

Building Healthy Teen Relationships

An Evaluation of the Fourth R Curriculum with Middle
School Students in the Bronx

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Abstract

National estimates indicate that anywhere from one in ten to one in five adolescents experience physical dating violence and an even greater number experience verbal or psychological abuse. *The Fourth R: Strategies for Healthy Youth Relationships* is a dating violence prevention curriculum, previously shown to reduce physical dating violence among Canadian ninth-grade students. Utilizing a randomized controlled trial design, this study tests the effectiveness of the Fourth R curriculum with a younger, diverse, urban population in the Bronx, New York. A secondary quasi-experimental study seeks to examine whether the Fourth R had any school-wide benefits *across* the experimental schools, reaching even those students who did not directly receive the curriculum. We hypothesized that students who were exposed to the Fourth R would show improvements in the following primary and secondary target attitudes and behaviors: teen dating violence, sexual harassment/assault, peer violence/bullying, sexual activity, drug and alcohol use, perceptions of school safety, acceptance of gender stereotypes and pro-violence beliefs, and pro-social responses to violence.

Methods

Incoming seventh-grade students in ten Bronx middle schools were assigned to class sections, which were then randomly assigned to receive either the Fourth R or a standard seventh-grade curriculum during the 2011-2012 academic year. Surveys were administered to students at three points: prior to program implementation (B), at the conclusion of the program year (T1), and at the conclusion of the subsequent school year (T2). A total of 570 students were available for main program impact analyses at T1, and 517 students were available for T2 analyses. The surveys were supplemented with a dosage measure of the Fourth R curriculum in each experimental school as well as with qualitative interviews with program participants and administrators.

Results

Consistent with previous literature, just over half of the students (57%) were already dating and fewer than one in ten students (8%) were sexually active at baseline. Nearly one-fifth of students reported experiencing dating violence (20%) or physical sexual harassment/assault (20%) or perpetrating sexual harassment/assault (21%) against peers; twice as many students (41%) reported having been the victim of any sexual harassment/assault. The majority of students reported having experienced physical peer violence and/or emotional/psychological forms of bullying as either a perpetrator (56%) or victim (68%). Incidence of physical dating violence was lower (8%). A minority of students (14%) reported recent drug or alcohol use.

In terms of overall program effects, the results generally show little impact of the Fourth R curriculum on primary or secondary target behaviors. The program did not generally reduce dating violence, peer violence/bullying, or drug and alcohol use among the experimental sample. Students exposed to the Fourth R were more likely than control students to delay sexual activity;

and students who received *more* of the curriculum experienced even greater delays. Students who received *more* of the curriculum also perpetrated less bullying and saw greater attitudinal changes than students who received lower dosages of the curriculum. The Fourth R was also found to reduce dating violence among those *high-risk* students who had already experienced or perpetrated dating violence at baseline.

Conclusion

This study demonstrates modest impacts of the Fourth R curriculum among an urban middle school target population in the Bronx, New York. The findings suggest that dosage and program delivery matter. In schools with higher fidelity to the program model, the Fourth R produced delays in sexual activity, decreased peer violence/bullying perpetration, and reduced acceptance of pro-violence beliefs and gender stereotypes. High risk students were especially likely to experience program benefits at follow-up.

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Table of Contents

| | |
|--|-------------|
| Abstract | i |
| Acknowledgements | iii |
| Executive Summary | viii |
| Chapter 1. Introduction | 1 |
| Adolescent Dating Violence: Prevalence, Characteristics, & Associated Risks | 1 |
| Dating Violence Prevention Efforts | 3 |
| Need for Further Study & Genesis of the Current Study | 5 |
| Study Goals and Objectives | 6 |
| Organization of the Report | 6 |
| Chapter 2. Research Design and Methodology | 8 |
| Setting | 8 |
| Randomization Protocols | 12 |
| Survey Design and Implementation | 14 |
| Process Evaluation and Fidelity Analysis | 19 |
| Data and Measures | 23 |
| Analytic Plan | 31 |
| Chapter 3. Planning of the Model | 33 |
| The Fourth R Curriculum | 33 |
| Start Strong Bronx | 34 |
| Choosing a Curriculum | 35 |
| Recruiting Schools | 38 |
| Teacher Training | 38 |
| Program Costs | 40 |
| Chapter Summary | 40 |
| Chapter 4. Implementation, Fidelity, and Participant Feedback | 43 |
| Implementation Fidelity | 43 |
| Additional Formal Feedback from Teachers | 44 |
| Student Feedback | 45 |
| Chapter Summary | 50 |
| Chapter 5. Baseline Prevalence Estimates for Victimization & Perpetration | 52 |
| Demographic Background | 52 |
| Baseline Dating and Sexual Activity | 52 |
| Dating Violence and Sexual Harassment/Assault | 52 |
| Peer Violence and Bullying | 56 |
| Drug and Alcohol Use | 56 |
| School Safety | 56 |
| Positive Attitudes/Beliefs | 56 |

| | |
|---|-----------|
| Pro-Social Behaviors | 57 |
| Previous Program Exposure | 57 |
| Chapter Summary | 57 |
| Chapter 6. Impact of the Fourth R | 58 |
| Brief Review of the Analytic Plan | 58 |
| Relationship among Target Attitudes and Behaviors | 62 |
| Main Program Impacts | 62 |
| Impact on Select Subgroups | 62 |
| Multivariate Results: Individual- and School-Level Predictors | 66 |
| Chapter Summary | 69 |
| Chapter 7. Diffusion Effects of the Fourth R | 71 |
| Differences between the Experimental Control Sample and Comparison Sample | 71 |
| Diffusion Effect on Fourth R Outcomes | 75 |
| Chapter Summary | 75 |
| Chapter 8. Conclusion | 79 |
| Discussion of Major Findings | 79 |
| Study Limitations | 83 |
| Implications for Future Implementation and Research | 84 |
| References | 86 |
| Appendix A. Baseline Differences between Treatment & Control Samples | 91 |
| Appendix B. Parental Information Packet & Dissent | 93 |
| Appendix C. Student Assent to Participate in Survey Research | 97 |
| Appendix D. Baseline Survey Instrument | 99 |
| Appendix E. Survey Implementation by School | 111 |
| Appendix F. Baseline Demographics and Other Characteristics: Successfully Matched v. Follow-Up Missing Cases | 112 |
| Appendix G. Sample Fidelity Tracking Form | 113 |
| Appendix H. Sample Lesson Items, Unit 1 | 118 |
| Appendix I. Correlation Matrix: Primary & Secondary Outcomes, T2 | 119 |
| Appendix J. Main Program Impact: Change in Student Behavior, Victimization, and Beliefs from Baseline (B) to End of Program Year (T1), Full Outcome List | 120 |

| | |
|---|-----|
| Appendix K. Main Program Impact: Change in Student Behavior, Victimization, and Beliefs from Baseline (B) to End of Program Year (T2), Full Outcome List | 121 |
| Appendix L. Impact of Student Sex on Select Outcomes | 122 |
| Appendix M. Diffusion Effect: Change in Student Behavior, Victimization, and Beliefs from Baseline (B) to End of Program Year (T1) in Experimental Control versus Comparison Samples, Full Outcome List | 123 |
| Appendix N. Diffusion Effect: Change in Student Behavior, Victimization, and Beliefs from Baseline (B) to End of Program Year (T2) in Experimental Control versus Comparison Samples, Full Outcome List | 124 |

Executive Summary

National estimates indicate that anywhere from one in ten to one in five teenagers experience physical dating violence (e.g., CDC 2013; Grunbaum et al. 2004; Silverman et al. 2001) and an even greater number experience verbal or psychological abuse (e.g., Avery-Leaf et al. 1997; Davis 2008; Foshee et al. 1996; Halpern et al. 2001). Victims face a number of associated risks, including risky sexual behavior, substance abuse, unhealthy dieting, attempted suicide, and future intimate partner violence. Accordingly, interest has grown in the development of evidence-based prevention models. One such model, *The Fourth R: Strategies for Healthy Youth Relationships*, was previously shown to reduce physical dating violence among Canadian ninth-grade students. However, the program was found to be less effective with other target behaviors (e.g., physical peer violence, drug and alcohol use, and condom use), prompting the evaluators to recommend a younger target audience (Wolfe et al. 2009).

The current study seeks to test the Fourth R curriculum with middle school students in the Bronx, New York. Utilizing a randomized controlled trial design, this study tests the effectiveness of the Fourth R curriculum with seventh-grade students drawn from ten public middle schools in the Bronx, New York. A secondary quasi-experimental study seeks to examine diffusion of program impacts by comparing students assigned to the experimental control sample and students in three comparison schools where no one received the Fourth R.

Methodology

Incoming seventh-grade students in ten Bronx middle schools were assigned to class sections, which were then randomly assigned to receive the Fourth R or a standard seventh-grade curriculum during the 2011-2012 academic year. Surveys were administered to students at three points: a baseline survey (B) was collected during the fall of 2011, prior to program implementation; a follow-up survey (T1) was collected at the conclusion of the 2011-2012 academic year (in June), after half of the students had received the Fourth R curriculum; and a final follow-up survey (T2) was collected at the conclusion of the 2012-2013 academic year, a full year after any students received the curriculum.

Three additional Bronx middle schools were included in a secondary quasi-experimental study to allow us to measure whether students in the experimental schools who did not directly receive the Fourth R curriculum might experience some program benefit as a result of peer-to-peer or teacher-to-student transmission of program messages.

Survey domains included an array of behaviors and beliefs, including five primary targets (dating violence victimization and perpetration, sexual harassment victimization and perpetration, peer violence/bullying victimization and perpetration, sexual activity, and drug and alcohol use) and three secondary targets (perceptions of school safety, acceptance of pro-violence attitudes and gender stereotypes, and pro-social responses to peer and dating violence).

We hypothesized that students who received the Fourth R curriculum would show improvements in the primary and secondary target attitudes, beliefs, and behaviors. We further hypothesized that even those students in the experimental schools who did not receive the Fourth R curriculum

would experience some improvements as compared to students in schools where no one received the curriculum.

To test study hypotheses, repeated-measures survey findings were supplemented with a fidelity analysis to determine dosage of the Fourth R curriculum in each experimental school as well as with qualitative interviews with program administrators, teachers, and students.

Planning and Implementation

- **A Comprehensive Curriculum:** Staff at Start Strong Bronx¹ chose the Fourth R curriculum for its comprehensive approach. By focusing on building healthy relationships and the interrelated nature of the target issues (e.g., links among healthy relationships, drug and alcohol use, and personal empowerment), staff felt that this curriculum eliminates the need for multiple programs targeting overlapping behaviors.
- **Program Fidelity:** In general, the experimental schools implemented the Fourth R curriculum with moderately high program fidelity. Of the ten schools, all completed each of the three units, and only one school completed less than half of the possible activities across the units. Completion declined across the units, with teachers completing more of Unit 1 (81%) than Units 2 (71%) or 3 (67%); these findings may suggest some program fatigue over time. The average fidelity score (0.67) suggests that nearly 70% of exercises and activities were completed across the ten schools. Nonetheless, there were significant school-level variations in fidelity (range: 0.35 to 0.86), and these variations would prove to be exceptionally important when examining the impact of the Fourth R curriculum.
- **Program Length:** While a more comprehensive approach was seen as a strength of the Fourth R curriculum (versus Safe Dates, the shorter alternative program that focuses more exclusively on teen dating violence), implementing more than 26 hours of program material was a serious challenge for teachers with many demands on their time and attention. Program staff at Start Strong Bronx suggested that many teachers simply dropped out after completing 12 to 15 lessons. For this reason, Start Strong Bronx was interested in exploring the possibility of condensing program materials and reducing the total number of lessons.
- **Appropriateness for the Target Population:** Program materials were adapted from the original ninth-grade curriculum. The majority of those interviewed (teachers and students) agreed that the program materials were appropriate for the seventh-grade audience. However, several teachers suggested that their students needed more information on the basic biology of sex before discussing safe and healthy sexual relationships. At least one student expressed concern that the unit on sexual activity was too mature for seventh-graders.

¹ Start Strong Bronx is one of eleven Start Strong sites across the country funded by the Robert Wood Johnson Foundation to implement one of two dating violence prevention programs. Start Strong Bronx carried out program implementation, oversight, and administration of the Fourth R as evaluated in this report.

- Program Retention: Students had moderate to high recall of the bullying and drug and alcohol topics covered in the curriculum, but had less recall of the dating violence component.
- Sustainability: The Fourth R program model relies on training teacher facilitators to implement program materials. For this reason, program staff felt that the program was more sustainable than comparable programs that rely on professional outside facilitators.
- Program Costs: The estimated \$12.21 per student cost for implementation in the Bronx compares favorably to the creators' cost estimates (CAD \$16) for the original program. Across the ten schools, the average cost per school was \$676.

Prevalence of Target Behaviors

- Overall Prevalence Rates: Baseline prevalence of target behaviors among the seventh-grade Bronx population was largely comparable to rates among older Canadian high school students included in the previous evaluation of the Fourth R curriculum. However, these higher rates are consistent with existing literature based on comparably-aged student populations in the U.S.
- Dating Violence and Sexual Harassment: Close to one-fifth of students reported having been either the perpetrator (22%) or victim (16%) of dating violence or having perpetrated sexual harassment (21%) against peers during the past three months. A larger percentage (41%) reported that they had been the victim of sexual harassment. These rates of dating violence were comparable to those found in the Taylor et al. study (2011), which also looked at a New York City middle school population.
- Peer Violence/Bullying: The majority of students had experienced bullying as either a perpetrator (56%) or victim (68%). Even when limiting bullying to only *physical* incidents, six in ten students (60%) reported physical bullying by peers.
- Sexual Activity: Eight percent of students reported that they were sexually active at baseline (which is similar to the 6% of respondents reporting sexual activity prior to age 13 in the National Youth Risk Behavior Survey; CDC 2013).
- Drug and Alcohol Use: Fourteen percent of students reported using drugs or alcohol; alcohol was the most widely used substance.
- Pro-Social Attitudes: Students rejected more than half of the pro-violence beliefs and gender stereotypes included in the survey (e.g., “It is okay for me to hit someone to get them to do what I want,” “Girls sometimes deserve to be hit by the boys they date”). Nearly all students (92%) reported that they would undertake *some* pro-social response if they or a friend experienced dating violence or bullying. Students also reported that they would be more likely to talk to a friend (range: 51-70%) than to talk to a parent (range: 38-51%) or a teacher (range: 40-58%) in the instance of bullying or dating violence.

Students were least likely to report that they would call a hotline in such an instance (range: 8-22%).

- Interrelation among Target Behaviors: Behaviors targeted by the Fourth R are strongly interrelated. That is, students who experienced one type of violence/harassment were particularly likely to experience other types of violence/harassment. Additionally, students who experienced dating violence, sexual harassment/assault, and/or peer violence/bullying reported having been both perpetrators *and* victims of these respective types of violence. Multivariate analyses further revealed that those students who began dating or became sexually active earlier were more likely to experience a number of negative outcomes, including increased dating and peer violence/bullying, sexual harassment/assault, and endorsement of pro-violence beliefs and gender stereotypes.

Impact of the Fourth R

- Main Effects on Target Behaviors: Generally, the main effects analyses show little impact of the Fourth R curriculum on primary or secondary target behaviors. The program did not generally reduce dating violence, peer violence/bullying, or drug and alcohol use among the experimental sample. There is some evidence that the Fourth R led to delays in sexual activity among the treatment sample.
- Impact of Program Fidelity: Results cautiously suggest that *implementation matters*—students in the experimental group who attended schools with greater fidelity to the Fourth R model, indicated by covering *more* of the curriculum, appeared to have received some benefit. Specifically, students who received more of the curriculum experienced significantly greater delays in sexual activity (a 2% increase at T2 for the treatment sample versus a 9% increase for the control sample). Likewise, students who received more of the curriculum saw significantly smaller increases in perpetration of peer violence/bullying than students who received a lower-fidelity implementation. Finally, students who received more of the curriculum came to reject significantly more pro-violence beliefs and gender stereotypes at follow-up.
- Impact on High Risk Students: High risk students—that is, those students already engaged in target behaviors at baseline—saw greater reductions than lower risk students in dating violence. High risk students exposed to the Fourth R saw a 19% reduction in dating violence victimization and a 29% reduction in dating violence perpetration relative to the control group.
- Differential Impacts on Male and Female Students: Based on results from the previous evaluation, which found males to benefit differentially from the Fourth R curriculum (Wolfe et al. 2009), we conducted a number of analyses examining differential program impact on male versus female students. However, results suggest no differential impact by participant sex.

Diffusion Effects of the Fourth R

- Peer Violence/Bullying: Students in the control sample—who did not directly receive the Fourth R curriculum themselves but attended schools where others were randomly assigned to receive it—reported less peer violence/bullying perpetration than students in the quasi-experimental comparison schools (e.g., 2% versus 14% reporting any peer violence/bullying perpetration at T1). When students from the control sample in *high fidelity* experimental schools were isolated, additional diffusion benefits were seen with regard to reductions in physical peer violence/bullying victimization and perpetration.
- Drug and Alcohol Use: Students in the control sample reported less drug and alcohol use than students in comparison schools where no one received the Fourth R curriculum (6% versus 19% increase in any use at T1).
- Other Target Behaviors: Significant diffusion effects from those who experienced the Fourth R curriculum directly to control group students who attended the same schools were not evident with respect to other target behaviors and attitudes (including dating violence, sexual harassment/assault, and sexual activity).

