and review the outcomes where the macro level poverty scale remained significant once individual differences were controlled, and observe if there is a change in the macro

⁶ Fortunately there are several existing instruments available which have demonstrated reliability which measure this precise construct which could be incorporated into the present survey.

poverty scale in Model 4. Six of the outcomes considered met the criteria -- utilization of tobacco resistance and alcohol resistance skills, perceptions of others' tobacco and others' alcohol use, and perceptions of no tobacco or no alcohol use. In the case of utilization of resistance skills (Table 18), the inclusion of measures of program implementation in the regression, while not completely mediating the impact of the macro level poverty/school situational factors, it appears to partially mediate (or lessen) the effect of school context on student use of tobacco and alcohol resistance schools. Model 4 on Table 19 reveals a similar pattern for perceptions of others' tobacco use -- a partial mediation of the impact of the macro level poverty indicators.

Perceptions of no tobacco use by others provides an example of complete mediation -- students who attend schools with high quality of campaign implementation (and lower number of strategies) are more likely to report a decline in their perception that peers never use tobacco (Table 20). In this case, *where* the program is implemented does not matter; these results are dependent on *how* the campaign is conducted. Finally, the two other outcomes -- perception of other's alcohol use and perception of no alcohol use by others -- have a mediating impact that *reverses* the direction of the relationship between the context of the school and measures of program implementation. Referring to Table 19, perception of alcohol use by others, note that the beta coefficient in Model 3 is positive, indicating that older white students in schools that score higher on the macro poverty scale also have higher perceptions of others' alcohol use. Observe Model 4 and the impact of including the implementation variables -- the coefficient in the macro poverty scale, while still significant, has now reversed direction; in addition, race is no longer significant. This reveals that older students who attend schools with higher poverty indicators where norms campaigns are conducted of higher quality have significantly lower perceptions of alcohol use by others.

The same pattern holds for perception of no alcohol use by others scale. In Model 3, younger non-white students attending schools with fewer poverty indicators were more likely to perceive that their peers never drink alcohol (thus they are less likely to think their peers drink). Adding measures of campaign exposure and quality of campaign (Model 4) flips the direction of this relationship so that younger, non-white students with higher grades who report less exposure to a lower quality campaign conducted in schools where there are higher indicators of poverty are now more likely to perceive that peers never drink.

Finally, related to measure of reported alcohol use in the last 30 days (Table 17), while the macro level poverty indicator scale was no longer significant in Model 3 after controlling for age, race and grades, in Model 4 the poverty scale coefficient became statistically significant AND indicates an increase in magnitude (from -.022 to -.080). This result indicates that older students attending schools with lower poverty indicators, who are exposed to a higher quality campaign with fewer strategies, report a higher frequency of alcohol use than other students. Viewed in the converse, this indicates that younger students with higher grades attending schools in higher poverty areas, with less exposure to a lower quality campaign, but with more strategies report fewer number of days of alcohol use.

In conclusion, the ATOD campaigns that are of quality and/or use multiple strategies can be effective at changing the behaviors and perceptions of high school students. Further, how these campaigns are conducted can mediate the impact of aggregate level socio-economic and school factors in higher poverty areas. This creates a “level playing field” for these students.

Chapter V: Recommendations and Conclusion

Recommendations

Standardized Implementation

Information about the various levels of implementation of the social norms campaigns was gathered from the individual schools involved with the program. Much of this information proved to be helpful and allowed for a detailed description of the types of strategies that both the middle and the high schools used to implement their various approaches to the social norms campaigns. However, the quality and quantity of information about implementation varied considerably between schools, even, as Connell et al., assert “to the point of being unable to determine whether some of the schools followed through with their original marketing plans” (2007a, p.52).

I concur with Connell et al., (2007a) that it is necessary to create campaign implementation standards for the schools because these standards will help ensure that similar information is collected from each school. If data required to assess the implementation are collected periodically and systematically (e.g., monthly or quarterly reports which quantify intervention efforts as well as discuss interim successes and challenges) these data can be used to provide the schools feedback on their progress in meeting their implementation goals. This feedback will give schools an opportunity to revise their implementation approach to enhance the probability of meeting their implementation benchmarks. In short, schools can improve their programs on an on-going basis (e.g., perform a “mid-course” correction) rather than waiting for an end-of-the year assessment to discover where changes are necessary to improve the rigor and reliability of their social norms campaign intervention.

In addition to standardizing data collection from the schools, this evaluation would also benefit from obtaining attitudinal and experiential data from the school faculty, SAC (if applicable)

or other counselor, and school administrators. This information, perhaps through administration of a short survey, could capture many aspects of the program implementation that are currently not collected. For instance, such a survey could provide multiple perspectives on the overall success and effectiveness of the campaign, quantify the level of engagement by school personnel and others involved (e.g., parents, students, community) and provide a means for understanding how varying motives and priorities influenced the structure and focus of the campaign. All told, this additional information could be invaluable to understanding and accounting for differences in implementation in the campaigns. Based on the results contained in this report, implementation influences outcomes and thus should be considered in any evaluation effort.

Revision to Survey Methodology

I also agree with Connell et al., (2007b) as it relates to limitations in the analysis of data and conclusions that can be surmised based on the fact that the survey is anonymous. Lacking any way to link the survey respondents who completed the pre-test survey, to those that also completed the post-test survey, severely limits the researcher's capacity to assess if there were any meaningful change as a result of the intervention. Thus, I strongly concur with Connell et al., in their recommendations that the survey methodology be revised to allow for a confidential survey which employs a unique identification number for each respondent; this will meet the researcher's need to link the respondent's surveys together. The list of the linking identification numbers for each survey respondent can be kept strictly confidential to ensure the privacy of the student's responses. This is a common procedure among researchers and Institutional Review Boards generally approve of this method, provided adequate safeguards are implemented to limit those who have access to the identification number link list. This substantially ameliorates risk to the survey respondent.

While Dr. Connell and I have engaged our best effort to provide information related to the efficacy of these social norms campaigns, without a means to identify respondents from pre- to post-test (or from year to year), there is no reasonable way to assert the intervention has changed the respondent in any meaningful way. Given the effort expended and the cost associated with conducting such a program, this is truly unfortunate. If this procedural change is possible and occurs, I have little doubt that much more knowledge can be gained about the campaigns generally, and about the students to whom the project is intended to positively impact.

Revision of Survey Instruments

Finally, I concur with Connell et al., that revisions to the survey questions are necessary to improve the rigor and reliability of future assessments of the social norms campaigns. The results in both this report and the Connell et al., (2007b) report indicate that the bullying social norms campaign in middle schools, and the ATOD social norms campaign in high schools appear to have an impact on the student's behaviors and perceptions about bullying and ATOD/substance use. However, these findings could be strengthened considerably by including some additional items (e.g., the measures of treatment implementation and exposure as Connell et al., suggests) and with revision of other items that are overly complicated, confusing or fail to accurately capture the question of interest (e.g., understanding which of the behaviors listed on the bullying behavior continuum the respondent considers as bullying).