Impact of Other Student and School Attributes on Target Behaviors

- Dating and Sexual Activity: Independent of Fourth R participation, those students who delayed dating and/or sexual activity—i.e., did not report engaging in such activity at baseline—also, on average, reported engaging in less violence perpetration and experiencing less victimization at follow-up across multiple outcome measures.
- Program Setting: Independent of Fourth R participation, several school-level factors were related to target behaviors and attitudes. In general, *smaller schools* and *schools with more personalized programming* (i.e., more students designated with an individualized educational program) yielded more positive effects in reducing sexual activity, bullying, and drug and alcohol use. Such findings point to a need for prevention programming in larger schools, which appear to begin at a disadvantage in addressing target behaviors.

Conclusion

This study demonstrates modest impacts of the Fourth R curriculum among an urban middle school target population in the Bronx, New York. Students exposed to the Fourth R were less likely to be sexually active than students who were not exposed—yet, few other significant main effects were evident. More striking were the results we obtained when isolating a subgroup of schools where the Fourth R curriculum was particularly well-implemented and when isolating a subgroup of students who, in the absence of the Fourth R, had previously demonstrated a particularly high propensity for negative behaviors at baseline. First, the findings suggest that dosage and program delivery matter. In schools with higher fidelity to the program model, the Fourth R produced delays in sexual activity, decreased peer violence/bullying perpetration, and reduced acceptance of pro-violence beliefs and gender stereotypes. Poorly implemented

programming did not yield comparable effects. Second, students who were already engaged in target behaviors at baseline were especially likely to experience program benefits at follow-up. Insofar as the aim of prevention programming is to reduce negative behaviors among those students who might otherwise have a predisposition to engage in them, the positive findings with high risk students are notable. Of final interest, the findings hint at modest, though limited, school-wide benefits across the experimental schools—whereby program information is diffused, presumably through peer-to-peer contact, from those students who received the program to students attending the same schools who did not receive the program directly. Specifically, students throughout the experimental schools showed reduced aging-in to drug use and reduced peer violence/bullying as compared with students who lacked any form of program exposure, due to attending a school where it was not available to any students.

Chapter 1

Introduction

National estimates indicate that anywhere from one in ten to one in five teenagers experience physical dating violence (e.g., CDC 2013; Grunbaum et al. 2004; Silverman et al. 2001) and an even greater number experience verbal or psychological abuse (e.g., Avery-Leaf et al. 1997; Davis 2008; Foshee et al. 1996; Halpern et al. 2001). Victims face a number of associated risks, including risky sexual behavior, substance abuse, unhealthy dieting, attempted suicide, and future intimate partner violence. Accordingly, interest has grown in the development of evidence-based prevention models. One such model, *The Fourth R: Strategies for Healthy Youth Relationships* (henceforth “Fourth R”) was previously shown to reduce physical dating violence among Canadian ninth-grade students. However, the program was found to be less effective with other target behaviors (e.g., physical peer violence, drug and alcohol use, and condom use), prompting the evaluators to recommend a younger target audience (Wolfe et al. 2009).

With funding from the National Institute of Justice, the current study serves as an effectiveness trial of the Fourth R curriculum, adapted for a younger, urban population of seventh-grade middle school students in the Bronx, New York. First and foremost, the study includes a randomized controlled trial of the Fourth R curriculum, based on random assignment of class sections in each of ten middle schools. In addition, the study includes a quasi-experimental comparison between control students in these ten schools (i.e., students who did not directly receive the Fourth R curriculum) and students attending three pure comparison schools, where no one received any exposure at all to the Fourth R, either directly in class or indirectly through possible peer-to-peer or teacher-to-student diffusion effects.

Adolescent Dating Violence: Prevalence, Characteristics, & Associated Risks

Prevalence

Estimates of the extent of dating abuse among adolescents vary greatly. The results of the National Longitudinal Study of Adolescent Health indicate an 18-month victimization prevalence of 12% for physical dating violence and 20% for psychological dating violence among students in grades seven through twelve (Halpern et al. 2001). Results from the CDC’s 2013 National Youth Risk Behavior Survey (YRBS) indicate that 10% of students in grades nine through twelve had experienced physical dating violence within the past 12 months. Another 10% of students had been kissed, touched, or forced to have sexual intercourse by a dating partner when they did not want to at some time. The YRBS prevalence measures are limited to the 74% of students who reported that they had been involved in a dating relationship in the preceding 12-month period.² According to the YRBS data, female students experienced higher levels of physical and sexual dating violence than male students; incidence was also higher among students in higher grade levels (CDC 2013).

Most prevalence estimates focus on students in grades eight or nine through twelve. In a recent review of the dating violence literature, Manganello (2008) summarized estimates of dating violence victimization among older students as ranging from 1% to 68%, depending on

² The survey does not ask about other types of dating violence (e.g., psychological).

the exact measures used, sampling, and reference point. The bulk of estimates, however, fall around 10% to 15% (Manganello 2008).

Estimates for younger students, however, are rare. One study of seventh-graders found that, of those who had begun dating, one-third reported perpetrating physical, emotional, and/or sexual aggression against a dating partner (Sears, Byers, and Price 2007). A second study found that 19% of sixth- and seventh-grade students reported sexual victimization at the hands of another student (Taylor 2010; Taylor et. al 2008). A recent study of sixth- and seventh-grade students in New York City found that 19% had experienced physical or sexual dating violence and 20% reported having perpetrated such violence against a dating partner (Taylor et al. 2011). Finally, results from the initial phase of the Robert Wood Johnson Foundation Start Strong evaluation suggest that three-quarters of seventh grade students in the sample were already involved in dating behavior. Around one-third of all students had been the victim of emotional (37%) or electronic (31%) violence by a dating partner and 15% had been the victim of physical dating violence. More than one-third (37%) reported having witnessed physical violence between dating partners and half (49%) had experienced sexual harassment in the preceding six months (RTI International 2013).

Associated Risks

The YRBS found physical dating violence was higher among Hispanic males (as compared to white and black males); sexual dating violence was higher among white and Hispanic females (versus black females) and black males (versus white and Hispanic males; CDC 2013). While some additional studies have found that perpetration of dating violence is higher among black adolescents than whites or Hispanics (Makepeace 1987; O’Keeffe et al. 1986; O’Keeffe 1997), others have found no differences by race or have found that these differences disappear once socioeconomic status was controlled (Malik, Sorenson, and Aneschensel 1997). A small number of studies have linked lower socioeconomic status (Makepeace 1987; Sigelman, Berry, and Wiles 1984) or residence in urban inner cities (Bergman 1992; Makepeace 1987) to higher rates of adolescent dating violence, but other studies have not borne out these findings.

The YRBS asks respondents about five additional risk factors: current sexual activity, attempted suicide, current cigarette use, episodic heavy drinking, and physical fighting. After controlling for student background characteristics, all but one of these risk factors (current cigarette use) was significantly associated with physical dating violence victimization (CDC 2006). Others have similarly found dating violence to be associated with a variety of additional risks, including physical injuries that may require visits to the emergency room (Foshee 1996); drug, alcohol, and tobacco use (Plichta 1996); unhealthy sexual behaviors that put teens at risk of unplanned pregnancy and sexually-transmitted infections (Decker, Silverman, and Raj 2005; Silverman et al. 2001); unhealthy dieting (Ackard and Neumark-Sztainer 2002); and future intimate partner abuse (Feld and Strauss 1989; Smith et al. 2003)

Unlike intimate partner violence among adults, research generally indicates that male and female adolescents experience comparable rates of dating violence (Hendy et al. 2003; Martin 1990; O’Leary et al. 2008; Renner and Whitney 2010).³ While several studies have found that girls perpetrate more *physical* dating violence than boys (Foshee 1996; Gray and Foshee 1997; Malik et al. 1997; O’Keeffe 1997; Roscoe and Callahan 1985), girls are more often the victims of *sexual* dating violence (Bennett and Fineran 1998; Foshee 1996; Molitor and Tolman 1998).

³ The most recent YRBS results are an exception; both physical and sexual dating violence were found to be higher among female respondents (CDC 2013).

Moreover, the implications of violence appear to be different for males and females. While adolescent female victims are more likely to report being scared and physically or emotionally hurt by dating violence, adolescent male victims are more likely to report being angered or amused (Foshee 1996; O’Keefe and Treister 1998).

Motivation behind dating violence may also differ by sex; both males and females report that anger is the primary motivator for violence, but girls more often cite self-defense as a secondary motivator, while boys cite the desire for control over their partner (O’Keefe 1997). Martin (1990) suggests that the gender symmetry in violence perpetration indicates that adolescents are not yet embedded in adult patterns of victimization and abuse; therefore, prevention programs targeting adolescents may be successful in intervening before adult patterns are established.

Dating Violence Prevention Efforts

While numerous programs targeting adolescent dating violence have been developed, only a handful have been rigorously evaluated. In general, evaluations of violence prevention programs find positive program effects on participant attitudes and knowledge. However, because programs vary greatly (e.g. by program length, target audience, implementation), it is difficult to determine which program components have the greatest impact.

In a 2005 review of the literature, O’Keefe identifies ten programs included in rigorous impact evaluations. Of these, one intervention showed no impact on student attitudes (Jones 1987; Levy 1984), while the remaining nine evaluations suggested some positive program effects. Several programs have shown positive effects on participant knowledge (Aldridge, Friedman, and Giggans 1993; Jaffe et al. 1992; Macgowan 1997; Rosenbluth 2002), attitudes (Avery-Leaf et al. 1997; Lavoie et al. 1995; Macgowan 1997), and awareness (Rosenbluth 2002). Fewer interventions have measured effects on behavior. In one randomized trial of a community-based program, the Youth Relationship Project (YRP), adolescents receiving the program reported significantly fewer incidents of both physical and psychological dating violence, and lower levels of emotional distress, than the control group (Wolfe et al. 2003). A recent evaluation of the Shifting Boundaries curriculum implemented in middle schools across New York City found that, while standard classroom implementation did not significantly improve student outcomes, both a building-level implementation (including school-based protective orders, public service announcement posters, and increased faculty surveillance/presence), and combined building- and classroom-level implementation, had positive effects on student knowledge, bystander intervention, and violence and harassment perpetration and victimization (Taylor et al. 2011).

Safe Dates

One of the most extensive evaluations of a dating violence prevention program, the Safe Dates program, included a randomized trial with an extended follow-up period—a rarity in the prevention literature. At one-month follow-up, program participants in eighth- and ninth-grade showed significantly lower rates of physical, psychological, and sexual violence perpetration. In addition, program participants showed improvements in attitudes about gender violence, gender stereotyping, conflict resolution, and knowledge of available services for victims of dating violence (Foshee et al. 1998). In a follow-up study, Foshee et al. (2004) randomly assigned half of the treatment group from the earlier study to receive Safe Dates booster sessions between two and three years after the initial intervention. While the booster sessions did not improve

participant outcomes (Foshee et al. 2004), when comparing all Safe Dates participants to the control group four years after the initial intervention, program participants reported significantly less perpetration of moderate physical, psychological, and sexual violence and less sexual victimization. Treatment effects were comparable for students who reported perpetrating dating violence prior to the intervention and for those who had no history of dating violence perpetration (Foshee et al. 2005).

Safe Dates is part of the forthcoming evaluation of the Robert Wood Johnson Foundation Start Strong initiative,⁴ which examines the impact of an adapted version of the program on a younger, seventh-grade audience (Miller et al. *under review*). The first phase of this research found short-term program impacts on acceptance of teen dating violence and feelings about gender equality were sustained across all four waves of follow-up (i.e., two academic years). Additional short-term gains, including increased parent-child communication about relationships and increased satisfaction with dating relationships, were not sustained past Wave 2 (i.e., end of the program implementation school year). Students who had already experienced or perpetrated dating violence at baseline particularly benefitted from the program; these higher risk students showed declines in bullying perpetration, improved attitudes about gender equality, and increased parent-child communication at Wave 2. While this evaluation finds some positive impacts on attitudes, beliefs, and bullying behavior, there were no program impact on *dating* violence behavior (perpetration or victimization), criticism of or dominance over dating partners (i.e., emotional abuse), or perceived negative consequences of dating violence (RTI International 2013).

The Fourth R

Created for ninth-grade students in Ontario, Canada, the Fourth R is a 21-lesson curriculum using skills-based exercises to engage youth in healthy decision-making in their relationships, sexuality, and drug and alcohol use. Trained in a six-hour workshop, teachers build on Reading, ‘Riting, and ‘Rithmetic, incorporating relationship education into existing core curricula (e.g. physical education, health, or English classes). The original Fourth R curriculum is composed of three units of seven 75-minute lessons focusing on personal safety and injury prevention; healthy growth and sexuality; and substance use and abuse. Thus the total program dosage is just over 26 hours. The curriculum has been adapted for other provinces in Canada; students from different age groups (eighth, tenth, and eleventh grades); Aboriginal students; and students in Catholic and alternative schools. The Fourth R is currently implemented in more than 4,000 Canadian schools.⁵

In a cluster randomized trial with a 30-month follow-up period, the Fourth R was found to be effective (Wolfe et al. 2009). Specifically, physical dating violence was significantly higher among students in the control schools, although the results did not reach statistical significance when only the group of students who had dated in the year preceding the follow-up was isolated. The evaluation further found that program effects were limited to boys—that is, while boys in the treatment schools were significantly less likely than boys in the control schools to engage in

⁴ The “Start Strong: Building Healthy Teen Relationships” initiative is funded by the Robert Wood Johnson Foundation (RWJF) and the Blue Shield of California Foundation, in collaboration with Futures without Violence, and consists of a total of 11 sites nationwide. To learn more about Start Strong, or to learn about the national RWJF evaluation of the initiative as a whole, visit <http://www.rwjf.org/en/research-publications/find-rwjf-research/2013/09/evaluation-of-the-building-healthy-teen-relationships-program.html>

⁵ See Chapter 3 for additional description of the Fourth R curriculum.

dating violence, girls in the treatment and control schools engaged in similar rates of violence.

The Fourth R was found to be less effective at reducing other target behaviors, including physical peer violence/bullying, substance use, and condom use. While sexually active boys in the treatment schools were more likely to use condoms, condom use was *less* likely among the partners of sexually active girls in treatment schools, resulting in no net program benefit. There were no significant program impacts on substance use or physical peer violence/bullying. The authors of the Fourth R evaluation suggest that relatively high rates of substance use experimentation and physical peer violence/bullying at baseline may explain the findings and recommend that interventions targeting younger students—before they begin to engage in target behaviors—might lead to greater program impacts. With regard to the differential program impacts on boys and girls, the authors suggest that girls in the samples may have been dating older boys and/or boys from other schools. Moreover, in qualitative interviews, girls were more likely to describe their use of violence against dating partners as a means of expressing anger or engaging their partners. The authors suggest that some girl-initiated violence may be in response to negative actions by boys—such as refusal to engage in safe-sex behaviors (Wolfe et al. 2009).

Need for Further Study & Genesis of the Current Study

Need for Further Study

Due to limited program impacts and relatively high baseline rates of target behaviors in the original Fourth R evaluation, the authors of that study suggested that a younger target audience might realize greater program effects. The current study not only seeks to determine whether the curriculum can impact outcomes in a younger sample, it represents the first evaluation of the program implemented in a variety of class settings (the previous evaluation sites were all health or physical education classes). Finally, while the original sample included mostly white students from two-parent homes in schools across southwestern Ontario, our sample is primarily composed of black and Hispanic students from lower socioeconomic strata. Half of the current sample lives in two-parent homes; the remaining half live with a single parent or with other relatives.

Study Genesis

Staff at the Center for Court Innovation was approached by the director of Start Strong Bronx in the spring of 2010, based on Start Strong's interest in having the Center conduct a randomized trial of the ongoing Fourth R curriculum in the Bronx. Start Strong Bronx, a project of Bronx-Lebanon Hospital Center, received funding from the Robert Wood Johnson Foundation (RWJF) in 2008 as part of a national initiative, Start Strong: Building Healthy Teen Relationships.⁶ The Bronx was one of eleven sites that received funding to implement one of two violence prevention curricula—Fourth R or Safe Dates. As part of the initiative, RWJF contracted with RTI International to conduct a multi-site evaluation. However, due to budget constraints and other considerations, RTI only elected to study those sites that implemented the Safe Dates curriculum. Responding to this development, and recognizing that several New York City dating violence prevention initiatives had recently faced budget cuts, staff at Start Strong Bronx felt that a rigorous evaluation of the effectiveness, implementation, and the sustainability of the Fourth R was crucial.

⁶ Further details of the RWJF Start Strong initiative and Start Strong Bronx are included in Chapter 3.

Study Goals and Objectives

Utilizing a randomized controlled trial design, this study tests the effectiveness of the Fourth R curriculum with seventh-grade students drawn from ten public middle schools in the Bronx, New York. A secondary quasi-experimental study compares outcomes among control students included in the randomized controlled trial to students in comparison schools where no one received the Fourth R. Findings build upon the previous evaluation described above by testing the Fourth R with younger and predominately minority students in the U.S. Specifically, we test the performance of the following nine hypotheses:

- **Hypothesis 1:** The Fourth R curriculum will result in lower rates of dating violence victimization and perpetration.
- **Hypothesis 2:** The Fourth R curriculum will result in lower rates of sexual harassment victimization and perpetration.
- **Hypothesis 3:** The Fourth R curriculum will result in lower rates of peer violence/bullying victimization and perpetration.
- **Hypothesis 4:** The Fourth R curriculum will result in lower rates of sexual activity.
- **Hypothesis 5:** The Fourth R curriculum will result in lower rates of drug and alcohol use.
- **Hypothesis 6:** The Fourth R curriculum will result in increased ratings of school safety.
- **Hypothesis 7:** The Fourth R curriculum will result in decreased acceptance of pro-violence attitudes and gender stereotypes.
- **Hypothesis 8:** The Fourth R curriculum will result in an increase in pro-social responses to bullying and dating violence.
- **Hypothesis 9:** Students in the schools in which the Fourth R is implemented who are not directly exposed to the curriculum will experience some program benefits due to school-wide, peer-to-peer diffusion of program messages. (Hence, as a group, the control sample across the ten experimental schools will see better outcomes than students in the three schools added for the quasi-experiment, where no students received the Fourth R.)

Outcomes are measured at baseline (B) and two follow-up time periods. The first follow-up (T1), at the end of the seventh-grade school year in June (during which the program was implemented), measures short-term program benefits. The second follow-up (T2), at the end of the following school year, measures sustained program benefits.

In addition to the randomized controlled trial and quasi-experimental study testing program impacts, the report includes a fidelity assessment and process evaluation detailing the planning and implementation of the Bronx program. Finally, the study offers a dating violence prevalence estimate among seventh-grade students in a major urban area.

Organization of the Report

The next chapter details the research design and methodology. Chapter 3 describes the Fourth R curriculum and Start Strong Bronx and the process of planning the adaptation of the program model for the younger Bronx audience. Chapter 4 includes results of the process evaluation documenting program implementation and fidelity in the Bronx and student and teacher

feedback. Chapter 5 provides a general profile of the baseline characteristics of the experimental sample and highlights the general prevalence of target behaviors among the students. Chapter 6 examines program impacts on primary and secondary target behaviors, including dating violence, sexual harassment/assault, peer violence/bullying, sexual activity, drug and alcohol use, perceptions of school safety, acceptance of pro-violence beliefs and gender stereotypes, and pro-social response to bullying and dating violence. Chapter 7 looks at whether students across the experimental control sample who were not directly exposed to the Fourth R curriculum experienced any diffusion benefits as compared to students in three Bronx schools where *no* students received the Fourth R curriculum. Finally, Chapter 8 summarizes major findings, study limitations, and possible next steps for further study.

Chapter 2

Research Design and Methodology

This chapter begins with an overview of the schools included in the study. We then describe the design and methodology for both the randomized controlled trial and the secondary quasi-experimental study. This discussion includes a description of the randomization strategies employed; design and implementation of the survey instrument; scale construction; and analytic plan. In addition, this chapter outlines the methods used to document the planning, implementation, and fidelity to the Fourth R curriculum in the ten experimental schools.

Setting

Bronx County is the northernmost of the five counties that, together, compose New York City. As of the 2010 Census, the county's population was just over one million (1,385,108). About one-fifth (20%) of the total population is enrolled in primary or secondary education (kindergarten through high school). The population of the Bronx is largely black (37%) and Hispanic (54%). The median household income (\$34,300) falls considerably below the national average (\$53,046); correspondingly, the percentage of families below the poverty level (27%) is much higher than the national average (11%; U.S. Census 2010).

The 13 Study Schools

A total of ten Bronx middle schools were included in the randomized controlled trial; an additional three schools were included as quasi-experimental comparison schools to test for school-wide diffusion of Fourth R impacts. Key characteristics of all 13 schools are presented in Table 2.1. Eleven of the thirteen schools are exclusively middle schools serving sixth through eighth (n=10) or sixth through ninth (n=1) grades. One school is a combined elementary/middle school (School E1) and one school is a combined middle/high school (School E10). The schools included in the sample vary greatly in size; total enrollment ranges from a low of 31 per grade year (School Q13) to a high of 218 per grade year (School Q11). Grade size for the target seventh-grade cohort ranges from 64 (School Q11) to 255 (School Q11) students. Grades are then divided into multiple class section, as further discussed below.

Student demographics reflect those of the Bronx in general. Students are predominately black and Hispanic in all 13 schools.

Economic Need Index reflects the socioeconomics of the student population. It is calculated based on the formula:

$$\text{Economic Need Index} = (\text{Percent Temporary Housing}^7) + (\text{Percent HRA-eligible}^8 * 0.5) + (\text{Percent Free Lunch Eligible} * 0.5)$$

⁷ During the past four years.

⁸ Eligibility for certain types of assistance, as designated by the Human Resources Administration.

Table 2.1. Profile of the 13 Bronx Middle Schools

| | EXPERIMENTAL SCHOOLS | | | | | | | | | | QUASI-EXPERIMENTAL COMPARISON SCHOOLS | | |
|---|----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|---------------------------------------|------------|------------|
| | School E1 | School E2 | School E3 | School E4 | School E5 | School E6 | School E7 | School E8 | School E9 | School E10 | School Q11 | School Q12 | School Q13 |
| School Information | | | | | | | | | | | | | |
| Community School District | 10 | 9 | 7 | 10 | 9 | 12 | 10 | 7 | 12 | 9 | 9 | 9 | 10 |
| Grades Served | K-8 | 6-8 | 6-9 | 6-8 | 6-8 | 6-8 | 6-8 | 6-8 | 6-8 | 6-12 | 6-8 | 6-8 | 6-8 |
| Total Enrollment, 2011-12 ¹ | 550 | 442 | 494 | 251 | 340 | 323 | 367 | 254 | 340 | 763 | 653 | 365 | 331 |
| Total 7th Grade Students, 2011-2012 ¹ | 64 | 130 | 157 | 83 | 107 | 116 | 113 | 94 | 133 | 110 | 255 | 123 | 92 |
| Student Population | | | | | | | | | | | | | |
| % Female ² | 52% | 48% | 53% | 57% | 46% | 51% | 47% | 50% | 49% | 54% | 50% | 56% | 49% |
| Race/Ethnicity ² | | | | | | | | | | | | | |
| Hispanic | 84% | 57% | 75% | 69% | 75% | 66% | 72% | 66% | 85% | 66% | 71% | 64% | 82% |
| Black | 14% | 43% | 25% | 21% | 24% | 29% | 27% | 32% | 13% | 30% | 27% | 32% | 14% |
| Asian | 2% | 1% | 0% | 4% | 0% | 1% | 1% | 1% | 1% | 2% | 2% | 3% | 3% |
| White | 0% | 0% | 0% | 4% | 1% | 1% | 1% | 1% | 0% | 1% | 1% | 0% | 2% |
| Other | 0% | 0% | 0% | 2% | 0% | 3% | 0% | 0% | 1% | 1% | 0% | 1% | 0% |
| Economic Need Index ³ | 0.81 | 1.00 | 0.86 | 0.76 | 0.94 | 0.85 | 0.99 | 0.92 | 0.96 | 0.79 | 1.06 | 0.83 | 0.99 |
| % of Students Eligible for Free or Reduced-Price Lunch ³ | 96% | 96% | 94% | 87% | 97% | 95% | 85% | 95% | 94% | 76% | 90% | 89% | 94% |
| % Students with Individualized Educational Program (IEP) ³ | 14.8% | 24.9% | 17.9% | 21.4% | 28.9% | 20.9% | 24.0% | 28.8% | 22.3% | 15.3% | 21.0% | 13.0% | 16.2% |
| % Students English Language Learners (ELL) ³ | 7.1% | 24.7% | 8.5% | 5.8% | 14.0% | 9.0% | 23.4% | 15.8% | 37.1% | 5.3% | 31.4% | 9.6% | 22.8% |
| Teachers | | | | | | | | | | | | | |
| Total # of Teachers, 2011-2012 ¹ | 36 | 33 | 33 | 19 | 23 | 18 | 28 | 20 | 28 | 48 | 49 | 22 | 24 |
| % of Teachers w/< 3 Years Experience ¹ | 6% | 15% | 21% | 16% | 13% | 28% | 25% | 15% | 32% | 19% | 20% | 14% | 50% |
| % of Teachers w/Master's Degree + 30 Hours/Doctorate ¹ | 36% | 52% | 6% | 16% | 17% | 6% | 32% | 15% | 14% | 35% | 31% | 18% | 17% |
| Attendance & Discipline | | | | | | | | | | | | | |
| Annual Attendance Rate, 2010-2011 ¹ | 94% | 88% | 93% | 96% | 90% | 93% | 94% | 89% | 93% | 91% | 92% | 93% | 92% |
| # Student Suspensions, 2010-2011 ¹ | 5 (1%) | 65 (15%) | 40 (8%) | 11 (4%) | 2 (1%) | 28 (9%) | 61 (17%) | 33 (13%) | 29 (9%) | 40 (5%) | 113 (17%) | 16 (4%) | 13 (4%) |
| NYC DOE Report Card | | | | | | | | | | | | | |
| Overall DOE Report Card Score ^{3,4} | 61.0 (B) | 46.7 (C) | 78.1 (A) | 74.8 (A) | 70.0 (A) | 66.1 (A) | 66.5 (A) | 63.0 (A) | 44.4 (C) | 53.2 (B) | 42.0 (C) | 65.1 (A) | 51.0 (C) |
| DOE Report Card Student Progress Score ³ | 30.4 | 27.1 | 47.1 | 41.0 | 37.4 | 34.4 | 40.1 | 30.7 | 25.6 | 28.6 | 24.2 | 36.7 | 32.9 |
| DOE Report Card Student Performance Score ³ | 16.1 | 8.3 | 16.1 | 14.2 | 14.7 | 15.3 | 10.0 | 15.5 | 6.7 | 11.6 | 7.7 | 16.0 | 7.3 |
| DOE Report Card School Environment Score ³ | 9.9 | 7.0 | 11.1 | 14.4 | 11.9 | 12.8 | 12.3 | 11.8 | 7.9 | 7.3 | 6.1 | 9.8 | 6.6 |
| DOE Report Card Closing Achievement Gap Score ³ | 4.5 | 4.3 | 3.8 | 5.2 | 6.0 | 3.6 | 4.1 | 5.0 | 4.2 | 5.7 | 4.0 | 2.5 | 4.2 |

¹ Information obtained via the New York State Department of Education Report Card at <https://reportcards.nysed.gov>.

² Information obtained via the New York City Department of Education at <http://schools.nyc.gov/Accountability/data/default.htm>.

³ Information obtained via the New York City Department of Education Report Card at <http://schools.nyc.gov>.

⁴ Score out of a possible 100.

Table 2.2. Elementary and Middle School Student Profile by Borough

| | Mean Economic Need Index | % IEP | % ELL |
|-------------------------------------|--------------------------|-------|-------|
| Brooklyn | 0.70 | 17.3% | 11.8% |
| Bronx | 0.83 | 19.5% | 17.8% |
| <i>Mean Score, 13 Study Schools</i> | 0.90 | 20.7% | 16.5% |
| Queens | 0.51 | 14.7% | 13.0% |
| Manhattan | 0.66 | 16.7% | 7.5% |
| Staten Island | 0.44 | 21.8% | 7.1% |
| <i>All Boroughs</i> | 0.67 | 17.5% | 13.4% |

Higher scores on the index indicate a higher need population. Citywide, the mean score on the index is 0.67 among elementary/middle school students (see Table 2.2); students in the Bronx have the highest level of need across the city. In general, the schools in the sample are high-need; ten of the 13 fall at or above the mean for Bronx and all 13 fall above the citywide average.

Individualized Educational Programs (IEP) are special education and related services for students with disabilities and special needs. The IEP itself is a document outlining the goals, objectives, performance, and related services recommended for a student’s educational program.⁹ The percent of students with an IEP varies across the sample, with a range of 13% (School Q12) to 29% (School E5, School E8). The average score across the 13 schools (21%) resembles the average incidence of IEPs across the Bronx (20%, Table 2.2).

English Language Learners (ELL) represents the percentage of a school’s students who utilize programming including English as a Second Language (ESL) and Transitional Bilingual Education (TBE), which enables English-learners to be instructed in core subjects in their native language while simultaneously learning English through ESL classes. Again, there is sizeable variation among the schools in the sample; percent of ELL students ranges from a low of 5% (School E10) to a high of 37% (School E9). There are more ELL students in the Bronx than elsewhere in the city; the mean score across the study sample (17%) reflects the borough-wide average (18%, Table 2.2).

Teaching Staff experience varies across the sample. In the majority of schools, less than a third of teachers are new to teaching (i.e., less than three years of experience); two schools have more new teachers (School E9; School Q13). In general, schools with *more* teachers tend to have more teachers with advanced degrees (School E3 is an exception). From as few as 6% to as many as 52% of teachers have a graduate degree across the sample.

Attendance and Discipline are defined by attendance rates and suspension rates. The attendance rate is calculated by taking the total number of days attended by all students and dividing it by the total number of days on the school’s register for all students. Annually, attendance rates in

⁹ See <http://schools.nyc.gov>.

the ten schools range from 88% (School E2) to 96% (School E4). These attendance rates compare favorably to attendance in the Bronx (83%) and the city (85%) overall.¹⁰ The schools in the sample have higher suspension rates than the borough as a whole. The average 11% suspension rate (number of suspensions/total student population) is higher than the 7% rate across the Bronx.¹¹ Across the 13 schools, prevalence of suspensions varies from 1% to 17%.

Table 2.3. NYC DOE Report Card Overall Scores

| Grade | Score Range | % of Schools |
|-------|----------------|--------------|
| A | 63.1 or higher | 26% |
| B | 53.2 - 63.0 | 36% |
| C | 40.6 - 53.1 | 31% |
| D | 32.0 - 40.5 | 5% |
| F | 31.9 or lower | 2% |

Overall DOE Report Card Score is a summary measure, which is translated into letter grades in Table 2.3. Scores in the sample range from A down to C; nine of the 13 score a B or better. The ten experimental schools have higher overall scores on average (62.4) than the three quasi-experimental schools (52.7). The overall report card score is a sum of four component scores:

1. Student Progress Score measures student improvement on State ELA and math exams. The score represents the percent of students who scored the same on the previous year's exam who score the same or lower on the current year's exam. A higher score indicates a greater improvement in student performance. Scores range from 0 to 60.
2. Student Performance Score measures the average proficiency rating of all students in ELA and math. Scores range from 0 to 25.
3. School Environment Score measures conditions for learning, including student attendance, high expectations, engagement, safety, respect, and communication. Scores range from 0 to 15.
4. Student Closing Achievement Gap Score awards credit to schools that achieve high scores with a high-need student population. Scores range from 0 to 17.

As with the overall report card score, the 13 schools vary across these component measures; the ten experimental schools score higher than the three quasi-experimental comparison schools across all four components.

Sex Education in New York City's Public Schools

New York City schools began implementing universal sex education in all middle schools at the beginning of the 2011-2012 academic year. The new requirement goes beyond the previous statewide mandate that all middle and high school students receive a semester of health education and requires that schools teach sex education for sixth- or seventh-grade students (and again for ninth- or tenth-grade students) as part of the required semester of health education.

¹⁰ Average Bronx and citywide attendance rates represent *all* regular elementary, middle, and high school rates for 2012-2013. Charter schools, community-based organizations (pre-K), home instruction, hospital schools, alternative high schools, and Special Education District 75 are excluded. Information derived from <http://schools.nyc.gov>.

¹¹ Borough-wide rates represent *all* regular elementary, middle, and high school rates across the Bronx.

While the NYC Department of Education does not mandate that a specific curriculum be used, they do recommend the HealthSmart curriculum. Any sex education requirement used to meet the mandate must include lessons on anatomy, puberty, pregnancy, and the risks of unsafe sexual activity. Sex education curricula may be taught in either sex-segregated or coeducational classes (Santos 2011). For the purposes of the current study, it is worth noting that schools have the option of selecting a program that meets the required components; the Fourth R program fulfills the requirements (and was utilized in the experimental treatment sections included in this study to meet the new sex education requirements).

Randomization Protocols

Table 2.4 summarizes the randomization protocols across the ten experimental schools. Initially, the research design called for pre-assigned *sections* of students to be randomly assigned to either the treatment or control condition. However, based on feedback from principals in the final ten experimental schools, modifications to the original research design and randomization protocols were made. The final randomization protocols vary somewhat across the sites, with two general strategies:

- a. Randomized Sections: In the majority of the experimental schools (8), students were assigned to sections by the principal, according to standard protocols at each school. In general, principals seek to balance all sections with a mix of students based on academic performance, behavioral issues, and other factors. That is, in practice, standard protocols for assigning students to class sections act as a *de facto* student-level randomization process.¹² The resulting *sections* were then randomly assigned to either Group 1 (treatment) or Group 2 (control). Research staff randomly assigned sections by drawing one of two slips of paper indicating group assignment from a container. One-half of sections in each school were assigned to each condition. One of two slips of paper were drawn for each participating section sequentially, until all section assignments became clear (e.g., if a school had four participating sections and the first two sections were randomly assigned to Group 1, the remaining two sections were automatically assigned to Group 2).¹³

¹² One exception to this general rule is that many (although not all) students who have individualized educational programs (IEPs) are assigned to a two-teacher classroom. As a result, up to one-third of students in two-teacher classrooms have IEPs; the remaining two-thirds are general education students. It is therefore possible that, on average, students in two-teacher classrooms may differ from general education sections on key unmeasured background characteristics. In one school, one special education and one bilingual education section were excluded from the study. In two of the ten experimental schools, each experimental condition included one two-teacher class section. Because IEP students were thus spread across both the treatment and control sections in these two schools, the risk of bias was minimal. However, in two other schools, a single two-teacher section in each of these schools was assigned to one study condition, resulting in possible unmeasured bias. In the remaining six schools, no IEP or special education sections were flagged for special consideration.