Another example of possible measurement error as a result of question construction can be found in the questions relating to smoking and drinking (and other like items) in the ATOD survey. The questions ask "how often do you think each in the following category use tobacco". This question has several categories of people for the survey respondent to think about and provide their assessment for each person's frequency of ATOD behaviors. The categories included: "your friends,

students in your grade, males in your grade, females in your grade, high school juniors and seniors, and school athletes. The problem with this question is one of overlap – it is quite likely that in answering the question for the first category (your friends) that the response provided includes some of the males in your grade (who are your friends), females in your grade (who are also your friends), school athletes (several of whom are friends) etc., so that by the end of responding to all of the categories the student has over-estimated the frequency of ATOD behaviors (e.g., friends who were males in your grade, who are athletes were counted 3 times). While not likely to occur with all survey respondents, there is still non-trivial probability that measurement error has occurred. The findings of any study are highly reliant on the quality of the data examined. I believe that while revisions to the questions will require some additional effort, the reward will be well worth the work.

Conclusion

In this study of the implementation of the social norms campaign and consequent impact on outcomes, there are three overall conclusions. First, there were variations among the schools in the implementation of the social norms campaigns. Schools varied in both the number of strategies utilized, in the quality of implementation of those strategies, and varied in who was the primary party responsible for implementing the campaign at the school (e.g., an administrator such as the Principal or Vice Principal, versus the Substance Abuse Counselor, counselor, or a teacher). There were also differences among schools related to the focus of the campaign – some schools targeted students while others focused on the parents. In addition, some campaigns were “structured” (e.g., the school created and implemented a planned campaign, and there was a level of thoroughness to the plan) while other campaigns were non-structured.

Second, the quality and quantity of the campaign implementation had differing impacts on the outcomes – oftentimes in seemingly conflicting, rather than complimentary, ways. Data that

comprehensively captures multiple perspectives on the process, as well as standardized data collection and regular reporting will help to tease out the exact nature of the relationship between quality and quantity of program implementation.

Third, measures of implementation of the social norms campaign mediates, or lessens, the impact of macro-level socio-economic circumstances of the schools on some of the outcomes. This study found that indicators of poverty had a significant impact on the survey outcomes, but in some cases, particularly with the bullying campaign higher quality campaigns lessened the impact of these macro-level factors considerably, and with the ATOD campaign, higher numbers of strategies likewise resulted in more favorable outcomes. Consequently, if the Department of Education chooses to implement social norms campaigns throughout the state of New Jersey, even for those schools with high poverty indicators, a social norms campaign of high quality and/or utilizing multiple strategies could succeed, despite the barriers often associated with higher distressed communities.

Table 1. Macro/School Level Measures and Poverty Indicators

<u>Measure</u>	<u>Variable Description</u>
Macro Level Indicators of Poverty¹	
Median Household Income	(as of 1999) based on zip code
Percent below poverty line	(as of 1999) based on zip code
School Measures²	
Class Size	Average Class Size
School Mobility	Rates of Students Moving In and Out of the School
Individualized Education Program	Percent of Students with an IEP
High School Non-Graduation	Percent of High School Students Failing to Graduate (calculated: 100 minus graduation rate)
Middle School Non-Attendance	Percent of Middle School Students Failing to Attend (calculated: 100 minus attendance rate)
Suspensions	Percent of Students Suspended
Free Lunch	Percent of Students Receiving Free Lunch
Reduced Lunch	Percent of Students Receiving Reduced Lunch
Subsidized Lunch	Percent of Students Receiving Subsidized lunch (calculated: summed percent of those receiving free and reduced lunch)
Race – Percent Black	Percent of students who are African American
Gender – Percent Male	Percent of students who are Male

¹Data obtained from the U.S. Census (2000)

²Data provided by Dr. Connell from New Jersey Department of Education 2005-2006 School Report Cards

Table 2. Implementation Measures by Quantity, Quality, and Type

<u>Measure</u>	<u>Variable Description</u>	<u>Data Source</u>
Quantity – Number of ...		
Strategies Used (of 6)	Range: 3 to 6	School: (Brag Books &/or Marketing Outlines)
Training/Information Sessions	Range: 0 to 4	School: (Brag Books &/or Marketing Outlines)
Steering Committee Meetings	Range: 1 to 9	School: (Brag Books &/or Marketing Outlines)
Contests Held	Range: 0 to 6	School: (Brag Books &/or Marketing Outlines)
Assemblies Held	Range: 0 to 4	School: (Brag Books &/or Marketing Outlines)
SACS per School	Range: 0 to .50	CAS Program Coordinator
Quality		
Enthusiasm	Scale of 1 to 5 Higher values = More enthusiasm	CAS Program Coordinator
Quality of Implementation	Scale of 1 to 5 Higher values = better quality	CAS Program Coordinator
Level of faculty/staff buy-in (Excluding SACs) was sufficient to effectively implement program	Agree/Disagree Scale of 1 to 5 Higher values = Higher agreement	CAS Program Coordinator
Level of SAC buy-in was sufficient to effectively implement program	Agree/Disagree Scale of 1 to 5 Higher values = Higher agreement	CAS Program Coordinator
Level of Community buy-in was important to the success of the program	Agree/Disagree Scale of 1 to 5 Higher values = Higher agreement	CAS Program Coordinator
Type		
School Project Coordinator/Contact	SAC or Counselor; Teacher; or Administrator (Principal or VP)	CAS Program Coordinator
Structured or Non-Structured	Structured – Creating and implementing a plan, thoroughness of plan, involvement of different students	CAS Program Coordinator
Program Focus	Parents or Students	CAS Program Coordinator
Giveaways - Most expensive giveaway or contest prize	Range: 0 to 3: 0 – None; 1 – pens and/or pencils; 2 – book bags and t-shirts; 3 – electronics	School: (Brag Books &/or Marketing Outlines)

Table 3. Bullying Descriptives: Implementation Measures by Quantity, Quality, and Type

	N	Freq.	Range	Mean (SD)
<u>Quantity – Number of</u>				
Strategies Used (of 6)	9		4 to 6	5.22 (.83)
Training/Information Sessions	9		1 to 4	2.78 (1.09)
Steering Committee Meetings	8		2 to 9	4.00 (2.45)
Contests Held	9		1 to 4	2.33 (1.22)
Assemblies Held	9		0 to 6	1.67 (1.93)
SACS Assigned per School	9		0 to 1	.33 (.35)
<u>Quality</u>				
Enthusiasm Overall	9		1 to 5	3.22 (1.79)
Quality of Implementation	9		1 to 5	3.33 (1.41)
Faculty/Staff buy-in was sufficient	9		1 to 5	3.00 (1.66)
SAC buy-in was sufficient	6		0 to 5	3.00 (1.67)
Community Buy-in Important	9		2 to 4	3.00 (.71)
<u>Type</u>				
School Coordinator	8		0 to 1	.66 (.50)
SAC or Other Counselor		6		
Principal or Vice Principal		2		
Campaign Structure	9		0 to 1	.67 (.50)
Structured		6		
Not Structured		3		
Campaign Focus	8		1 to 1	1.00 (.00)
Students		8		
Parents		0		
Giveaways - Most Expensive Type	9		1 to 3	2.44 (.73)
Pens, Pencils		1		
T-Shirts, Book Bags		3		
Electronics, Gift Cards		5		