¹³ In one of these eight schools, a similar strategy was implemented, but rather than assigning students to sections according to standard school protocols, the principal assigned students to one of eight *teachers* according to the school's standard protocols. The teachers were then randomly assigned to either Group 1 or Group 2. This strategy does not fundamentally diverge from the other seven schools in this category, since principals, in varying degrees, will characteristically tend to consider the advisory teacher, or subject teachers, as one factor among many that go into the assignment of class sections.

Table 2.4. Fourth R Implementation in the Ten Experimental Schools

| | School E1 | School E2 | School E3 | School E4 | School E5 | School E6 | School E7 | School E8 | School E9 | School E10 |
|--|------------------|-----------|-----------|-----------|-----------|-----------|---------------------|------------------|----------------|------------|
| Total # Randomized Sections ¹ | 2 | 6 | 4 | 4 | 4 | 8 | 4 | 5 | 6 ² | 4 |
| Randomization Unit | Section | Section | Section | Students | Section | Section | Section | Students | Section | Section |
| 4th R Implemented in Which Course | ELA ³ | Literacy | Health | Elective | Health | Advisory | Health ⁴ | Advisory | Advisory | Health |
| Total 4th R Teachers | 1 | 2 | 1 | 2 | 2 | 4 | 2 | 2 | 4 | 1 |
| 4th R Teacher also Teaches Control? | Yes | Yes | Yes | No | Yes | No | Yes | No | No | Yes |
| Sex Segregated? | No | No | No | No | Yes | No | Yes | Yes ⁵ | No | No |

¹ Treatment and Control sections included in count.

² One special education section in each group; control section is bilingual special education.

³ English Language Arts.

⁴ Health was taught as part of an Enrichment period in this school.

⁵ Fourth R Group only segregated by sex; control group contained mix-sex classes.

- a. **Randomized Students:** In the remaining two experimental schools, *students* were randomly assigned into either Group 1 or Group 2 class sections by research staff, who drew one of two slips of paper from a container following the same process described above. The resulting sections were then assigned to a teacher previously identified by the principal as either a Group 1 or Group 2 teacher. This strategy was implemented because principals at two schools felt that specific teachers were better suited for implementing the Fourth R curriculum.

As shown in Table 2.4, between one (School E1) and four (School E6) sections in each school received the Fourth R curriculum in classes ranging from health class (where it was originally designed to be implemented) to advisory and elective sections to English Language Arts. In six of the ten schools, teachers who implemented the Fourth R curriculum in one or more sections also implemented the control condition in other sections.¹⁴ While the original curriculum was designed to be implemented in sex-segregated classrooms, only three of the ten schools in the current study segregated participating students by sex.¹⁵

Baseline comparisons between those assigned to receive the Fourth R and those assigned to the control condition (presented in Appendix A) generally suggest that the randomization was successful and the treatment and control samples were nearly identical. The samples differed on only five items (of 69 total parameters) at the $p < .05$ level. (Treatment students were more likely to be male, less likely to be living with two parents, more likely to have dated during the past three months, less likely to feel safe in classrooms and school bathrooms, and less likely to talk to a friend in the instance of bullying or dating violence). Given the number of parameters, one would naturally expect an average of three or four differences to arise at the $p < .05$ level, and seeing five differences is therefore well within the range of credible, naturally occurring outcomes, assuming that the randomization process was well-implemented.

Survey Design and Implementation

Baseline surveys were administered in the 13 schools at the beginning of the 2011-2012 academic year (September-October 2011). Follow-up surveys were administered at the end of the 2011-2012 school year (May-June 2012, T1) and again at the end of the 2012-2013 school year (May-June 2013, T2). Survey administration was scheduled within a pre-determined window at the convenience of participating schools. A passive parental consent strategy was employed at both the beginning of the 2011-2012 and the end of the 2012-2013 school years. That is, information packets (see Appendix B) were sent home with students; parents who did not wish to allow their child to participate in the research study were asked to return the signed declination form (in an included pre-paid envelope addressed to research staff). A list of students whose parents had declined research participation was forwarded to each school principal before the survey date; non-consented students were removed from the classroom prior to survey administration. All remaining students were then assented by research staff (see Appendix C).

¹⁴ This overlapping appointment of teachers in both treatment and control sections introduces possible contamination of the samples. Based on direct conversations with teaching staff, we feel relatively certain that any contamination brought about by dually assigned teachers was minimal. Despite this, the possibility of inadvertent contamination remains a limitation of this study and is discussed as such further in Chapter 8.

¹⁵ In one of these schools (School E8), students in the treatment condition were sex-segregated, but students in the control condition were not.

The final baseline survey instrument is included as Appendix D. Survey questions were designed to address areas targeted by the Fourth R curriculum (dating violence, peer violence/bullying, drug and alcohol use, safe sex behavior; see Chapter 3) and were drawn from the original Fourth R evaluation (Wolfe et al. 2009) and a variety of other sources (see Table 2.5). The final survey instrument was developed through a collaborative process, including feedback from research staff, Start Strong Bronx staff, and the creators of the Fourth R curriculum. Survey questions were vetted for age-appropriate language and comprehension by staff at the Center for Court Innovation, who regularly work with middle-school students.

In addition to the 141 questions¹⁶ included in the baseline survey, follow-up surveys added one control question asking students whether they had previously participated in the Fourth R program. Reference periods for the T1 and T2 follow-up survey were limited to the past three months in most instances (drug and alcohol use questions were limited to the past 30 days), whereas the reference period for baseline surveys was “since the beginning of this school year.” This difference in reference periods reflects the design decision to limit incidents to those experienced *in school* (as opposed to at home or in the community). While this creates a slightly abbreviated reference period for baseline survey responses (generally one to two months), we ultimately felt that the outcomes examined as part of the program evaluation should be confined to those events over which the program—and the schools—feasibly had some control. Beyond this difference in reference periods, questions included across the three survey periods were identical. A scannable version of the survey was created by an independent survey company.

Survey Response

Table 2.6 presents response rates for the three waves of surveys. A total of around 1,100 surveys were collected at each wave. Three-quarters of students completed surveys at T2 and baseline; response rates were lower (69%) at T1. Between parental and student declines, an additional 11-12% of students refused to complete (or were prohibited from completing) the survey. The remaining 12% (baseline) to 19% (T1) of students were either not in attendance or not available to complete the survey for another reason. Flow of student response over the three survey waves is illustrated in Figure 2.1. Response rates by school are presented in Appendix E.

Despite reasonably high response rates, the pseudo-identifier used to link surveys across waves proved problematic. In order to protect respondent anonymity, students were asked to provide the first two letters of their first name, the numerical month and day of their birth, and the first letter of their last name. Together with school number, an indicator of class section, age (with realistic increases allowed from baseline to follow-ups), and respondent sex, these fields were intended to create a unique linking identifier. However, responses clearly indicate that students had trouble accurately completing the identification fields, in spite of explicit instructions provided by onsite research assistants.

¹⁶ Several of the 141 items are included as part of multi-part questions; therefore question numbering in the survey instrument (Appendix D only goes up to 41.

Table 2.5. Survey Domains

| Domain | Total # of Items | Source(s) |
|--|-------------------------|---|
| Unique Identifier | 3 ¹ | CCI |
| Demographics | 5 | YRBS 2007; PMEDS; Add Health Survey |
| Contamination Controls | 4 ² | Taylor et al. 2009 Survey (Adapted) |
| Perceived School Safety | 5 | Youth Behaviour Survey Grade 8 (Adapted); |
| School Violence Victimization & Perpetration | 13 | YRBS 2007; Wolfe et al. 2009 (Adapted) |
| Peer Violence/Bullying Victimization & Perpetration | 14 | Taylor et al. 2009 Survey (Adapted) |
| Dating History | 2 | UAHRBS; Taylor et al. 2009 Survey |
| Dating Violence Victimization & Perpetration | 24 | Taylor et al. 2009 Survey (Adapted) |
| Sexual Harassment/Assault Victimization & Perpetration | 22 | Taylor et al. 2009 Survey (Adapted) |
| Attitudes Toward Violence | 10 | Youth Behaviour Survey Grade 8 |
| Knowledge About Violence | 4 | CCI; Taylor et al. 2009 Survey |
| Behavioral Intentions to Respond to Violence/Pro-Social Behavior | 15 | Youth Behaviour Survey Grade 8 |
| Sexual Behavior | 8 | YRBS 2007; CCI; PMEDS (Adapted) |
| Substance Abuse | 12 | YRBS 2007; UAHRBS (Adapted); CCI |

Sources:

- (1) Add Health Survey: The National Longitudinal Study of Adolescent Health (Add Health).
- (2) CCI: Original item developed by CCI.
- (3) PMEDS: The Prevention Minimum Evaluation Data Set.
- (4) UAHRBS: Understanding Adolescent Health Risk Behaviors Survey.
- (5) Wolfe et al. 2009: The original Fourth R evaluation tool.
- (6) Youth Behaviour Survey Grade 8. 2011. CAMH Centre for Prevention Science.
- (7) YRBS 2007: New York City Youth Risk Behavior Survey 2007 Survey Version.

¹ In addition to the items included in the survey instrument, school and section number/name were used as identification variables.

² Follow-up surveys included five contamination questions (including a question about past exposure to the Fourth R).

Due to inaccurate responses to identifying questions, matching respondents across survey waves was not straightforward. After utilizing multiple algorithms and procedures to match respondents,¹⁷ 63% of T1 and 60% of T2 respondents were matched to the same students at baseline. It is not possible to determine with certainty the extent to which non-response at follow-up reflects: (1) actual non-response (i.e., the same students were not present in class on the day of surveying and/or did not answer both the baseline and T1 and/or T2 surveys) or (2) matching problems (students who in fact answered both surveys were not successfully matched). However, despite the laboriousness of the matching process, available evidence suggests that it was largely successful, and that non-response largely reflects true non-response at either baseline or the given follow-up period, which largely, although not exclusively, reflects attendance problems at the target schools.¹⁸

Final analyses were limited to successfully-matched surveys, leaving a total of 745 cases (570 experimental, 175 quasi-experimental comparison) for baseline to T1 analyses and 709 cases (517 experimental, 192 quasi-experimental comparison) for baseline to T2 analyses.

Background differences between the successfully matched and follow-up missing (due to nonresponse or coding disparities) samples are presented in Appendix F. Students whose surveys were not successfully linked were older, more likely to be male, had lived in the U.S. for less time, were less likely to be living with two parents, and were more likely to have ever dated.¹⁹ Those students whose follow-up surveys were missing were otherwise similar to students whose surveys were successfully matched across survey waves.

Given the final matched sample size of just over 500 experimental study cases (around 250 students per experimental study group) available for all main program impact analyses, we will be able to detect as significant an effect of 13% or more, utilizing standard assumptions (i.e., i.e., .50 for one of the two subgroups, 80% power, and $\alpha = .05$). As is always the case when using standard conservative assumptions, actual power will be greater for most analyses (e.g., whenever both means tend either to be high or low rather than near the midpoint).

¹⁷ In order to maximize matching across survey waves, we adopted an iterative strategy. First, any identical matches on all eight fields (school id, section id, first two letters of first name, month of birth, day of birth, first letter of last name, age, sex) were considered a successful match. Next, we accepted matches on seven of the eight fields. Then we accepted matches on six fields plus a first initial match only on the first name field. Finally, we manually reviewed all unmatched cases and looked for apparent typos (e.g., “1” rather than “11” entered for birth day) or instances of missed matches due to poor penmanship that was incorrectly scanned (e.g., “H” misread as “A”).

¹⁸ Given the baseline and T2 response rates, we would anticipate that around 57% of survey respondents would have completed surveys at both waves (i.e., $.75 * .76 = .57$); slightly lower match rates would be anticipated at T1 (i.e., $.75 * .69 = .52$). Therefore, despite matching issues, it is likely that most students whose completed follow-up survey at T1 (34%) or T2 (40%) could not be successfully matched across survey waves because they did not complete a baseline survey.

¹⁹ Several of the measures on which the matched and unmatched samples vary are predictive of outcomes more generally (see Tables 6.7 and 6.8), suggesting that higher-risk students were disproportionately excluded from the final sample. Based on our findings that higher risk students saw greater program impacts (see Table 6.5), the exclusion of these higher-risk students may suggest that program impacts would have been greater, had the unmatched students been included in the final analyses. Therefore, we believe that any bias introduced by the exclusion of these students has resulted in overly conservative estimates of program impacts.

Table 2.6. Survey Implementation

| | Ten Experimental Schools | Three Quasi- Experimental Schools | All 13 Schools |
|--|---|--|---------------------------|
| Total 7th Grade Students, 2011-2012 ¹ | 1,107 | 470 | 1,577 |
| Total 8th Grade Students, 2012-2013 ² | 1,035 | 411 | 1,446 |
| Baseline | | | |
| <i>Completion</i> | | | |
| Total # Surveys Collected | 864 | 319 | 1,183 |
| Baseline Response Rate ³ | 78% | 68% | 75% |
| <i>Refusal</i> | | | |
| Total Parental Declines ⁴ | 31 | 24 | 55 |
| Total Student Declines | 83 | 59 | 142 |
| Baseline Refusal Rate ⁵ | 10% | 18% | 12% |
| <i>Missing (absent, etc.)</i> | 12% | 14% | 12% |
| T1 Follow-Up | | | |
| <i>Completion</i> | | | |
| Total # Surveys Collected | 803 | 291 | 1,094 |
| T1 Response Rate ³ | 73% | 62% | 69% |
| <i>Refusal</i> | | | |
| Total Parental Declines | 35 | 24 | 59 |
| Total Student Declines | 76 | 49 | 125 |
| T1 Refusal Rate ⁵ | 10% | 16% | 12% |
| <i>Missing (absent, etc.)</i> | 17% | 22% | 19% |
| <i>Successfully Matched to Baseline</i> | | | |
| # Successfully Matched to Baseline | 570 | 175 | 745 |
| T1 Successful Match Rate ⁶ | 66% | 55% | 63% |
| T2 Follow-Up | | | |
| <i>Completion</i> | | | |
| Total # Surveys Collected | 810 | 282 | 1,092 |
| T2 Response Rate ³ | 78% | 69% | 76% |
| <i>Refusal</i> | | | |
| Total Parental Declines ⁷ | 12 | 6 | 18 |
| Total Student Declines | 84 | 64 | 148 |
| T2 Refusal Rate ⁵ | 9% | 17% | 11% |
| <i>Missing (absent, etc.)</i> | 13% | 14% | 13% |
| <i>Successfully Matched to Baseline</i> | | | |
| # Successfully Matched to Baseline | 517 | 192 | 709 |
| T2 Successful Match Rate ⁶ | 60% | 60% | 60% |

¹ Information obtained via the New York State Department of Education Report Card at <https://reportcards.nysed.gov>.

² Information obtained via the New York City Department of Education Class Size Report at <http://schools.nyc.gov/AboutUs/data/classsize/classsize20130215.htm>.

³ T1 Response Rate = Total # of surveys collected/Total # 7th grade students, 2011-2012; T2 Response Rate = Total # of surveys collected/Total # 8th grade students, 2012-2013.