Table 4. Bullying: Scale Reliabilities

	Items	Alpha	Range	Mean	N
<u>School Scales</u>					
Macro/School Level Poverty Indicator (higher values indicate higher poverty)	7	.87	2.70 to 24.79	8.80	8
Quality of Program Implementation (higher values indicates higher quality)	4	.84	.75 to 4.75	2.78	8
<u>Survey Scales</u>					
School Environment (higher values indicates more positive climate)	9	.76	1 to 4	3.00	2578
Personal Victimization (higher values indicates more victimization)	7	.85	0 to 3	0.62	2597
Self-Reported Bullying Behavior (higher values indicates more bullying behavior)	8	.88	0 to 3	.35	2555
Beliefs about Bullying (higher values indicates more acceptance of bullying behaviors)	4	.86	1 to 4	1.43	2654
Perceptions of Others' Victimization (higher values indicates higher perceptions of peer victimization)	7	.89	0 to 3	1.50	2543
Perceptions of Others' Bullying Behavior (higher values indicates higher perceptions of peer bullying)	8	.93	0 to 3	1.33	2521
Perceptions of Others' Beliefs about Bullying (higher values indicates high perceptions of others' acceptance of bullying behaviors)	4	.85	1 to 4	1.87	2578

Table 5. Bullying Descriptives: Middle School Sample

	N	Freq.	Range	Mean (SD)
Age	2685		9 to 20	12.65 (1.00)
Gender	2682		0 to 1	.48 (.50)
Males		1284		
Females		1398		
Race (White vs Non-White)	2664		0 to 1	.59 (.49)
White		1560		
Black		150		
Hispanic/Latino		233		
Asian		377		
American Indian/Alaskan		59		
Other		285		
Letter Grade Most Often Received	2667		0 to 4	3.37 (.77)
A (4 points)		1376		
B (3 points)		977		
C (2 points)		255		
D (1 point)		45		
F (0 points)		14		
Exposure to Campaign: How Often Saw or Heard Survey information	2616		0 to 6	2.76 (2.01)
Never		489		
Once		316		
Twice		417		
3 to 4 times		490		
5 to 9 times		312		
10 to 19 times		191		
20 or more times		401		
Proportion Exposed to Campaign	2616		0 to 1	.81 (.39)
How safe do you feel at school? (Scale of 1 to 10: 1 = not safe, 10 = very safe)	2755		1 to 10	7.83 (2.14)
Proportion Reporting Victimization Prior 30 days	2633		0 to 1	.76 (.43)
Proportion Self-Reporting Bullying Behaviors Prior 30 days	2451		0 to 1	.60 (.49)

Table 6. Bullying Descriptives: Macro/School Level Measures

	N	Range	Mean (SD)
Macro Level Poverty Indicators			
Median Household Income	9	35,647 to 129,375	75,768 (34,480)
Percent below Poverty Line	9	.50 to 15.7	3.93 (4.54)
School Measures			
Average Cass Size	8	12.9 to 22.5	19.56 (3.23)
School Mobility Rate	8	0 to 19.2	10.10 (7.36)
IEP Rate	8	10.6 to 19.10	14.60 (3.45)
Non-Attendance Rate	8	3.00 to 7.60	4.69 (1.72)
Suspension Rate	8	0 to 20	8.05 (7.14)
Percent Free Lunch	8	.63 to 49.41	15.44 (18.39)
Percent Reduced Lunch	8	.74 to 12.00	4.42 (3.72)
Percent Subsidized Lunch	8	1.37 to 56.37	19.85 (21.62)
Race – Percent Black	8	1.58 to 36.93	9.60 (11.87)
Gender – Percent Male	8	49.68 to 58.15	53.03 (2.67)
Aggregated School Variables			
Proportion Exposed to Campaign	8	.56 to .86	7.83 (.09)
Average Level of Exposure	8	1.22 to 3.24	2.67 (.62)
Average Level “I Feel Safe”	8	5.88 to 8.52	7.55 (.77)
Proportion Reporting Victimization Prior 30 days	8	.69 to .88	.77 (.05)
Proportion Self-Reporting Bullying Behaviors Prior 30 days	8	.50 to .80	.62 (.09)

Table 7. Bullying Results: Macro Poverty Scale on Implementation Quality and Quantity

	(Model 1)	(Model 2)
	Quality of Campaign Scale	Number of Campaign Strategies
Macro Poverty Scale	0.075 (10.35)**	0.002 (0.59)
Constant	2.153 (39.71)**	5.387 (208.18)**
Observations ⁺	2683	2683
R-squared	0.04	0.00

Absolute value of t statistics in parentheses
 **p<.001, * p<.05

⁺Excludes 82 Observations from School F

Table 8. Bullying Results: Classroom Environment and Feeling Safe in School

	(Model 3)	(Model 4)	(Model 3)	(Model 4)
	Classroom Environment	Classroom Environment	Feel Safe in School	Feel Safe in School
Macro Poverty Scale	0.004 (1.23)	0.004 (1.20)	-0.005 (0.33)	0.007 (0.49)
Age	-0.064 (7.40)**	-0.062 (7.08)**	-0.214 (5.30)**	-0.199 (4.92)**
White	0.022 (1.26)	0.042 (2.22)*	0.022 (0.26)	0.214 (2.45)*
Male	-0.063 (3.59)**	-0.066 (3.73)**	-0.119 (1.46)	-0.174 (2.13)*
Letter Grade	0.156 (13.52)**	0.149 (12.43)**	0.577 (10.70)**	0.518 (9.37)**
Campaign Exposure		-0.013 (2.86)**		-0.089 (4.37)**
Quality of Campaign		-0.003 (0.31)		-0.169 (3.63)**
Number of Strategies		0.078 (3.77)**		0.434 (4.57)**
Constant	3.279 (27.32)**	2.891 (17.29)**	8.716 (15.60)**	6.891 (9.00)**
Observations ⁺	2533	2467	2546	2480
R-squared	0.10	0.11	0.06	0.09

Absolute value of t statistics in parentheses

**p<.001, * p<.05

⁺Excludes 82 Observations from School F

Table 9. Bullying Results: Self-Reported Victimization and Bullying

	(Model 3)	(Model 4)	(Model 3)	(Model 4)
	Victim of Bullying	Victim of Bullying	Self-Reported Bullying	Self-Reported Bullying
Macro Poverty Scale	0.005 (1.13)	0.006 (1.19)	-0.004 (1.14)	-0.002 (0.43)
Age	0.023 (1.77)	0.020 (1.49)	0.076 (7.47)**	0.077 (7.61)**
White	-0.065 (2.38)*	-0.093 (3.26)**	-0.069 (3.26)**	-0.073 (3.31)**
Male	0.058 (2.16)*	0.075 (2.80)**	0.044 (2.12)*	0.054 (2.61)**
Letter Grade	-0.147 (8.26)**	-0.147 (8.09)**	-0.147 (10.70)**	-0.145 (10.33)**
Campaign Exposure		0.063 (9.43)**		0.047 (9.09)**
Quality of Campaign		-0.000 (0.01)		-0.033 (2.81)**
Number of Strategies		-0.074 (2.38)*		-0.109 (4.52)**
Constant	0.792 (4.34)**	1.067 (4.29)**	-0.064 (0.46)	0.442 (2.29)*
Observations [†]	2485	2422	2466	2405
R-squared	0.04	0.07	0.08	0.11