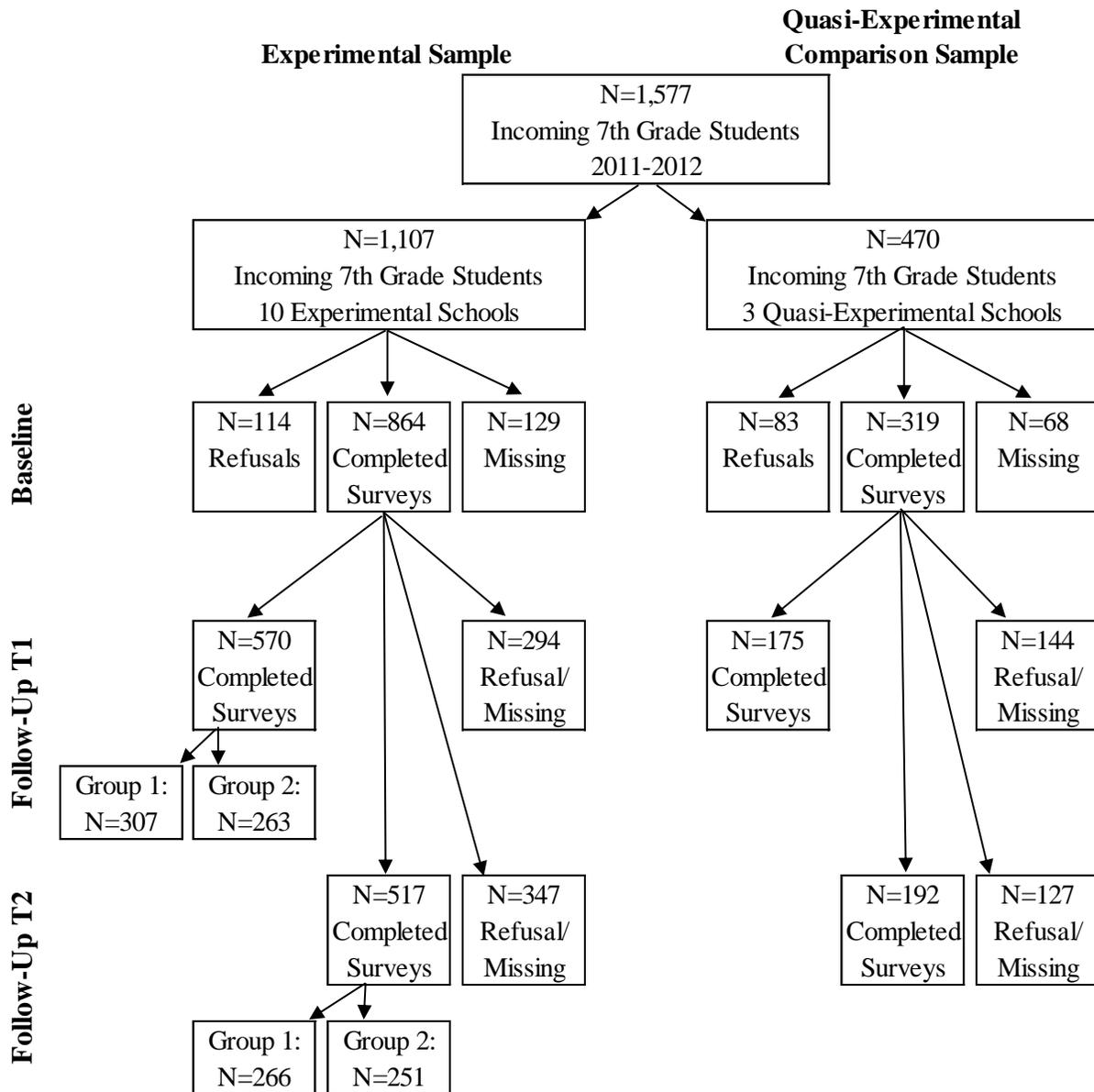
⁴ Three additional parental declinations were received after the baseline survey was administered.

⁵ T1 Refusal Rate = (Total # parental declines + Total # student declines)/Total # 7th grade students, 2011-2012; T2 Refusal Rate = (Total # parental declines + Total # student declines)/Total # 8th grade students, 2012-2013.

⁶ T1 Match Rate = Total # of T1 Surveys Collected/Total # of Baseline Surveys Collected; T2 Match Rate = Total # of T2 Surveys Collected/Total # of Baseline Surveys Collected.

⁷ One additional parental declination was received after the baseline survey was administered.

Figure 2.1
Survey Completion Flow Diagram



Process Evaluation and Fidelity Analysis

The process evaluation (see results in Chapters 3 and 4) documents the adaptation of the curriculum for the Bronx, the implementation process, and the extent to which the implementation of the Fourth R remained faithful to the original program model. Data sources included:

- Program Documents. Documents reviewed included official Fourth R curriculum materials provided to teachers; the original funding request and subsequent annual reports

submitted to RWJF by Start Strong Bronx; and documents distributed to schools informing them about the program, the evaluation, or other related topics.

- Interviews with Key Staff at Start Strong Bronx: Interviews were conducted with both the Start Strong Bronx Director and Program Coordinator to obtain additional background on the project planning and implementation. (Whereas Start Strong staff did not literally implement the curriculum, Start Strong oversaw implementation, including training, fidelity tracking, and ongoing technical assistance, as further indicated below.)
- Training Observations. Teachers attended a full day (six-hour) training led by Start Strong Bronx to prepare for the Fourth R in September 2011, prior to program implementation. Researchers attended the training, took notes, and answered research-related questions.
- Teacher Fidelity Logs. Teachers were required to complete implementation reports for Start Strong Bronx as part of programmatic efforts to document fidelity to the program model. In these reports, teachers indicated whether or not they completed lessons, activities, and homework, and responded to a series of questions on student engagement, sex differences, and suggestions for improvement by Unit and Lesson (a sample is available as Appendix G).
- Teacher Interviews. Interviews were conducted with teachers who implemented the Fourth R program as part of the experimental study. A total of seven teachers from six of the experimental schools were interviewed. The interviews were conducted at the end of the seventh-grade school year (T1), after Fourth R program implementation. Interviews elicited information regarding program content and appropriateness, logistics of program implementation, program impact on students, and suggestions for improvement. Teachers who participated in focus groups received a \$25 donation to their classroom.
- Student Focus Groups. Students from three experimental schools were recruited for a series of three sex-segregated focus groups at the end of the seventh-grade school year (T1). Turnout for these groups was low, and two of the students completed individual interviews and the remaining three students participated in a true focus group. Focus groups at one of the three schools were cancelled altogether. Four more sex-segregated focus groups were held at the end of the eighth-grade school year (T2) with better turnout (N=24). Student focus group responses informed both the process and impact evaluations. Relevant to the process evaluation, students were asked to reflect on program implementation and to provide suggestions for improvement. Students who participated in the focus groups were given a \$10 cash honorarium in exchange for their time.

Assessing Program Fidelity

Program fidelity refers to the degree to which the delivery of the program adheres to the model as intended by the program developers (Dane and Schneider 1998; Domitrovich and Greenberg 2000; Mowbray et al. 2003). Fidelity can be described across five areas:

1. Program adherence is the extent to which components are delivered as intended by the model. This usually refers to measurements of program component completion.
2. Quality of delivery refers to the way in which the program was delivered. This includes measures of teacher preparedness, use of relevant examples, and ability to respond to questions.

3. Program exposure is often described as dosage and is the amount of the program delivered compared to the amount that is prescribed by the model.
4. Participant responsiveness refers to the level of participant's engagement in the program.
5. Program differentiation refers to the extent to which the program components are distinguishable from each other and which components, if any, are essential to program success (Durlak and DuPre 2008; Fagan et al. 2008; Mowbray et al. 2003).

Most program evaluation research focuses on adherence and exposure; however, the comprehensive process evaluation of the Fourth R program allowed for at least some examination across four of the five dimensions of program fidelity, providing a more inclusive picture of program implementation. We do not include a measure of program differentiation. While considered one of the components of fidelity, program differentiation actually does not have to do with whether the program is administered as intended, but is, instead, a measure of which components do or do not impact program outcomes. Analysis of this dimension was beyond the scope of the current project, as delivery of separate program components did not vary enough among the treatment sample. Table 2.7 summarizes the process evaluation components that were used to examine the four remaining dimensions of program fidelity. It is worth noting that, despite best efforts to capture multiple components of program fidelity, our primary fidelity measure—the fidelity score described in detail below—best captures program exposure. Further discussion of the limitations of the fidelity score is included in Chapter 4.

As indicated in the table, teacher fidelity logs were the primary source of information for assessing program fidelity across the domains. All participating teachers were asked to complete fidelity logs throughout the year during which they implemented the Fourth R in their classroom. Logs could be filled out on paper or using an online system supported by RWJF Start Strong. Logs included every possible activity (e.g., presentation of introductory materials, video, exercise, homework) for each Unit and Lesson. Teachers were instructed to indicate whether each specific activity was completed or not. Teachers were also asked to indicate whether there were any interruptions to the lesson, whether lessons were appropriate and relevant to their students, whether any activities were particularly well- (or poorly-) received, whether reception varied by male and female students, and whether there was sufficient time to implement the materials. A text field was available for teachers to provide additional program feedback. The completion rate was 100%. All of the teachers who taught the Fourth R completed the fidelity log for all of the units which they taught.²⁰

²⁰ No teachers were asked to complete fidelity tracking logs for control class sections. However, based on conversations with control teachers (and those dually assigned to teach both conditions), we feel relatively certain that Fourth R program materials were not introduced in control sections. For further discussion, see Chapter 8.

Table 2.7. Program Fidelity by Evaluation Components

| Dimension of Program Fidelity | Relevant Evaluation Components |
|-------------------------------|---|
| Program Adherence | <ul style="list-style-type: none"> ▪ Teacher fidelity log ▪ Teacher interviews |
| Quality of Delivery | <ul style="list-style-type: none"> ▪ Teacher fidelity log ▪ Training observations ▪ Teacher interviews ▪ Student focus groups |
| Program Exposure | <ul style="list-style-type: none"> ▪ Teacher fidelity log |
| Participant Responsiveness | <ul style="list-style-type: none"> ▪ Teacher fidelity log ▪ Teacher interviews ▪ Student focus groups |
| Program Differentiation | <ul style="list-style-type: none"> ▪ <i>Not measured</i> |

At the end of the study period, research staff accessed teacher fidelity logs through the RWJF Start Strong online system (Start Strong Bronx staff entered all paper fidelity logs into the online system). Results were aggregated and fidelity index scores were developed for each school, essentially measuring program exposure and adherence. Since the Fourth R does not require teachers to complete every activity or homework and provides a flexible framework for Unit and Lesson completion, no teacher would be expected to achieve a 100% fidelity score. As a reminder, Fourth R consists of three major Units: (1) Personal Safety and Injury Prevention, (2) Healthy Growth and Sexuality, and (3) Substance Use and Abuse. Each unit has seven Lessons (and multiple activities, sessions, and homework for each Lesson). Lesson and Unit completion scores were calculated by school, teacher, and class. To compute fidelity scores, the total number of items (e.g., introductions, activities, lessons, homework) completed were divided by the total possible number of items for each of the three units, resulting in a section average. Schools with multiple treatment sections were averaged to create a unit average for the school. Finally, scores across the three units were averaged to create a mean fidelity score for each school. Table 2.8 shows fidelity scores for each of the ten experimental schools, including a score for each unit and a final mean score representing fidelity across all three units. Fidelity scores across each of the seven lessons for each of the three units are presented in Table 2.9. (For a sample of the types of lesson items that comprise each lesson, see Appendix H.)

The mean fidelity score is used in two primary ways in this report. First, program fidelity is reported in Chapter 4 as part of the discussion of program implementation. In that context, the scores serve as measures of the five fidelity domains above. Second, mean fidelity scores were included in the impact models included in Chapter 6, in order to determine whether schools in which the Fourth R was implemented with greater fidelity to the program model saw increased program effects. Impact models are described further in the next section; limitations of the fidelity analysis are described in subsequent chapters.

Table 2.8. Program Fidelity by School

| | % of all Unit 1 Activities Completed | % of all Unit 2 Activities Completed | % of all Unit 3 Activities Completed | Mean Fidelity Score, Units 1-3 |
|--------------------------|---|---|---|---|
| School E1 | 88% | 83% | 67% | 0.79 |
| School E2 | 38% | 35% | 33% | 0.35 |
| School E3 | 50% | 52% | 69% | 0.57 |
| School E4 | 85% | 83% | 53% | 0.73 |
| School E5 | 78% | 37% | 52% | 0.56 |
| School E6 | 76% | 74% | 82% | 0.77 |
| School E7 | 79% | 82% | 85% | 0.82 |
| School E8 | 43% | 53% | 60% | 0.52 |
| School E9 | 100% | 79% | 80% | 0.86 |
| School E10 | 73% | 76% | 54% | 0.75 |
| <i>Mean, All Schools</i> | 71% | 65% | 64% | 0.67 |

Data and Measures

Individual-Level Characteristics

Individual-level measures are taken from the baseline survey and include respondent age, sex, race, living arrangement, tenure in the U.S., and sexual orientation at baseline. Fields with low response (especially sexual orientation) are excluded as controls in final multivariate models in order to maximize sample sizes.

School-Level Characteristics

School-level measures include those described previously in this chapter: total enrollment, size of the seventh-grade cohort, economic need index, percent individualized education programs, percent English language learners, teaching experience, attendance and suspension rates, overall DOE report card score, mean program fidelity score. In order to determine whether schools with specific characteristics might see greater (or lesser) program impacts, school-level measures were introduced into multivariate models. Another possible way to account for the nested nature of the data (i.e., students situated in experimental sections situated in schools) would have been to utilize hierarchical linear modeling (HLM). However, much of our data was available only at the school level (as opposed to the *section* level), resulting in a site-level N of only ten experimental schools, too few for an HLM framework.

Outcome Measures

As described in the next chapter, the Fourth R curriculum is designed to address an array of interrelated behaviors, including peer and dating violence, sexual harassment/assault, drug and alcohol use, and unsafe sex behaviors. To simplify the analysis of these multiple outcomes, we used factor analysis to create theoretically-based summary variables across five primary and three secondary outcome domains: (1) dating violence (victimization and perpetration); (2) peer violence/bullying (victimization and perpetration); (3) sexual harassment/assault (victimization

Table 2.9. Calculating Fidelity Scores

| UNIT | LESSON | Total Lesson Items¹ | Lesson Completion Rate | Unit Completion Rate |
|---|--|---------------------------------------|-------------------------------|-----------------------------|
| UNIT 1 Personal Safety & Injury Prevention | Lesson 1: Focus on healthy relationships | 5 | 0.87 | 0.81 |
| | Lesson 2: Barriers to Healthy Relationships | 5 | 0.75 | |
| | Lesson 3: Contributors to Violence | 4 | 0.79 | |
| | Lesson 4: Conflict and Conflict Resolution | 4 | 0.85 | |
| | Lesson 5: Media Violence | 6 | 0.72 | |
| | Lesson 6: Conflict Resolution Skills | 3 | 0.88 | |
| | Lesson 7: Action in the School and Community | 3 | 0.85 | |
| UNIT 2 Healthy Growth & Sexuality | Lesson 1: Focus on healthy sexuality | 7 | 0.65 | 0.70 |
| | Lesson 2: Sexuality in the Media | 3 | 0.81 | |
| | Lesson 3: Responsible Sexuality | 2 | 0.93 | |
| | Lesson 4: Preventing Pregnancies and STIs | 5 | 0.60 | |
| | Lesson 5: Assertiveness Skills to Deal with Pressure in Relationships | 5 | 0.68 | |
| | Lesson 6: Sexuality: Responsibility and Consequences | 8 | 0.55 | |
| | Lesson 7: Sexual Decision Making/Community Resources | 4 | 0.68 | |
| UNIT 3 Substance Use & Abuse | Lesson 1: Myth and Facts/Definitions | 4 | 0.70 | 0.67 |
| | Lesson 2: Effects of Substance Use and Abuse | 2 | 0.76 | |
| | Lesson 3: Making Informed Choices About Smoking | 4 | 0.52 | |
| | Lesson 4: Factors Influencing Decisions about Drug Use | 2 | 0.70 | |
| | Lesson 5: Building Skills to Avoid Pressure to Use Substances | 3 | 0.51 | |
| | Lesson 6: Practicing Skills/Binge Drinking | 3 | 0.70 | |
| | Lesson 7: Coping/Making the Connection between Drug Use, Sex, and Violence/Community Resources | 2 | 0.76 | |

¹ Items refer to total number of lectures, homeworks, exercises, and activities for each lesson. Teachers are not required to complete all items and may select the ones they think are most appropriate.