Absolute value of t statistics in parentheses
 **p<.001, * p<.05

[†]Excludes 82 Observations from School F

Table 10. Bullying Results: Perception of Others' Victimization and Bullying

	(Model 3)	(Model 4)	(Model 3)	(Model 4)
	Perception of Others' Victimization	Perception of Others' Victimization	Perception of Others' Bullying	Perception of Others' Bullying
Macro Poverty Scale	0.045 (7.70)**	0.054 (9.26)**	0.042 (6.96)**	0.051 (8.39)**
Age	0.093 (5.80)**	0.094 (5.92)**	0.105 (6.24)**	0.103 (6.18)**
White	-0.103 (3.10)**	-0.080 (2.33)*	-0.083 (2.39)*	-0.077 (2.14)*
Male	-0.209 (6.41)**	-0.195 (6.05)**	-0.176 (5.16)**	-0.161 (4.81)**
Letter Grade	-0.142 (6.58)**	-0.147 (6.69)**	-0.178 (7.86)**	-0.177 (7.75)**
Campaign Exposure		0.084 (10.48)**		0.099 (11.91)**
Quality of Campaign		-0.099 (5.40)**		-0.085 (4.46)**
Number of Strategies		-0.143 (3.81)**		-0.206 (5.29)**
Constant	0.642 (2.89)**	1.359 (4.50)**	0.423 (1.81)	1.448 (4.60)**
Observations [†]	2480	2419	2492	2431
R-squared	0.07	0.12	0.07	0.13

Absolute value of t statistics in parentheses

**p<.001, * p<.05

[†]Excludes 82 Observations from School F

Table 11. Bullying Results: Beliefs and Perception of Others' Bullying Beliefs

	(Model 3)	(Model 4)	(Model 3)	(Model 4)
	Self-Reported Beliefs about Bullying	Self-Reported Beliefs about Bullying	Perception of Others' Beliefs about Bullying	Perception of Others' Beliefs about Bullying
Macro Poverty Scale	-0.005 (1.16)	-0.003 (0.79)	0.024 (5.26)**	0.030 (6.30)**
Age	0.086 (7.88)**	0.088 (7.95)**	0.076 (5.88)**	0.080 (6.22)**
White	-0.039 (1.72)	-0.038 (1.58)	-0.042 (1.57)	-0.020 (0.70)
Male	0.134 (6.08)**	0.137 (6.17)**	-0.006 (0.24)	-0.002 (0.06)
Letter Grade	-0.139 (9.53)**	-0.136 (8.98)**	-0.127 (7.31)**	-0.122 (6.83)**
Campaign Exposure		0.021 (3.77)**		0.037 (5.66)**
Quality of Campaign		-0.026 (2.05)*		-0.076 (5.11)**
Number of Strategies		-0.079 (3.05)**		-0.168 (5.51)**
Constant	0.802 (5.32)**	1.200 (5.73)**	1.193 (6.69)**	2.075 (8.42)**
Observations ⁺	2542	2477	2479	2416
R-squared	0.08	0.09	0.05	0.07

Absolute value of t statistics in parentheses

**p<.001, * p<.05

⁺Excludes 82 Observations from School F

Table 12. ATOD Descriptives: Implementation Measures by Quantity, Quality, and Type

	N	Freq.	Range	Mean (SD)
<u>Quantity – Number of</u>				
Strategies Used (of 6)	8		3 to 6	4.50 (1.07)
Training/Information Sessions	8		0 to 4	2.00 (1.41)
Steering Committee Meetings	8		1 to 9	4.13 (2.59)
Contests Held	8		0 to 6	1.75 (1.98)
Assemblies Held	7		0 to 4	1.14 (1.46)
SACS Assigned per School	9		0 to 1	.33 (.35)
<u>Quality</u>				
Enthusiasm Overall	9		1 to 5	3.00 (1.58)
Quality of Implementation	9		1 to 4	2.78 (1.30)
Faculty/Staff buy-in was sufficient	8		1 to 5	3.13 (1.46)
SAC buy-in was sufficient	5		1 to 5	2.80 (1.79)
Community Buy-in Important	8		2 to 5	2.87 (.99)
<u>Type</u>				
School Coordinator	9		0 to 1	.56 (.53)
SAC, Counselor, or Teacher		6		
Principal or Vice Principal(s)		3		
Campaign Structure	9		0 to 1	.44 (.52)
Structured		6		
Not Structured		3		
Campaign Focus	8		1 to 1	.63 (.518)
Students		5		
Parents		3		
Giveaways - Most Expensive Type	8		0 to 3	1.88 (1.25)
No Giveaways Listed		2		
T-Shirts, Book Bags		3		
Electronics, Gift Cards		3		

Table 13. ATOD: Scale Reliabilities

	Items	Alpha	Range	Mean	N
<u>School Scales</u>					
Macro/School Level Poverty Indicator (higher values indicate higher poverty)	7	.94	3.67 to 28.35	8.94	8
Quality of Program Implementation (higher values indicates higher quality)	4	.79	1.25 to 4.75	2.78	8
<u>Survey Scales</u>					
School Environment (higher values indicates more positive climate)	9	.74	1 to 4	2.83	2642
Perceptions of Others' Tobacco Use (higher values indicate more tobacco use)	6	.88	0 to 6	2.92	2627
Perceptions of Others' Alcohol Use (higher values indicate more alcohol use)	6	.90	0 to 6	3.18	2649
Perceptions of Others' Marijuana Use (higher values indicate more marijuana use)	6	.92	0 to 6	2.40	2632
Perceptions of Others' Illicit Drug Use (higher values indicate more illicit drug use)	6	.92	0 to 6	1.43	2651
Negative Consequences of Drinking* (higher values indicate more negative consequences have occurred)	15	.88	0 to 2	.27	1203
Smoking Resistance Skills (higher values indicate more resistance skills utilized)	5	.68	0 to 1	.39	2188
Drinking Resistance Skills (higher values indicate more resistance skills utilized)	6	.57	0 to 1	.30	2203

* Only those who reported they drank alcohol in the prior 12 months

Table 14. ATOD Descriptives: High School Sample

	N	Freq.	Range	Mean (SD)
Age	2752		13 to 21	16.09 (1.25)
Gender	2746		0 to 1	.47 (.50)
Males		1292		
Females		1454		
Race (White vs Non-White)	2674		0 to 1	.63 (.48)
White		1690		
Black		213		
Hispanic/Latino		280		
Asian		331		
American Indian/Alaskan		32		
Other		128		
Average Grade	2651		0 to 4	3.14 (.73)
Exposure to Campaign: How Often Saw or Heard Survey information	2646		0 to 6	3.37 (1.98)
Never		301		
Once		225		
Twice		352		
3 to 4 times		539		
5 to 9 times		369		
10 to 19 times		273		
20 or more times		587		
Proportion Exposed to Campaign	2646		0 to 1	.89 (.32)
Proportion Drank in Last 30 Days	2715		0 to 1	.39 (.49)
Proportion Smoked in Last 30 Days	2713		0 to 1	.16 (.37)
Number of Days Smoked in Last 30 Days	2713		0 to 30	2.17 (6.84)
Number of Days Drank Alcohol in Last 30 Days	2715		0 to 30	1.86 (4.24)
Perception % Students Never Smoke	2683		0 to 100	55.83 (26.95)
Perception % Students Never Drink	2685		0 to 100	37.24 (25.50)

Table 15. ATOD Descriptives: Macro/School Level Measures

	N	Range	Mean (SD)
Macro Level Poverty Indicators			
Median Household Income	9	35,647 to 129,375	81,795 (33,650)
Percent below Poverty Line	9	.50 to 15.7	3.81 (4.58)
School Measures			
Average Cass Size	8	16.2 to 22.4	20.44 (2.48)
School Mobility Rate	8	1.3 to 45.2	12.05 (14.18)
IEP Rate	8	7.7 to 20.50	13.26 (3.88)
Non-Graduation Rate	8	0 to 17.00	4.10 (6.24)
Suspension Rate	8	3.4 to 21.10	9.12 (7.20)
Percent Free Lunch	7	.84 to 37.53	8.67(13.19)
Percent Reduced Lunch	7	.66 to 7.40	2.79 (2.57)
Percent Subsidized Lunch	7	1.50 to 44.93	11.47 (15.57)
Race – Percent Black	7	1.32 to 34.02	9.96 (11.61)
Gender – Percent Male	7	46.19 to 56.44	50.78 (3.14)
Aggregated School Variables			
Proportion Exposed to Campaign	8	.61 to .95	.85 (.11)
Average Level of Exposure	8	3.52 to 4.86	3.91 (.50)
Proportion Drank in Last 30 days	8	.32 to .54	.40 (.06)
Proportion Smoked in Last 30 days	8	.13 to .48	.20 (.18)
Days Smoked in Last 30 Days	8	1.46 to 9.20	2.91 (2.60)
Days Drank Alcohol Last 30 Days	8	1.46 to 2.68	1.95 (.44)
Perception % Students Never Smoke	8	32.29 to 69.75	52.18 (11.77)
Perception % Students Never Drink	8	27.10 to 46.48	34.94 (7.72)

Table 16. ATOD Results: Macro Poverty Scale on Implementation Quality and Quantity

	(Model 1)	(Model 2)
	Quality of Campaign Scale	Number of Campaign Strategies
Macro Poverty Scale	0.209 (42.06)**	-0.008 (1.15)
Constant	0.915 (25.73)**	4.419 (94.05)**
Observations ⁺	2320	2320
R-squared	0.43	0.00

Absolute value of t statistics in parentheses

**p<.001, * p<.05

⁺Excludes 437 Observations from School C

Table 17. ATOD Results: Self-Reported Tobacco and Alcohol Use Last 30 Days

	(Model 3)	(Model 4)	(Model 3)	(Model 4)
	Days Using Tobacco in last 30 days	Days Using Tobacco in last 30 days	Days Using Alcohol in last 30 days	Days Using Alcohol in last 30 days
Macro Poverty Scale	0.074 (1.62)	-0.086 (1.36)	-0.022 (0.74)	-0.080 (1.98)*
Age	0.370 (3.32)**	0.290 (2.56)*	0.297 (4.19)**	0.255 (3.54)**
White	0.403 (1.31)	0.032 (0.10)	0.193 (0.99)	0.004 (0.02)
Average Grade	-2.826 (12.56)**	-2.949 (13.04)**	-0.786 (5.49)**	-0.835 (5.80)**
Campaign Exposure		0.212 (2.89)**		0.146 (3.14)**
Quality of Campaign		0.867 (4.22)**		0.328 (2.51)*
Number of Strategies		-0.621 (3.99)**		-0.247 (2.49)*
Constant	4.652 (2.35)*	7.709 (3.55)**	-0.325 (0.26)	0.860 (0.62)
Observations ⁺	2223	2191	2223	2191
R-squared	0.07	0.09	0.02	0.03

Absolute value of t statistics in parentheses

**p<.001, * p<.05

⁺Excludes 437 Observations from School C

Table 18. ATOD Results: Utilization of Tobacco and Alcohol Resistance Skills

	(Model 3)	(Model 4)	(Model 3)	(Model 4)
	Tobacco Resistance	Tobacco Resistance	Alcohol Resistance	Alcohol Resistance
Macro Poverty Scale	-0.043 (17.16)**	-0.031 (10.09)**	-0.033 (16.73)**	-0.025 (10.17)**
Age	-0.022 (4.10)**	-0.015 (2.78)**	-0.025 (5.74)**	-0.019 (4.38)**
White	-0.041 (2.78)**	-0.019 (1.31)	-0.048 (4.14)**	-0.037 (3.16)**
Average Grade	0.099 (8.99)**	0.105 (9.76)**	0.074 (8.41)**	0.078 (9.02)**
Campaign Exposure		-0.005 (1.39)		-0.003 (0.98)
Quality of Campaign		-0.066 (7.13)**		-0.048 (6.54)**
Number of Strategies		0.041 (5.80)**		0.019 (3.45)**
Constant	0.712 (7.39)**	0.466 (4.53)**	0.687 (9.03)**	0.550 (6.73)**
Observations ⁺	1992	1960	1988	1956
R-squared	0.19	0.22	0.19	0.22

Absolute value of t statistics in parentheses

**p<.001, * p<.05

⁺Excludes 437 Observations from School C

Table 19. ATOD Results: Perception of Tobacco and Alcohol Use

	(Model 3)	(Model 4)	(Model 3)	(Model 4)
	Perception of Others' Tobacco Use	Perception of Others' Tobacco Use	Perception of Others' Alcohol Use	Perception of Others' Alcohol Use
Macro Poverty Scale	0.116 (11.69)**	0.027 (2.02)*	0.023 (2.74)**	-0.029 (2.59)**
Age	0.052 (2.14)*	0.011 (0.44)	0.083 (4.12)**	0.055 (2.73)**
White	0.021 (0.32)	-0.114 (1.72)	0.200 (3.59)**	0.085 (1.53)
Average Grade	-0.522 (10.70)**	-0.547 (11.48)**	-0.276 (6.77)**	-0.285 (7.12)**
Campaign Exposure		0.076 (4.91)**		0.098 (7.55)**
Quality of Campaign		0.451 (10.43)**		0.283 (7.80)**
Number of Strategies		-0.075 (2.28)*		-0.013 (0.47)
Constant	2.918 (6.80)**	3.380 (7.39)**	2.435 (6.79)**	2.418 (6.29)**
Observations ⁺	2220	2188	2217	2186
R-squared	0.11	0.17	0.04	0.09