Table 2.10. Scaled Outcome Measures

| | Mean | S.D. |
|---|------|---------|
| DATING VIOLENCE | | |
| Victimization ($\alpha=0.683$) | | |
| Said something to hurt feelings | 14% | 0.34620 |
| Slapped or scratched | 5% | 0.21757 |
| Insulted/made fun of in front of others | 5% | 0.21872 |
| Not let do things with other people | 14% | 0.34251 |
| Pushed, grabbed, shoved, or kicked | 4% | 0.19894 |
| Made describe where they were every minute of the day | 12% | 0.32065 |
| Hit with fist or something hard | 2% | 0.14835 |
| Threatened to hurt | 1% | 0.11374 |
| Forced to do something sexual | 4% | 0.20682 |
| Experienced 2+ of the above | 34% | 0.47533 |
| Perpetration ($\alpha=0.697$) | | |
| Said something to hurt feelings | 12% | 0.33050 |
| Slapped or scratched | 5% | 0.21316 |
| Insulted/made fun of in front of others | 3% | 0.17718 |
| Not let do things with other people | 6% | 0.24381 |
| Pushed, grabbed, shoved, or kicked | 3% | 0.18230 |
| Made describe where they were every minute of the day | 6% | 0.23275 |
| Hit with fist or something hard | 2% | 0.13029 |
| Threatened to hurt | 1% | 0.08720 |
| Forced to do something sexual | 1% | 0.09749 |
| Experienced 2+ of the above | 23% | 0.41942 |
| SEXUAL HARASSMENT/ASSAULT | | |
| Victimization ($\alpha=0.807$) | | |
| Made sexual comments/jokes/gestures/looks | 26% | 0.43813 |
| Showed sexual pictures/messages/notes | 9% | 0.28263 |
| Sent sexual text messages/emails/voicemails/instant messages | 8% | 0.26379 |
| Posted sexual messages/comments/photos online | 5% | 0.22058 |
| Called gay/lesbian, as an insult | 17% | 0.37992 |
| Touched/grabbed/pinched in a sexual way | 15% | 0.35598 |
| Pulled clothing off/down | 4% | 0.19632 |
| Forced kiss | 12% | 0.32897 |
| Forced sexual activity | 2% | 0.14678 |
| Experienced 2+ of the above | 41% | 0.49234 |
| Perpetration ($\alpha=0.717$) | | |
| Made sexual comments/jokes/gestures/looks | 7% | 0.25942 |
| Showed sexual pictures/messages/notes | 1% | 0.11364 |
| Sent sexual text messages/emails/voicemails/ instant messages | 2% | 0.13878 |
| Posted sexual messages/comments/photos online | 1% | 0.08066 |
| Spread sexual rumors | 1% | 0.10096 |
| Called gay/lesbian, as an insult | 9% | 0.28870 |
| Touched/grabbed/pinched in a sexual way | 4% | 0.19429 |
| Pulled clothing off/down | 1% | 0.10106 |
| Forced kiss | 4% | 0.20081 |
| Forced sexual activity | 1% | 0.09150 |
| Experienced 2+ of the above | 19% | 0.39311 |

Table 2.10. Summary Outcome Measures (Continued)

| | Mean | S.D. |
|---|--------|---------|
| PEER VIOLENCE/BULLYING | | |
| Victimization ($\alpha=0.777$) | | |
| How many days: Threatened/injured w/weapon on school property ¹ | 0.1019 | 0.48356 |
| How many days: Threatened/injured w/weapon on way to/from school ¹ | 0.0757 | 0.40169 |
| Pushed, hit, kicked | 36% | 0.47986 |
| Slapped or scratched | 21% | 0.40658 |
| Beat up | 3% | 0.17669 |
| Assaulted with a knife or gun | 2% | 0.12461 |
| Threatened to hurt | 16% | 0.36389 |
| Insulted/made fun of | 44% | 0.49705 |
| Left out | 16% | 0.36349 |
| Spread rumors/gossip | 32% | 0.46627 |
| Told others not to be friends with | 18% | 0.38165 |
| Pressured to do something | 16% | 0.36749 |
| Electronically bullied | 9% | 0.28474 |
| Followed, watched, spied on | 9% | 0.29111 |
| Number of types of violence, past 3 months ² | 2.0944 | 2.29646 |
| Perpetration ($\alpha=0.759$) | | |
| Pushed, hit, kicked | 34% | 0.47405 |
| Slapped or scratched | 18% | 0.38420 |
| Beat up | 8% | 0.27119 |
| Assaulted with a knife or gun | 1% | 0.07857 |
| Threatened to hurt | 10% | 0.29954 |
| Insulted/made fun of | 31% | 0.46446 |
| Left out | 11% | 0.30739 |
| Spread rumors/gossip | 13% | 0.33263 |
| Told others not to be friends with | 8% | 0.26593 |
| Pressured to do something | 6% | 0.23560 |
| Electronically bullied | 4% | 0.18974 |
| Followed, watched, spied on | 2% | 0.15592 |
| Number of types of violence, past 3 months ³ | 1.4027 | 1.87328 |
| DRUG & ALCOHOL USE ($\alpha=0.668$) | | |
| Smoked cigarettes, past 30 days | 3% | 0.16395 |
| Drank alcohol, past 30 days | 11% | 0.31446 |
| Smoked marijuana, past 3 months | 4% | 0.20572 |
| Used inhalants, past 3 months | 4% | 0.18624 |
| Used Rx meds (recreational use), past 3 months | 1% | 0.10527 |
| Used other hard drugs, past 3 months | 1% | 0.09302 |
| Binge drinking, past 3 months | 8% | 0.26602 |
| SCHOOL SAFETY ($\alpha=0.884$)⁴ | | |
| Feel safe: Classrooms | 4.4630 | 0.95141 |
| Feel safe: School hallways/stairwells | 3.8735 | 1.19798 |
| Feel safe: School grounds/parking lot | 3.5979 | 1.32603 |
| Feel safe: School bathrooms | 3.8176 | 1.28890 |
| Feel safe: Cafeteria | 4.3020 | 1.12199 |

Table 2.10. Summary Outcome Measures (Continued)

| | Mean | S.D. |
|--|--------|---------|
| POSITIVE ATTITUDES/BELIEFS ($\alpha=0.759$)⁵ | | |
| O.K. for me to hit someone to get them to do what I want | 1.1673 | 0.48406 |
| Sometimes a person doesn't have any choice but to fight. | 2.1414 | 1.10522 |
| If someone disrespects me, they deserve to have rumors spread about them. | 1.4125 | 0.73993 |
| If I walk away from a fight, I'd be a coward. | 1.9134 | 1.13100 |
| Sometimes I have only two choices: get punched or punch the other kid first. | 1.9587 | 1.10245 |
| If people do something to make me really mad, they deserve to be beaten up. | 1.7200 | 0.99531 |
| It's okay to hit someone who hits you first. | 2.7417 | 1.18022 |
| Gossip and rumor spreading are just what teenagers do and it's not a big deal. | 1.6047 | 0.93019 |
| O.K. for my group of friends to ignore someone if we are mad at that person. | 1.7630 | 0.98107 |
| As long as you're joking, what you say/do can't be considered sexual harassment. | 1.7110 | 1.00386 |
| Boys cannot be sexually harassed by girls. | 1.8845 | 1.18587 |
| There are better ways to solve problems than fighting. | 3.0629 | 1.18728 |
| A guy who doesn't fight back when other kids push him around will lose respect. | 2.1948 | 1.18712 |
| If a person is not physically harming someone, then they are not really abusive. | 1.8378 | 1.05757 |
| I don't need to fight because there are other ways to deal with being mad. | 2.9707 | 1.16986 |
| When my friends fight, I try to get them to stop. | 3.0904 | 1.10835 |
| I try to talk out a problem instead of fighting. | 2.9222 | 1.11869 |
| Violence between dating partners is a personal matter and people shouldn't interfere. | 2.3238 | 1.23543 |
| A guy shows he really loves his girlfriend if he gets in fights with other guys about her. | 2.1263 | 1.14822 |
| Girls sometimes deserve to be hit by the boys they date. | 1.1277 | 0.47087 |
| Boys sometimes deserve to be hit by the girls they date. | 1.5094 | 0.93208 |
| There are times when violence between dating partners is okay. | 1.3229 | 0.69939 |
| RESPONSE TO VIOLENCE ($\alpha=0.896$)⁶ | | |
| Bullying, Self: Talk to a friend | 2.2802 | 0.75665 |
| Bullying, Self: Talk to a parent/guardian | 2.2531 | 0.83422 |
| Bullying, Self: Talk to school staff | 2.0964 | 0.84360 |
| Bullying, Self: Talk to trusted adult | 2.2557 | 0.81422 |
| Bullying, Self: Ignore | 1.5667 | 0.76942 |
| Bullying, Self: Avoid bully | 2.0789 | 0.84467 |
| Bullying, Self: Call/text hotline | 1.6300 | 0.78974 |
| Bullying, Friend: Talk to a friend | 2.5616 | 0.69463 |
| Bullying, Friend: Talk to a parent/guardian | 2.0791 | 0.85324 |
| Bullying, Friend: Talk to school staff | 2.1540 | 0.84917 |
| Bullying, Friend: Talk to trusted adult | 2.1663 | 0.82720 |
| Bullying, Friend: Ignore | 1.3517 | 0.64661 |
| Bullying, Friend: Avoid friend | 1.3021 | 0.62616 |
| Bullying, Friend: Call/text hotline | 1.7028 | 0.81810 |
| Dating Violence, Self: Talk to a friend | 2.2818 | 0.81040 |
| Dating Violence, Self: Talk to a parent/guardian | 2.0805 | 0.8848 |
| Dating Violence, Self: Talk to school staff | 1.8053 | 0.86388 |
| Dating Violence, Self: Talk to trusted adult | 2.0636 | 0.86033 |
| Dating Violence, Self: End relationship | 2.5471 | 0.70035 |
| Dating Violence, Self: Call/text hotline | 1.5791 | 0.78267 |
| Dating Violence, Self: Stay in relationship | 1.3759 | 0.65396 |
| Dating Violence, Friend: Talk to a friend | 2.5101 | 0.73252 |
| Dating Violence, Friend: Talk to a parent/guardian | 1.9505 | 0.88121 |
| Dating Violence, Friend: Talk to school staff | 1.8424 | 0.86288 |
| Dating Violence, Friend: Talk to trusted adult | 1.9843 | 0.86325 |
| Dating Violence, Friend: Ignore | 1.3325 | 0.64359 |
| Dating Violence, Friend: Avoid friend | 1.2424 | 0.57886 |
| Dating Violence, Friend: Call/text hotline | 1.5980 | 0.78962 |

Note: Unless otherwise indicated, variables are dichotomous, coded 0=no, 1=yes.

¹ Range: 0 (0 days) to 4 (6 or more days).

² Count variable. Range: 0 to 11.

³ Count variable. Range: 0 to 6.

⁴ Range: 1 (very unsafe) to 5 (very safe).

⁵ Range: 1 (most desirable/positive belief) to 4 (least desirable/positive belief).

⁶ Range: 1 (not likely) to 3 (likely).

Table 2.11. Average Scores on Scaled Outcome Measures, by Experimental Condition¹

| | TOTAL N ² | ALL BASELINE | |
|---|-------------------------|--------------|---------|
| | | 4th R | Control |
| | 511 | 263 | 248 |
| VIOLENCE, HARASSMENT, & BULLYING | | | |
| Dating Violence³ | | | |
| Mean Score, Victimization Scale ⁶ | 0.04 | 0.04 | 0.04 |
| Mean Score, Perpetration Scale ⁷ | 0.06 | 0.06 | 0.06 |
| Sexual Harassment/Assault | | | |
| Mean Score, Victimization Scale ⁸ | 13.00 | 0.13 | 0.12 |
| Mean Score, Perpetration Scale ⁹ | 0.04 | 0.04 | 0.05 |
| Peer Violence/Bullying | | | |
| Mean Score, Victimization Scale ⁴ | 0.19 | 0.19 | 0.19 |
| Mean Score, Perpetration Scale ⁵ | 0.15 | 0.15 | 0.16 |
| DRUG AND ALCOHOL USE | | | |
| Mean Score, Drug/Alcohol Use Scale ⁴ | 0.04 | 0.03 | 0.05+ |
| PERCEIVE SCHOOL AS SAFE | | | |
| Mean Score, Perception of Safety Scale ⁴ | 0.76 | 0.74 | 0.78 |
| POSITIVE ATTITUDES/BELIEFS | | | |
| Mean Score, Positive Attitudes Scale ⁴ | 0.34 | 0.35 | 0.33 |
| PROSOCIAL BEHAVIORS | | | |
| Mean Score, All Pro-Social Responses ⁴ | 0.57 | 0.56 | 0.58 |
| Bullying | | | |
| Mean Score, Response to Bullying (Self) ⁴ | 0.65 | 0.65 | 0.66 |
| Mean Score, Response to Bullying (Others) ⁴ | 0.54 | 0.53 | 0.56 |
| Dating Violence | | | |
| Mean Score, Response to Dating Violence (Self) ⁴ | 0.57 | 0.56 | 0.59 |
| Mean Score, Response to Dating Violence (Others) ⁴ | 0.47 | 0.47 | 0.48 |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Results from Quasi-Experimental comparison schools are not presented here.

² Only those respondents whose surveys were successfully matched to T2 responses are included in the total N.

³ Of those who dated someone within the past three months.

⁴ Range: 0 to 1.

⁵ Range: 0 to 0.92.

⁶ Range: 0 to 0.80.

⁷ Range: 0 to 0.50.

⁸ Range: 0 to 0.82.

⁹ Range: 0 to 0.55.

and perpetration); (4) sexual activity; (5) drug and alcohol use; (6) perceptions of school safety; (7) subscription to positive beliefs (e.g., anti-violence, rejection of gender stereotypes); and (8) pro-social response to peer and dating violence. We used a standard Cronbach's alpha (α) to measure scale reliability, with a cut-off of $\alpha \geq 0.69$ (slightly lower than the standard 0.70 value). Using an iterative process, we added or omitted additional items to maximize the alpha for each scale. Table 2.10 presents the final items included in each of the newly-created summary outcome variables, as well as the mean score and standard deviation for each of the component items (taken from baseline). Alphas reported in the table represent scores based on baseline data; in all instances, alphas at T1 and T2 were equal to or (usually) greater than those at baseline. Mean scores for each of the scaled outcome measures are presented by experimental group assignment in Table 2.11.

Several additional summary measures were explored but ultimately abandoned, due to substandard alphas. Likely due to relatively low baseline rates of sexual activity among the sample and large amounts of missing data on the remaining sexual activity items, none of the attempts to scale sexual activity variables (e.g., sexually active, condom use, knowledge about STIs, sexual empowerment) were successful. Therefore, a single dichotomous outcome item measures whether respondents are sexually active.²¹

Likewise, attempts to scale subcategories of violence and harassment (e.g., physical violence, severe violence, emotional/psychological violence) were unsuccessful. While we were not able to create an acceptable scaled measure, we did create a series of simple dichotomous variables measuring any physical violence victimization or perpetration. The new *physical dating violence* measures include respondents who reported at least one of the following: slapped or scratched; pushed, grabbed, shoved, or kicked; hit with a fist or something hard; beat up; assaulted with a gun or knife; or forced to do something sexual. Physical sexual harassment/assault includes respondents who report one or more of the following: touched, grabbed, or pinched; pulled clothing down/off; forced kiss; or forced to do something sexual. Physical bullying includes respondents who report one or more of the following: pushed, hit, or kicked; slapped or scratched; beat up; or assaulted with a weapon.

Upon the recommendation of the creator of the Fourth R curriculum, we also successfully created a general victimization summary measure, which included *any* peer, dating, or sexual harassment victimization. While the alpha for this final measure (0.847) met our threshold, interpretation of findings based on such an inclusive scale were not particularly informative and, thus, the general victimization measure is not included in the report.

While the Fourth R is not designed to *prevent* dating among participants, because the curriculum stresses healthy relationships and empowerment, it is anticipated that the curriculum might have impacts on student dating behavior. Therefore, we also include a dichotomous measure of whether students have ever dated or have recently (within the past three months) dated.

²¹ Students were asked only about consensual sexual activity. Based on the belief that the NYC DOE IRB would not approve anything more explicit for a seventh-grade audience, the specific definition of sexual activity was left unspecified. Students were considered sexually active if they provided a response other than "I have never had sex" to the question, "How old were you when you had sex for the first time?"

Analytic Plan

Main Effects of the Fourth R Curriculum

In order to detect the impact of the Fourth R curriculum on the outcome measures identified above, we conducted a “difference-in-differences” (DiD) test to determine whether changes in mean scores on each outcome of interest differed between the treatment and control groups. DiD is specifically designed for detecting differences in trends between two or more groups over two time periods, wherein one group has been exposed to a treatment (e.g., Fourth R) in the second time period (T1, T2) but not during the first time period (B), and the other group is not exposed to the treatment during either period. The analysis compares the difference in upward or downward trends between the groups and assesses whether these differences achieve statistical significance. Separate DiD analyses were conducted for the two follow-up periods.

Effects of Select Individual-Level Characteristics

In order to determine whether specific subgroups of students (e.g., male students, students who reported greater or lesser perpetration or victimization at baseline) have significantly improved (or diminished) outcomes, we conducted regression analyses (OLS for summary outcome scales and logistic for dichotomous recodes). All models include baseline scores and group assignment (treatment or control) along with select individual-level characteristics. Where appropriate, interaction terms (i.e., group*individual characteristic) are included. Results from the interaction term can then be interpreted as whether individuals with the given characteristic who received the Fourth R curriculum had significantly different outcomes than individuals without that characteristic who received the curriculum. For instance, a model including the interaction term male*group will answer the question whether outcomes for males who received the Fourth R curriculum differed significantly from outcomes for females who received the Fourth R.

Selection of variables to be included in the final multivariate models was informed by initial basic models which included only baseline score, one additional characteristic of interest, and the target outcome. Only variables which reached significance at the $p < .05$ level were included in the final models. These initial analyses allowed for a systematic reduction in the variables to be considered for multivariate models. Separate models were run for the two follow-up periods.

Diffusion Effects

In addition to examining impacts of the Fourth R program among those who received the curriculum, we were interested in determining whether there were any school-wide impacts for students in the ten experimental schools who *did not* receive the curriculum. That is, we sought to test whether, through peer-to-peer or teacher-student contact, some impacts of the Fourth R curriculum were disseminated throughout the student body, reaching even those students randomly assigned to not receive the curriculum directly. Toward this end, we included three additional Bronx middle schools as a quasi-experimental comparison to students across the ten-school experiment. Again, using DiD tests, we examined whether changes across the experimental control sample differed significantly from changes in the quasi-experimental comparison sample. (The experimental control and quasi-experimental comparison samples did not significantly differ on observed individual-level baseline differences, see Table 7.1).

Analysis of Qualitative Data

A variety of qualitative methodologies were used to collect data on the Fourth R program, and different techniques were employed for the analysis of the data. While all data was initially analyzed independently, the qualitative analysis process also allowed for qualitative data triangulation to ensure validity and investigate themes across data sources. Triangulation is well known to increase confidence in the data and to reveal unique findings (Thurmond 2001).