Absolute value of t statistics in parentheses

**p<.001, * p<.05

⁺Excludes 437 Observations from School C

Table 20. ATOD Results: Perception of No Tobacco or Alcohol Use by Others

	(Model 3)	(Model 4)	(Model 3)	(Model 4)
	Perception of No Tobacco Use by Others	Perception of No Tobacco Use by Others	Perception of No Alcohol Use by Others	Perception of No Alcohol Use by Others
Macro Poverty Scale	-1.917 (10.69)**	-0.108 (0.45)	-1.028 (5.80)**	0.648 (2.73)**
Age	-1.353 (3.10)**	-0.594 (1.38)	-1.691 (3.92)**	-1.001 (2.36)*
White	-1.427 (1.19)	0.321 (0.27)	-5.824 (4.92)**	-3.554 (3.03)**
Average Grade	5.352 (6.09)**	5.773 (6.70)**	3.511 (4.04)**	3.778 (4.47)**
Male	-2.107 (1.95)	-2.411 (2.28)*	-0.723 (0.68)	-1.053 (1.01)
Campaign Exposure		-0.311 (1.11)		-1.531 (5.59)**
Quality of Campaign		-8.658 (11.10)**		-8.408 (10.98)**
Number of Strategies		1.333 (2.26)*		-0.051 (0.09)
Constant	76.317 (9.84)**	64.822 (7.83)**	64.621 (8.43)**	64.899 (7.99)**
Observations [†]	2195	2163	2197	2165
R-squared	0.07	0.13	0.04	0.11

Absolute value of t statistics in parentheses

**p<.001, * p<.05

[†]Excludes 437 Observations from School C

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Appendix A: Middle School Social Norms Campaign Implementation Table

School	Training/ Info Sessions	Steering Comm.	Poster / Giveaway	Games	Contest	Assemblies	Other (Describe)
MS-A	2	4	Poster – starting Feb; Giveaways: 500 each Pens, Pencils, Magnet picture frames and Bags/ Backpacks	On-going Feb to June; Trivia games	1: Poster Contest	1	1) Student planning & marketing Committee; 2) Educational Social Norms day with booth and give-away; students asking questions of entire student body and peer discussions; 3) Some teachers incorporated social norm slogans in lesson plans; 4) Announce slogans over loud speaker
MS-B*	2 (faculty meeting & district)	Mostly completed via email	4 – Poster of winning t-shirt design made into banner/ Giveaway – Gift cards for top 3 t-shirt submissions; small treats; bracelets in March and April	0	2- T-Shirt Contest and social norms quiz Contest (Game?); “Top Ten” Poster Contest	2	1) Student Workshop 2) Newsletters – Nov and March 3) Speakers – Feb 07 survey result review 4) TV Commercial – March 07 5) Skits
MS-C	3 (2 regional, 1 independent)	Y – Monthly started June 06	Posters – Sept to June; Giveaways – 350 T-shirts; 2 Ipods, 2 flat screen, 2 TVs; 1 thesaurus;; 2 stereo; 2 walkie-talkie; 2 digital camera; 2 DSLite; 2 Portable DVD players; 4 tickets to Land of Make Believe; 4 tickets to Skate Park; Dinner for 4 at: Baca, Mamma’s and Frank’s Trattoria; 4 ticket pack AMC movies	Monthly Sept to June – word search and scrambles in Character Education Class	2 Poster contests; 3 Pizza Parties and 1 Ice Cream Party for homeroom with most perfect scores on social norm quiz	6 –Pep Rally; Balloon contest; Football Toss	1) Slide Shows – 4 – Undated (Sept?), December, February, and May – <i>Done at assemblies?</i>
MS-D	1	2	40 posters posted in bldg Dec 06; Other giveaways of a camera and TV; 120 T-shirts	Nov – word puzzle at lunch	Poster contest – winners awarded at TV show	3 – Feb, March and April	1) 2/22/07 T-shirts given out at basketball game 2) Pirate players stats in plays (6th & 8 th grade) 3) MTV or other assembly (7)

School	Training/ Info Sessions	Steering Comm.	Poster / Giveaway	Games	Contest	Assemblies	Other (Describe)
MS-E**	4 – (2 regional, 2 independent)	3	Twice posted new poster; Bracelets, pens, “Bully Free” classroom signs, bookmarks	Two Hidden message puzzles – April 07	Attendance contest (Jan-Feb); essay contest; “who says there are no free lunches?” contest (Jan to Feb)		1) Presentations in health class to explain survey and results and market contests
MS-F**	3 (2 regional, 1 independent)	4	Put up in January / Giveaways T-Shirts to those who complete survey	?? as needed in homeroom	Weekly in January in Café w/prizes	1 (Feb)	
MS-G	4 – (2 regional, 2 independent)	6 - Dec to May	Poster – January; Giveaways – pens, balloons, other small prizes	?? As needed for use during extra class time, prize is class extra credit	Flyer contest – prize gift card and posting winning flyers in school; 4 activities – 3 in March - Football toss, prize PSP, Football, Gift Card) Shamrock, Prize CD player, gift card) make own sundae (Stuffed bunny, gift cards and jellybeans) and 1 April – Basketball 3 point shoot (prize PSP w/NFL game; CD player; Basketballs	TBD	
MS-H	2	2 – Quarterly Sept to Dec 2006	Poster – 4 sets over winter; Giveaways – 1000 magnets; 100 highlighter pens; 100 JR Funk Pens, 125 Frisbees, 100 rope watch band, 200 memo board, 1000 pencils; 50 tote bags, 15 t-shirts	4 - Wacky Wednesdays including football toss	4 - Part of Wacky Wed” prizes with messages		1) Poster messages also on Message board and website 2) Power point Channel 19 3) Newsletter to parents Feb
MS-I**	4 – (2 regional, 2 independent)	2	Posters Nov and Dec; Gift card give- away	Always avail for use during extra class time, prize is class extra credit	3 – Fridays in Nov/Dec – cafeteria before dismissed – prize \$5 Border’s Gift card to those with ID cards	2 – Nov 1 – Pizza gift certificates for those who knew stats and Dec – gave t-shirts to participants.	1) Dec marched as group in X-mas parade wearing t-shirts and singing “its no joke, we don’t smoke” and hand out candy canes

*Based on Brag Book – UTL Marketing Outline for Middle School Program

**Based on Marketing Outline – UTL brag book materials for Middle School Program

Appendix B: Correlation Matrix of Variables in Bullying Regression Models

Correlations

		Macro level Variables Scale	Age	White vs other	Letter grade most often received	Gender	How often saw or heard survey info about what most students do and think about bullying	Quality of Implementation Scale	Total Number of Strategies Used of 6
Macro level Variables Scale	Pearson Correlation	1	.096	-.087	-.080	-.033	-.012	-.092	-.313
	Sig. (2-tailed)	.	.000	.000	.000	.089	.531	.000	.000
	N	2765	2685	2664	2667	2682	2616	2765	2765
Age	Pearson Correlation	.096	1	.101	-.062	.012	.021	.099	-.096
	Sig. (2-tailed)	.000	.	.000	.001	.518	.277	.000	.000
	N	2685	2685	2661	2662	2678	2610	2685	2685
White vs other	Pearson Correlation	-.087	.101	1	.040	-.007	.089	.341	-.037
	Sig. (2-tailed)	.000	.000	.	.039	.704	.000	.000	.057
	N	2664	2661	2664	2642	2659	2594	2664	2664
Letter grade most often received	Pearson Correlation	-.080	-.062	.040	1	-.118	.079	-.050	.205
	Sig. (2-tailed)	.000	.001	.039	.	.000	.000	.010	.000
	N	2667	2662	2642	2667	2659	2595	2667	2667
Gender	Pearson Correlation	-.033	.012	-.007	-.118	1	-.057	-.021	-.006
	Sig. (2-tailed)	.089	.518	.704	.000	.	.004	.269	.752
	N	2682	2678	2659	2659	2682	2609	2682	2682
How often saw or heard survey info about what most students do and think about bullying	Pearson Correlation	-.012	.021	.089	.079	-.057	1	.042	.016
	Sig. (2-tailed)	.531	.277	.000	.000	.004	.	.030	.426
	N	2616	2610	2594	2595	2609	2616	2616	2616
Quality of Implementation Scale	Pearson Correlation	-.092	.099	.341	-.050	-.021	.042	1	-.274
	Sig. (2-tailed)	.000	.000	.000	.010	.269	.030	.	.000
	N	2765	2685	2664	2667	2682	2616	2765	2765
Total Number of Strategies Used of 6	Pearson Correlation	-.313	-.096	-.037	.205	-.006	.016	-.274	1
	Sig. (2-tailed)	.000	.000	.057	.000	.752	.426	.000	.
	N	2765	2685	2664	2667	2682	2616	2765	2765

Correlations

		Classroom Environment Scale	SR Bullying Scale	Victimization Scale	Beliefs about Bullying Scale (higher val = view bx acceptable)	perceptions of others bullying	perceptions of others victimization	Perception Others beliefs (high val = others view bx more acceptable)	How safe you feel at school
Classroom Environment Scale	Pearson Correlation	1	-.307	-.441	-.363	-.284	-.228	-.389	.557
	Sig. (2-tailed)	.	.000	.000	.000	.000	.000	.000	.000
	N	2740	2613	2660	2672	2643	2659	2602	2734
SR Bullying Scale	Pearson Correlation	-.307	1	.495	.504	.440	.373	.310	-.313
	Sig. (2-tailed)	.000	.	.000	.000	.000	.000	.000	.000
	N	2613	2633	2602	2600	2599	2580	2545	2627
Victimization Scale	Pearson Correlation	-.441	.495	1	.206	.412	.409	.291	-.488
	Sig. (2-tailed)	.000	.000	.	.000	.000	.000	.000	.000
	N	2660	2602	2680	2618	2603	2626	2559	2677
Beliefs about Bullying Scale (higher val = view bx acceptable)	Pearson Correlation	-.363	.504	.206	1	.230	.193	.551	-.279
	Sig. (2-tailed)	.000	.000	.000	.	.000	.000	.000	.000
	N	2672	2600	2618	2695	2626	2611	2621	2688
perceptions of others bullying	Pearson Correlation	-.284	.440	.412	.230	1	.786	.451	-.294
	Sig. (2-tailed)	.000	.000	.000	.000	.	.000	.000	.000
	N	2643	2599	2603	2626	2659	2616	2575	2655
perceptions of others victimization	Pearson Correlation	-.228	.373	.409	.193	.786	1	.376	-.255
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.	.000	.000
	N	2659	2580	2626	2611	2616	2675	2562	2672
Perception Others beliefs (high val = others view bx more acceptable)	Pearson Correlation	-.389	.310	.291	.551	.451	.376	1	-.325
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.	.000
	N	2602	2545	2559	2621	2575	2562	2623	2618
How safe you feel at school	Pearson Correlation	.557	-.313	-.488	-.279	-.294	-.255	-.325	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.
	N	2734	2627	2677	2688	2655	2672	2618	2755

Appendix C: High School Social Norms Campaign Implementation Table

School	Training/ Information Sessions	Steering Committee Meetings	Poster / Giveaway	Games	Contest	Assemblies	Other (Describe)
A	2	4	Giveaways: 500 each Pens, Pencils, Magnet picture frames and 747 Backpacks	On-going Feb to June; Trivia games	1: Poster Contest	1	1) Student planning & marketing Committee; 2) Educational Social Norms day with booth and give-away; students asking questions of entire student body and peer discussions; 3) Some teachers incorporated social norm slogans in lesson plans; 4) Announce slogans over loud speaker
B**	2 – regional and local	Monthly with various groups	Poster Feb – 7 to 10 day rotation per message with varied media including flyers, classroom/hallway boards, message board, TV, computer screensavers	Feb to June Bi-Weekly; TBD Student Comm	Whenever possible - will start after 4+ messages disseminated at lunches, pep rallies and other events	TBD - Social norms specific assemblies not yet considered	1) Student Marketing Committee; 2) Focus is on faculty, parent and community training re: social norms project – desire to ensure that there are core groups which share the language of social norms and can act as key communicators with others. Outreach includes public forums at district level and publishing articles written by district’s public information officer.
C	4 - Regional when avail; 3 independent	2	Poster – Feb/ 1000 Pens (500 pull cap, 250 grip gel, 250 Executive Javalina); 1000 Pencils; 250 Book covers; 288 T-shirts; 300 Lanyards	Feb duration – will involve clubs to plan and run games	Feb duration of campaign during girls and boys basketball games	4 - Class meetings in Auditorium to explain results and messages and get community involvement	
D	4 – (2 regional, 2 independent)	6 (Dec to May)	Poster – January; Giveaways – pens, balloons, other small prizes	?? As needed for use during extra class time,	Flyer contest – prize gift card and posting winning flyers in school and 4 activities – 3 in March (football toss, prize PSP,	TBD	

School	Training/ Information Sessions	Steering Committee Meetings	Poster / Giveaway	Games	Contest	Assemblies	Other (Describe)
				prize is class extra credit	Football, Gift Card) Shamrock, Prize CD player, gift card) make own sundae (Stuffed bunny, gift cards and jelly beans) and 1 April – Basketball 3 point shoot (prize PSP w/NFL game; CD player; Basketballs		
E	1	5 (Jan and Feb)	Poster – 4 – Jan, Feb, March, May; Giveaways – T Shirts work	5 – Feb through June	Feb, March, May - 2 per month – focus on outcomes from survey	1 – June – Exit with Pride Assembly –	1) Social Norms video 2) Use of social norm messages on placemats 3) Publish a Parent Network Handbook to encourage parents to communicate re: activities of their children. Invited to conduct a series of parent programs on underage drinking. 4) had series of articles in school paper and the local paper.
F+							
G**	2/month Dec	2/month Dec and Jan	Waiting for posters	TBD - 1 or 2 a month Jan to June	TBD	2 – Winter and Spring Pep rally	
H*		1	Posters Feb; Giveaways: 510 T- shirts; Quia Subscription and Gift cards	Hall table with prizes	3 T-Shirt Design; Quia quiz – prizes Best Buy gift cards and flyer design contest; Top 10 reasons HSN is best		1) Newsletter in Nov e-guidance
I	1 (Oct) and as directed	2 Dec, as needed Jan – June	40 Posters distributed thru bldg in Jan; Giveaways: 564 T-shirts; 2 \$100 Visa cards for those who participated in the survey	4 – word scramble, anagram, scavenger hunt 1 st giveaway Jan; 2 nd Feb.	Poster contest - Feb and June with 2 major giveaways – drawings of those who solved puzzles, submitted games, puzzles	N/A – School under construction	