Student focus groups were conducted at the end of both the 2011-2012 (T1) and the 2012-2013 (T2) school years. Audio recordings from the T1 groups were transcribed; these transcripts were analyzed as part of the iterative process for qualitative analysis. Identifying and refining key concepts is part of the iterative process of qualitative research. The review of the transcripts allowed for minor changes in the protocol for the focus groups at T2. After completion of all focus groups, the verbatim transcripts for all focus groups were entered into NVivo 10 qualitative software for analysis. Transcripts were then thematically content-analyzed through standard coding procedure, followed by examination of relationships between themes.

NVivo 10 was similarly used in the analysis of teacher interviews. Two of the interviews were not audio-recorded, so interviewer notes, instead of verbatim transcripts, were used for the analysis. Themes were originally categorized by interview question, and then more complex themes and relationships were analyzed and developed.

Training observations, documents, and Start Strong staff interviews were analyzed without the use of software. Instead, in-depth review and recursive abstraction were used to analyze the data without extensive coding techniques. The data was reviewed extensively and summarized to develop comprehensive overviews of the documents and training observations to be used in conjunction with the analysis of the other qualitative data.

Chapter 3

Planning of the Model

This chapter describes the process of planning and adapting the Fourth R model to be implemented in the Bronx. An overview of the Fourth R curriculum is presented, along with some examples of the types of lessons and activities included in the program. We then describe Start Strong Bronx, the organization that implemented the curriculum as part of the larger RWJF Start Strong project, before detailing the particulars of planning in the Bronx, including choosing a curriculum, recruiting schools, training, and program costs.

The Fourth R Curriculum

The Fourth R is a program designed to promote healthy behaviors related to dating, sexual behavior, bullying, and substance use. It is a school-based interactive curriculum intended to be delivered in classrooms by teachers in middle and high schools. Based on social learning theory and stages of social development, it focuses on improving all healthy relationships in youth's lives, particularly peer and dating relationships. According to the program's developers, the aims of the Fourth R include: 1) helping youth strengthen relationship skills to assist in making safe, responsible choices; 2) addressing the common elements of multiple risk behaviors; 3) counteracting pro-abuse messages from peer culture; 4) emphasizing positive messages around safety and harm reduction; and 5) providing opportunities to develop assets and strengths (youth connections). It emphasizes issues across relationships (e.g., friendships, dating, and sexual relationships) and pressures in adolescence and aims to teach skills that promote healthier and safer decision-making with peers and dating partners (Wolfe et al. 2009; Crooks et al. 2008; Wolfe et al. 2008).

The program was originally designed to be implemented for ninth-grade students by health education or physical education teachers, but was subsequently adapted to be implemented among younger students and in other settings, including English classes. As described below, it was further adapted for implementation with students in the Bronx. Teachers receive a six-hour Fourth R training covering the lessons, activities, and key messages related to teen dating violence and healthy relationships. Teachers are provided with detailed lesson plans, videos, exercises, rubrics, overhead transparencies, and handouts for all lessons (Wolfe et al. 2009). Depending on the lesson, teachers can choose which activities and exercises they prefer to use, although all seven lessons in a unit should be completed to ensure comprehensive unit completion.

The curriculum consists of 21 lessons that can be integrated into any existing health or physical education curriculum. It was originally intended to be implemented in sex-segregated classrooms, but has been used in co-ed classrooms. The original lessons are 75 minutes each and separated into three units, each with seven lessons. The units are:

- 1) Personal Safety and Injury Prevention: Includes information on barriers to healthy relationships, conflict resolution, contributors to violence, and media violence;

- 2) Healthy Growth and Sexuality: Includes healthy sexuality, responsible sexuality, preventing pregnancies and sexually transmitted infections (STIs), sexual decision making, and assertiveness skills to deal with pressure in relationships; and
- 3) Substance Use and Abuse: Includes effects of substance use and abuse, making informed choices, and building skills to avoid pressures to use substances.

The Fourth R aims to engage youth through a variety of exercises and activities as part of each lesson. It includes detailed examples of conflicts experienced by teens, including both dating conflicts and peer bullying. It also makes extensive use of scenarios and role-playing, with the goal of increasing students' problem-solving skills and providing opportunities to practice new skills. For example, role play scenarios are used in Unit One to teach about peer violence and bystander intervention. Role-play is also used in relationship violence scenarios. A wide variety of activities and exercises allow students to engage individually, in pairs, as small groups, or as a class.

The Fourth R program has been implemented widely throughout Canada. In the United States, it has been used in schools in 16 states, including New York. It has also been implemented in Australia, Portugal and Spain. It has been adapted for alternative education and aboriginal populations, Catholic schools, and French- and Spanish-language settings.

Start Strong Bronx

Start Strong Bronx is one of 11 Start Strong: Building Healthy Teen Relationships (hereafter RWJF Start Strong) sites across the country funded by the Robert Wood Johnson Foundation (RWJF) and the Blue Shield of California Foundation, in collaboration with Futures without Violence.²² The nationwide initiative ran from 2008 through 2012 and was designed to prevent teen dating violence and abuse by focusing on middle school-aged youth and teaching them about healthy relationships. Start Strong is one of the largest initiatives of its kind in the United States and its primary funder, RWJF, is one of the largest health-focused foundations in the United States. Throughout the country, Start Strong takes a variety of approaches, including community awareness campaigns, targeted school-based programs, social media campaigns, and other programs. While the exact implementation of the initiative varies by site, each of the 11 Start Strong sites relied upon one of two possible prevention curricula: Safe Dates (Foshee and Langwick 2010) or the Fourth R (Wolfe et al. 2003).

During its tenure, Start Strong Bronx was housed in the Bronx-Lebanon Hospital Center, working closely with grant partners including the Bronx Borough President's Office, New York City Department of Education, Violence Intervention Program, Pregones Theatre, Bronx Clergy Task Force, Men Can Stop Rape, and Sanctuary for Families. The initiative's identified core strategies were education, policy change, community outreach, and social marketing campaigns.

Start Strong Bronx managed the implementation of the Fourth R program in 16 Bronx middle schools, including the ten experimental schools involved in this evaluation.²³ Three other RWJF

²² To learn more about Start Strong, or to learn about the national RWJF evaluation of the initiative as a whole, visit <http://www.rwjf.org/en/research-publications/find-rwjf-research/2013/09/evaluation-of-the-building-healthy-teen-relationships-program.html>

²³ In addition to the Fourth R implementation, Start Strong Bronx worked on several other specific efforts to achieve its goals in the Bronx, including: providing after-school and extracurricular programs for youth aged 11-14; providing workshops for parents on adolescent development and impact of parenting on pre-teens relationships to 75

Start Strong sites also implemented the Fourth R as part of their dating violence prevention work: Providence, Rhode Island; Boise, Idaho; and Wichita, Kansas.²⁴

Start Strong Bronx played a crucial role in recruiting schools to participate in the current evaluation.²⁵ Start Strong and the Center for Court Innovation held a kickoff event in the summer of 2011 for the principals and senior staff of the participating schools, and in September 2011, the designated Fourth R teachers attended a full day, six-hour, Fourth R training and received all program materials. (As discussed below, researchers attended the Fourth R training as part of the evaluation.)

Throughout the study, Start Strong Bronx oversaw the implementation of the curriculum in the experimental schools, including providing supplemental program materials, ensuring that no eighth graders received the Fourth R curriculum during the follow-up study year (2012-2013), confirming that Group 2 teachers were not implementing program materials in control sections, and tracking program fidelity. In fact, the search for funding for the current evaluation of the Bronx implementation was spearheaded by Start Strong Bronx staff. Upon learning that the impact evaluation of the full RWJF Start Strong initiative was to be limited to three sites, all of which were implementing the Safe Dates curriculum, the Start Strong Bronx director began to search for a research partner to conduct an evaluation of the Fourth R implementation in the Bronx.

I knew that I wanted us to have data... I was looking for people to do the [random control] trial... So I was looking around... We were just very excited to start this [evaluation with CCI]. Especially since, when we got the [programming] grant, there was an organization—RTI—attached to do [an evaluation].... And then they realized... that it was either impossible or just too complicated, so they just had to back down [from doing an evaluation of all the Start Strong programs]... It was just not what we were promised and that was a big piece for me, was that evaluation—all of that data—because we were thinking that the whole purpose of it was to develop best practices. And I know that [NYC] Department of Ed won't look at anything that isn't scientifically studied.

Choosing a Curriculum

Upon being notified in November 2008 that the proposed Start Strong Bronx initiative would be funded, project staff began to research the two curricula to decide which they would implement in the Bronx. The project director was drawn to the Fourth R, but was concerned that the New York City Department of Education would not approve the longer curriculum (Safe Dates is nine 50-minute sessions, as opposed to Fourth R's 21 75-minute sessions).

parents each year; creating a Teen Advisory Board, consisting of high school students and supporting their activities including television commercials on bystander intervention and a series called "I Love the Bronx" about positive activities in the Bronx; and training over 50 pediatric residents on how to screen for dating violence and provide referrals to patients.

²⁴ Start Strong Boston initially intended to implement the Fourth R curriculum, but switched to Safe Dates based on logistical concerns shortly after the awards were given.

²⁵ Start Strong Bronx staff members identified schools that might be amenable to the evaluation and, along with the Center's research team, visited potential experimental schools to explain the research proposal to school principals and obtain principal buy-in.

I wanted to do Fourth R because I thought it was more comprehensive, but it was unclear whether the Department of Ed would let us do that many lessons. We had this great liaison [at the NYC DOE]... she somehow talked to principals and worked it out... So she led us through all that and I was really surprised that they said yes [to a 21-lesson program].

The director's primary preference for the Fourth R curriculum over Safe Dates was based on what she saw as the broader scope of the Fourth R.

I had looked at both [Safe Dates and Fourth R]. And I was familiar with Safe Dates and the ...researcher who developed it and all of that, but when I looked at it more closely, I really liked how Safe Dates had this play at the end, I thought that was really creative. But it was just very narrow, as far as all it talked about was dating abuse... [I] looked at both and just thought that Fourth R focused on relationships, but it was all kinds of relationships and skills and it also talked about other risk factors connected with [relationship abuse]. And so I just thought that it was much more... comprehensive about the issue—about how relationships impact substance abuse issues and sexuality and all those things. So I think that it's all interconnected and you can't really separate dating abuse from everything else.

A curriculum that focuses on these interrelated issues was also seen as beneficial from a practical aspect—allowing schools to minimize the amount of additional training teachers must receive.

A lot of school districts want to address all these different issues and I've always thought it's really hard to sell a curriculum on this and [another] on that—there's just so many... hours in a day. So [the Fourth R] is addressing like a couple, like four or so major topics and showing how they all connect.

In addition, Start Strong Bronx staff felt that the staying power of the Fourth R, which relies on teacher-facilitators, might extend beyond the funding period. Because Safe Dates relies on professional facilitators from outside the school, they were concerned that the program would vanish once the RWJF funding period ended.

I really like the Fourth R model because I felt like it has to be institutionalized and it means more to the kids to have their teacher [give them the information]... Because then they could kind of weave it in, throughout the day and keep the content kind of alive. And also... I felt like it was making it part of the school's—it wasn't just this extra, side thing that they did once in awhile, but it was woven into the curriculum in a lot of ways. The big thing, though was, that if the teachers were trained, then it stays. And we knew that [Start Strong Bronx] would only be here a couple of years and this was really the only way that it will stay there, unless we get another agency [to fund Start Strong Bronx].

While Start Strong Bronx staff generally preferred the Fourth R curriculum, staff members did note some drawbacks. The length and density of the program materials created challenges for program implementation.

I do think Fourth R is too dense. I do think that ...the 21 lessons could easily be 42 weeks [because there is so much information to cover]... Looking at it, knowing that the population

we're working with, I mean the first 10 minutes of class is just calming them down. And so, if you have a 45 minute class period, you really only have 35 minutes you can give to it.

Particularly given the conditions of the RWJF funding, which required students to receive at least 17 of the 21 lessons in order to be counted as one of the 2,000 target students, the longer curriculum was sometimes difficult to complete. While program staff initially chose to implement the Fourth R in part because they felt it was more comprehensive than the shorter Safe Dates curriculum, the reality of implementing 21 lessons in a public school setting proved challenging. Ultimately, Start Strong Bronx staff wondered if a slightly abbreviated program could maintain the longer program's greater scope while reducing some of the practical implementation challenges that arose.

Essentially, what we all figured out is, 21 lessons is a lot. And you can only count it [as completed] if you do at least 17 of the 21 [lessons]. I could count another 1,000 students minimum if I could have counted 15 lessons. Because most... teachers began to wear out after 15 and did not hit the 17 mark. And I had to count them as 0... While Safe Dates is only 9 [lessons]. So if I only had to count for 9, I would have reached that 2,000 students by now. But I've only technically reached 1,505.

I think if we could knock [the curriculum] down to about 15 lessons. Which, looking at [the] fidelity tracking forms is about where everyone stops—between 12 and 15 lessons—I think the schools would be much more willing to take this on.

There are ...things I would do [to condense the curriculum]: I would have the ...basic 21 lessons and then, within that, highlight ones as optional. So, if you want to get through the material... highlight 'this is optional, this is optional.' So make some of the lessons, some of the planning optional.

The original Fourth R curriculum was adapted for implementation in the Bronx in several key ways. First, New York City schools generally have 50-minute class sessions. Since the Fourth R was developed to be taught in 75-minute sessions, lesson length was abbreviated, creating a 26-session curriculum. Next, while the curriculum was originally developed for sex-segregated classrooms, only three of the schools in the current study segregated the students by sex. Sex-segregation is a challenge for resource-limited schools, since they must be able to provide two trained teachers and two sets of materials for a single class. Finally, the original curriculum was adapted slightly for the seventh grade U.S. audience. Some changes to language and examples were made to account for the younger population (e.g., lower anticipated reading levels; less expectation of previous exposure to sex education); in addition, similar changes were made to adapt the curriculum for an urban U.S. audience (e.g., hockey examples were replaced with basketball examples).

Recruiting Schools

As part of the RWJF Start Strong funding, Start Strong Bronx sought to reach 2,000 students over the grant period. Staff told us that they started out targeting schools based on logistical concerns and ease of implementation.

We originally targeted schools surrounding the hospital, so it would be easy to get to. We went to a lot of schools and we had a lot of schools drop out over the years.

Over time, Start Strong staff began to identify characteristics of schools that made them particularly effective at implementing the program.

I think the key to doing something like Fourth R is working in a school that's not scattered and disorganized. Working in a school where the principal has buy-in, they give it to teachers who believe that social-emotional learning is important, and then you're going to have a shot of it working... The teacher has to believe that SEL matters. And they have to have some sort of mastery.

The best schools, unfortunately, that we have had the most success with the Fourth R, are schools that have like an A or a B rating [on the NYC DOE Report Card]. And the schools that need us the most—like the C schools... they're in such bad shape.... Because if they're a C or a D, they've got a lot of structural problems. Not just the students being poor, they just have poor management.

Schools with a dedicated person to oversee the program—like a social worker or a counselor—love it... the principal cannot oversee this. It's got to be... a dean, an assistant principal, or a guidance counselor... It's a small program... a 21-lesson program is just off [principals'] radars.

While staff felt some of these issues might be intensified by the size and nature of working in New York City, many of the lessons highlighted are likely relevant to other districts thinking about implementing the Fourth R.

I think in other places, they probably have an easier time. If there's less turnover and maybe fewer schools that they have to deal with in a district that it would be even easier...to really train the teachers and have... the continuity.

At the end of the RWJF funding period, Bronx Start Strong had trained a total of 90 teachers across 16 Bronx middle schools. A total of 2,016 students had received the curriculum.

Teacher Training

The training for teachers selected to implement the Fourth R curriculum as part of the experimental study was conducted in September 2011, prior to program implementation. The training was led by the Start Strong Bronx Program Coordinator, along with a seasoned Fourth R teacher (the school guidance counselor from a school that had implemented the Fourth R during

the previous academic year). Teachers from nine of the ten experimental schools attended the training in September (teachers from the final school were unavailable for the training and received an individual training session at a later date).²⁶ In total, 21 teachers were trained, only three of whom were male. The missing school later received one-on-one training from the Start Strong Bronx staff. The one-day training covered activities and teaching strategies including:

- Scavenger Hunt: Participants were asked to search through their books and documents to find definitions of key concepts or key materials.
- Use of Videos/Visuals: Videos and visuals were discussed and described and participants watched several of the videos found in the Fourth R program.
- Think-Pair-Share: Participants were asked to think about a specific question individually, then to discuss with a partner, and finally to share their thoughts with the full class.
- Mind Map: A mind map is a graphic organizer that allows participants to organize their thoughts and ideas on a topic.
- Post it, Pile it: Participants were asked to think about a topic or question and write their responses on Post-It notes, which were then posted on the blackboard until they pile up; the group then discussed the responses.
- Quiz, Quiz, Trade: Participants were paired up and quizzed each other using flash cards with pre-printed questions. Participants then switched partners and continued the exercise with a new partner and a new set of questions.
- Role Play: Participants acted out different roles in practice scenarios outlined in the curriculum.

The facilitator and participating teachers role-played select program materials and exercises and discussed how materials might be adapted to account for varying class period lengths, student composition (e.g., mixed-sex, IEP students), and so on.