*Based on Brag Book – UTL Marketing Outline for High School Program

**Based on Marketing Outline – UTL brag book materials for High School Program

+ No Information to complete chart – UTL brag book or Marketing outline

Appendix D: Correlation Matrix of Variables in ATOD Regression Models

Correlations

		Macro level Variables Scale	Age	White	Grade average	Gender	How Often Students Saw or Heard Survey Information about ATOD Use	Quality of Implementation Scale	Total Number of Strategies Used of 6
Macro level Variables Scale	Pearson Correlation	1	.061	-.363	-.408	-.031	-.096	.479	-.150
	Sig. (2-tailed)	.	.001	.000	.000	.108	.000	.000	.000
	N	2757	2752	2674	2651	2746	2646	2757	2757
Age	Pearson Correlation	.061	1	.023	-.023	.036	.026	.099	-.016
	Sig. (2-tailed)	.001	.	.238	.229	.062	.177	.000	.416
	N	2752	2752	2669	2646	2742	2641	2752	2752
White	Pearson Correlation	-.363	.023	1	.190	-.019	.159	-.013	-.016
	Sig. (2-tailed)	.000	.238	.	.000	.332	.000	.511	.406
	N	2674	2669	2674	2640	2663	2636	2674	2674
Grade average	Pearson Correlation	-.408	-.023	.190	1	.001	.040	-.153	.002
	Sig. (2-tailed)	.000	.229	.000	.	.953	.039	.000	.924
	N	2651	2646	2640	2651	2640	2617	2651	2651
Gender	Pearson Correlation	-.031	.036	-.019	.001	1	.023	-.057	-.005
	Sig. (2-tailed)	.108	.062	.332	.953	.	.232	.003	.808
	N	2746	2742	2663	2640	2746	2635	2746	2746
How Often Students Saw or Heard Survey Information about ATOD Use	Pearson Correlation	-.096	.026	.159	.040	.023	1	-.064	-.113
	Sig. (2-tailed)	.000	.177	.000	.039	.232	.	.001	.000
	N	2646	2641	2636	2617	2635	2646	2646	2646
Quality of Implementation Scale	Pearson Correlation	.479	.099	-.013	-.153	-.057	-.064	1	.171
	Sig. (2-tailed)	.000	.000	.511	.000	.003	.001	.	.000
	N	2757	2752	2674	2651	2746	2646	2757	2757
Total Number of Strategies Used of 6	Pearson Correlation	-.150	-.016	-.016	.002	-.005	-.113	.171	1
	Sig. (2-tailed)	.000	.416	.406	.924	.808	.000	.000	.
	N	2757	2752	2674	2651	2746	2646	2757	2757

Correlations

		Classroom Environment Scale	Perception of Tobacco Use Scale	Perception of Alcohol Use Scale	Perception of Marijuana Use Scale	Perception of Illicit Use Scale	Negative Consequences of Drinking Scale	Smoking Resistance Scale	Drinking Resistance Scale	Self: Days using tobacco in past 30 days	Self: Days using alcohol (other than few sips at family or religious occasion) in past 30 days	Perception: % in grade NO tobacco use	Perception: % in grade NO alcohol use
Classroom Environment Scale	Pearson Correlation Sig. (2-tailed) N	1 .000 2739	-.218 .000 2699	-.138 .000 2693	-.223 .000 2686	-.209 .000 2686	-.072 .000 2628	.119 .000 2468	.100 .000 2464	-.185 .000 2698	-.099 .000 2699	.202 .000 2669	.143 .000 2672
Perception of Tobacco Use Scale	Pearson Correlation Sig. (2-tailed) N	-.218 .000 2699	1 .000 2710	.651 .000 2701	.710 .000 2690	.529 .000 2691	.289 .000 2627	-.318 .000 2466	-.302 .000 2462	.321 .000 2700	.265 .000 2700	-.501 .000 2671	-.399 .000 2674
Perception of Alcohol Use Scale	Pearson Correlation Sig. (2-tailed) N	-.138 .000 2693	.651 .000 2701	1 .000 2704	.659 .000 2687	.471 .000 2689	.352 .000 2624	-.253 .000 2460	-.291 .000 2456	.226 .000 2695	.335 .000 2695	-.373 .000 2667	-.482 .000 2670
Perception of Marijuana Use Scale	Pearson Correlation Sig. (2-tailed) N	-.223 .000 2686	.710 .000 2690	.659 .000 2687	1 .000 2696	.604 .000 2682	.333 .000 2615	-.315 .000 2458	-.305 .000 2453	.338 .000 2687	.347 .000 2687	-.450 .000 2659	-.424 .000 2662
Perception of Illicit Use Scale	Pearson Correlation Sig. (2-tailed) N	-.209 .000 2686	.529 .000 2691	.471 .000 2689	.604 .000 2682	1 .000 2696	.141 .000 2618	-.150 .000 2454	-.147 .000 2451	.203 .000 2687	.249 .000 2687	-.382 .000 2660	-.306 .000 2663
Negative Consequences of Drinking Scale	Pearson Correlation Sig. (2-tailed) N	-.072 .000 2628	.289 .000 2627	.352 .000 2624	.333 .000 2615	.141 .000 2618	1 .000 2639	-.436 .000 2400	-.480 .000 2398	.306 .000 2630	.466 .000 2630	-.182 .000 2599	-.273 .000 2602
Smoking Resistance Scale	Pearson Correlation Sig. (2-tailed) N	.119 .000 2468	-.318 .000 2466	-.253 .000 2460	-.315 .000 2458	-.150 .000 2454	-.436 .000 2400	1 .000 2484	.738 .000 2436	-.250 .000 2469	-.223 .000 2471	.215 .000 2443	.229 .000 2445
Drinking Resistance Scale	Pearson Correlation Sig. (2-tailed) N	.100 .000 2464	-.302 .000 2462	-.291 .000 2456	-.305 .000 2453	-.147 .000 2451	-.480 .000 2398	.738 .000 2436	1 .000 2480	-.204 .000 2465	-.226 .000 2467	.213 .000 2439	.262 .000 2441
Self: Days using tobacco in past 30 days	Pearson Correlation Sig. (2-tailed) N	-.185 .000 2698	.321 .000 2700	.226 .000 2695	.338 .000 2687	.203 .000 2687	.306 .000 2630	-.250 .000 2469	-.204 .000 2465	1 .000 2713	.476 .000 2711	-.198 .000 2672	-.182 .000 2675
Self: Days using alcohol (other than few sips at family or religious occasion) in past 30 days	Pearson Correlation Sig. (2-tailed) N	-.099 .000 2699	.265 .000 2700	.335 .000 2695	.347 .000 2687	.249 .000 2687	.466 .000 2630	-.223 .000 2471	-.226 .000 2467	.476 .000 2711	1 .000 2715	-.210 .000 2674	-.227 .000 2676
Perception: % in grade NO tobacco use	Pearson Correlation Sig. (2-tailed) N	.202 .000 2669	-.501 .000 2671	-.373 .000 2667	-.450 .000 2659	-.382 .000 2660	-.182 .000 2599	.215 .000 2443	.213 .000 2439	-.198 .000 2672	-.210 .000 2674	1 .000 2683	.692 .000 2682
Perception: % in grade NO alcohol use	Pearson Correlation Sig. (2-tailed) N	.143 .000 2672	-.399 .000 2674	-.482 .000 2670	-.424 .000 2662	-.306 .000 2663	-.273 .000 2602	.229 .000 2445	.262 .000 2441	-.182 .000 2675	-.227 .000 2676	.692 .000 2682	1 .000 2685