Generally, teachers had positive reactions to the training and were engaged in the lessons and activities. Teachers commented numerous times that they believed students would find the activities interesting and engaging. The trainers provided many examples of real-life teaching situations with students. As would be expected with a full day training, the teachers appeared slightly less engaged (and tired) right before lunch and toward the end of the day.

A few areas of concern were noted by attendees. Initially, several teachers were confused about whether or not they were required to teach about safe sex in the seventh or eighth grade. They were informed that the Department of Education now requires safe sex education and that the Fourth R program fulfills the requirement, so no additional curriculum or lessons are necessary. In a few instances, teachers stated that some of the role play scenarios or videos may not be realistic or relatable to youth. Teachers also expressed concern about teaching sensitive topics in co-ed classrooms, although they appeared encouraged when they learned that most of the schools implementing the Fourth R during the preceding year were doing so in co-ed classrooms.

By the end of the training, teachers appeared enthusiastic about teaching the curriculum and reported that their questions had been adequately answered. Several teachers commented that they were happy to have a fellow teacher and guidance counselor as one of the trainers, since the experienced teacher-facilitator was able to provide many real-life examples of the challenges and

²⁶ In accordance with New York City Department of Education requirements, all teachers attending the training session were compensated for their time at a standard hourly rate.

successes of implementing the Fourth R. Teachers were provided with information on how to complete fidelity tracking forms, and were encouraged to reach out to Start Strong Bronx with any questions or concerns as they implemented the program.

Although relatively brief to relay a sizeable amount of information, the training appeared successful in providing teachers with the information, hands-on training, and resources they needed to implement the Fourth R. Teachers seemed to have accepted the program materials and expected that they would be able to implement the program with fidelity.

Program Costs

One of the benefits of the Fourth R program model is that, because it relies on pre-existing teaching staff to implement the curriculum, program costs are relatively low. Program costs according to the creators of the Fourth R curriculum are presented in Table 3.1.

Because implementation in the Bronx included administrative tasks associated with overseeing a multi-school project, costs for Start Strong Bronx were higher than the per school average cost. However, Start Strong Bronx provided cost estimates for the ten experimental schools in the study, excluding the oversight and administration costs of Start Strong Bronx:

- 20 binders: \$75/each x 20 = \$1,500
- 15 sets of materials: \$90 per set x 15 = \$1,350
- 20 teachers paid to attend training: \$95 x 20 teachers = \$1,900²⁷
- Food for teacher training: \$1,000
- Master Trainers: \$1,015
- **Total costs: \$6,765**

This breaks down to an average cost per school (over the ten experimental schools) of \$676. Although, in reality, not all seventh-grade students assigned to the treatment group likely received 17 of the 21 lessons, because the costs are an up-front, one-time expense, we can approximate a per student cost. The ten schools had a total of 1,107 seventh graders during the 2011-2012 academic year. Half of these students (554) should have been randomized into the treatment (Fourth R) experimental condition. The total cost of \$6,765 divided over 554 students is just over \$12 (\$12.21) per student. Without the experimental study conditions, some of these costs would increase (e.g., more binders would be needed if more teachers were trained), whereas others, charged at a per school or per training cost (e.g., additional materials, master trainers) would not. The per student cost estimate generated by this study is slightly lower than the CA\$16 cost generated by the earlier Fourth R evaluation (Wolfe et al. 2009).

Chapter Summary

This chapter describes the adaptation and planning of the Fourth R model by Start Strong Bronx, one of 11 Start Strong: Building Healthy Teen Relationships sites funded by the Robert Wood Johnson Foundation. Key findings include:

- A Comprehensive Curriculum: Staff at Start Strong Bronx chose the Fourth R curriculum for the comprehensive approach of the program. By focusing on the interrelated nature of

²⁷ Mean cost; teachers were paid more or less depending on the number of hours of training completed.

multiple target issues, (e.g., the links among healthy relationships, drug and alcohol use, and personal empowerment) staff felt that this curriculum eliminates the need for multiple programs (most of which take up instruction time and cost schools money), targeting overlapping behaviors.

Table 3.1. Fourth R Program Costs²⁸

| Item | Cost | Required by Developer |
|--|---|-----------------------|
| Fourth R Curriculum Binder, for teachers (includes cards; a DVD with role-play examples; two DVDs with skills for effective relationships; and a CD-ROM with handouts, overheads, a unit test, and other resources for printing) | \$135 per binder | Yes |
| 4-DVD Teen File Series: Binge Drinking Blowout Smoking: Truth or Dare? The Truth About Drugs The Truth About Sex | \$325 per set | No |
| Youth Safe Schools Committee Manual | \$25 each | No |
| 1-day, off-site teacher training workshop | \$150 per person | No |
| 1-day, on-site teacher training workshop | \$1,500 for 25 participants plus trainer travel expenses | No |
| 1.5-day, on-site master trainer training | \$12,500 for 25 participants plus trainer travel expenses | No |
| Master Trainer Manual (includes fidelity checklists) | \$150 each | No |
| 2-day, on-site consultation | \$2,000 plus travel expenses | No |
| Phone and email support | Free | No |
| Student Satisfaction Questionnaire | Free | No |
| Teacher Implementation Questionnaire | Free | No |

- **Sustainability:** The Fourth R program model relies on training teacher facilitators to implement program materials. For this reason, program staff felt that the program was more sustainable than comparable programs that rely on professional outside facilitators. Knowing that the Start Strong initiative was funded only through 2012, this was an important criteria for the staff.
- **Target schools:** Program staff felt that the schools that were the most successful at implementing the Fourth R (i.e., those with the highest program fidelity, lowest drop-out, and greatest buy-in) were generally high-performing schools. While schools that performed worse overall (i.e., scored lower on the DOE report card) might stand to gain more from the Fourth R, these schools faced too many other challenges to effectively implement the program. Program staff also suggested that schools with a support person

²⁸ Cost information retrieved from <http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=207>.

dedicated to the program—for instance, a specific teacher or guidance counselor—implemented the program more effectively.

- Program Costs: The program as implemented in the Bronx cost approximately \$12.21 per student or \$676 per school. This compares favorably to the creators' cost estimates (CAD \$16) for the original program.

Chapter 4

Implementation, Fidelity, and Participant Feedback

This chapter describes the implementation of the Fourth R curriculum in the Bronx. We describe fidelity to the Fourth R program model (described in the preceding chapter) and strategies used for quantifying program fidelity. We then report results from teacher interviews and student focus groups, highlighting general themes shared by participants.

Implementation Fidelity

Quantitative Fidelity Scores

All teachers in the ten experimental schools completed all three Fourth R Units with all of their assigned classes. No Units were skipped or omitted in full. To compute fidelity scores, the total number of items (e.g., introductions, activities, lessons, homework) completed were divided by the total possible number of items for each of the three units, resulting in a section average. Schools with multiple treatment sections were averaged to create a unit average for the school. Since the Fourth R provides a flexible framework for Unit and Lesson completion and does not require teachers to complete every possible exercise or homework activity, it was not expected that any teacher would achieve a 100% fidelity score. On average, teachers completed 73% of the Lessons in any given Unit; Unit One had a slightly higher completion rate of 81% compared to Units Two (71%) and Three (67%). Scores across the three units were averaged to create a mean fidelity index score for each school. The fidelity index scores ranged from 0.35 at the lowest fidelity school to 0.86 at the highest fidelity school; only one school had a score below 0.50, effectively meaning that only one of the ten schools completed less than half of the possible activities. The average fidelity index score was 0.67, essentially representing nearly 70% curriculum completion. Six of the ten schools were designated as moderately high-fidelity schools due to a fidelity index score of 0.60 or higher.

In addition to the fidelity index scores, teachers responded to several other questions for each Unit and Lesson. Overall, 97% of teachers agreed that the issues presented were relevant to students and over 94% agreed that the activities were appropriate for the grade level. Amongst those teachers whose classes were co-ed, 81% of teachers agreed that the activities were well-received by both boys and girls, although 18% reported that they felt unsure. More than half (57%) felt that the session was “just right” in terms of time allotted for each session, although nearly one-third (29%) believe that the time allotted were too short. Issues with time-allotment may be impacted by school differences, since class time is dependent on the school’s standard length of the class period, ranging from 45 minutes to 75 minutes, as well as the topic being covered. The Fourth R lessons were originally designed to be implemented during 75-minute classes, but were adapted to comply with New York City schools’ shorter class periods, as described in the previous chapter. Nonetheless, given varying class periods across schools, it is unsurprising that some teachers felt that they did not have enough time.

Teacher Fidelity Feedback

The fidelity tracking forms included several open-ended questions, allowing teachers to write in notes about their implementation experience. The vast majority of the notes refer to activities and sessions that received positive reactions from the students. Some responses included:

The students enjoyed discussing the resources they perceive around them and hearing about the things they have access to.

The lesson I felt meet the needs of the student very well because the scenarios could be a typical situation in which they may encounter.

Teachers also provided comments on specific activities, challenges, or suggestions for improvement.

The scenarios were not realistic for some of my students, which made it hard for them to put themselves in those situations.

Videos/computer would increase visual perspective on the matter.

Students [not] taking the scenarios seriously [was a challenge]. Some were laughing and making jokes because they had a hard time taking it seriously and being vulnerable to the rest of the class.

Several teachers described instances when they could not complete specific sections or did not have enough time to fully cover the topic: “*I found it to be a lot of information to cover in one lesson;*” “*We simply ran out of time;*” “*I actually split this lesson up over two sessions so that we could get more done.*” In general, teachers’ comments indicated concern and interest in ensuring that the curriculum is implemented correctly, that students are receiving the information in the most effective ways possible, and that all of the required topics are covered.

Additional Formal Feedback from Teachers

All 21 teachers who participated in the implementation of the Fourth R program in the ten experimental schools were invited to take part in an interview about implementing the Fourth R program. A total of seven interviews were completed with teachers from six schools (with one school having two teachers interviewed). Two of the teachers had sex-segregated classrooms with only girls. The fidelity index scores of the schools whose teachers completed the interview ranged from 0.52 to 0.86, indicating inclusion of four schools that fell into the moderately high fidelity category and two schools that were just below the 0.60 cutoff.

All of the teachers interviewed had positive impressions of the Fourth R program and the curriculum. All of them stated that they thought the material covered was appropriate for middle school students and that the students were engaged during the lessons.

When asked about specific activities or sessions that were particularly engaging or effective, interviewed teachers indicated that they found the role play and scenarios the best and most engaging activity.

... I definitely think that the more we got away from... techniques that they use in their substantive academic classes, the more they were able to do more real-life scenarios—whether it was having them just talk through things or, in this case, watch a video—I think it was easier to get them involved.

They really liked the scenarios part of the different units. Where they had to—where they were presented with a situation and they had to figure out how best to deal with that situation.

The perceptions of these teachers that the role play and scenarios were the most engaging is also supported in the implementation reports that all of the teachers filled out, as discussed previously. In every Unit, teachers commented that the role play and scenarios were engaging, indicating very positive perceptions of this type of activity.

Teachers were also asked about specific aspects, topics, or activities of the Fourth R that they would change or improve. Several teachers had comments about Unit Two, which focuses on sexuality and sexual decision-making. They believed that the curriculum did not provide enough background information in this area, and most of the students at the seventh grade level did not understand, or had misconceptions, about the basic biology around sex. These teachers attempted to supplement that Unit with more basic information. One teacher suggested that the unit about sex should be the first unit in any program. She stated, “When you tell kids we’re having health class, until you say ‘sex’, it’s like this big elephant just sitting there.”

Several teachers also commented on the use of videos. They stated that, although they liked using videos and found the concept engaging to students, they felt that the videos used were a bit outdated and unrealistic. Students had difficulty relating to them. One teacher said that videos and other visuals should be used more often, but that they still had to be more realistic. Research staff attending the teacher training session facilitated by Start Strong Bronx similarly noted the dated—and largely Caucasian—support videos.

Lastly, two teachers commented that they would have liked a longer Fourth R training. One teacher stated that she felt the training was “rushed.” Another teacher suggested that bringing teachers together on a regular basis during their implementation of the program to discuss successes and challenges could be a good way to help them throughout the process.

When asked to give an overall grade to the program, the average grade was B, with responses ranging from an A+ to a C+.

Student Feedback

In interpreting focus group results, it is important to keep in mind that the feedback reported in student focus groups comes from a limited number of students (N=29) in a limited number of schools (N=3). Nonetheless, student focus group participants at both T1 (N=5) and T2 (N=24) shared insight into their experience with the Fourth R subject areas, activities, and impact on their own behaviors.

Familiarity with Subject Matter

Participants were asked to describe what the terms “bullying” and “teen dating violence” meant to them, and what they thought of when they heard those words. All respondents were comfortable talking about bullying. Participants were able to identify multiple types of bullying,

including cyberbullying and social bullying. They provided both general and personal examples of bullying that included both physical and emotional bullying.

Like hitting, or slapping. I don't think to bully someone is just about hitting, it could be like verbally, it could be verbally and physically.

I think that bullying is like, when a person calls somebody names or threatens someone. And there's certain types of bullying such as cyberbullying, sexual bullying.

I was bullied in 6th grade—not like hit bullied, but like teasing and things like that—but it stopped this year.

Participants at T1 had more trouble when they were asked to describe “teen dating violence.” In general, the participants only discussed physical dating violence, providing examples such as “smacking,” “taking it out on someone,” or “hitting.”

Okay, so teen dating violence is, let's say you're dating somebody and you did something wrong and he just smacks you out of nowhere. That's teen dating violence. Like when one gender or the other hits each other.

Any gender. It could be gay or whatever. And they have some issues and they take it out on the person. It's just like physical bullying. Dating violence is just like physical bullying. If your mate doesn't feel happy and he doesn't have self-control maybe, and he's upset he takes it out on somebody. I'd say physical bullying as the answer.

When asked whether dating violence could be anything besides physical violence, one student offered that threatening to hurt someone physically could also count, or forcing someone to have sex. Another student said that it could be verbal, like bullying, but did not provide examples. None of the other T1 participants offered up definitions or examples that included non-physical abuse.

By T2, participants expressed a more complete understanding of teen dating violence describing multiple types of dating violence, including physical, emotional, and sexual. Many participants gave examples and the most frequent example of emotional violence was forcing a partner to do something they didn't want to do.

Emotional abuse starts off with, you know like, to try to trap the person, you know, you start to say hurtful things to them, and you know you'll start bringing down their confidence or whatever.

Student 1: [Dating violence is] when a boy or girl hits the other one. It's abusing a partner.

Student 2: Like hitting. But there's also rape or sexual violence.

Student 1: And people can make their girlfriends do something she doesn't want to do.

In each of the focus groups, participants also discussed what it meant to have a healthy dating relationship, emphasizing love, communication, and “connecting.”

People like abuse their partners—like their boyfriends, girlfriends—but... a relationship is about having the love, having connections, and being balanced about decisions.

I think in order to have a healthy relationship you really shouldn't be hurting someone.

The participants all stated that although students are dating in their school, dating violence was not a problem. When pressed about whether there was any emotional violence, as they had defined it, some participants did discuss situations where students in relationships at their school were experiencing emotional violence but insisted that it was not a major problem at the school.

Sometimes, for example, there are rumors spread that somebody in a relationship is cheating on the other partner and they end up fighting in the hallway and the end up saying degrading things to each other.

Actually, people have actually told me about [experiencing] dating violence. I told that person to get away from that person and not be around that person because that person doesn't love you.

The Curriculum

All of the participants indicated that bullying was covered at length in the Fourth R program; participants were also able to describe specific activities from the lessons dedicated to bullying.

It was awesome because we did this town meeting ... with all the Fourth R ideas. And then ... we did these posters about bullying and about what were the types... passive, aggressive, conflict resolution. And we made like boxes, and worksheets, and we would just talk about it.

You had to show an example of what would happen if someone was bullying, and there was a bystander and the bystander did nothing, what would happen. And they would say that was the wrong thing. And then they would show another video of someone being bullied and the bystander doing something.

Some participants stated that they felt the program focused too much on bullying and that they have been hearing a lot about bullying in school in general.

The whole thing was about bullying. It was like practically nothing else. Because it was like two months, this program, and we spent like a whole month just talking about bullying.

“It's not that there was too much bullying, but since sixth-grade we've been doing everything about bullying.”

It is clear that schools are working with students on bullying and that these participants felt that it had been adequately covered during their middle school experience. Generally students did not think bullying was a problem at their school. Students also stated that they knew their principal and teachers were concerned about it and did their best to address it.

In contrast, focus group participants did not believe that teen dating violence was emphasized in the Fourth R program. When asked what the Fourth R program was, or what they had covered that year, no students offered up teen dating violence or relationship violence in their initial response. When asked specifically whether they covered teen dating violence in the program, most agreed that they had, but could not remember as much of what they learned about this topic. The single male participant in the T1 conversations could not remember whether this topic was covered at all.

When presented with student feedback reporting less recall of lessons specifically addressing dating violence, Start Strong Bronx staff was not surprised by the findings. Staff explained that, because discussions of dating violence are largely couched in broader conversations about healthy relationships, it is completely feasible that teachers in the study may rarely or never have explicitly discussed “dating violence.” Particularly given the age of the target population—at twelve years old, these students have a range of “dating” experience, from none to casual in-school “dating” to sexually active—the curriculum is designed to emphasize desirable qualities and healthy aspects across an array of relationships. Student participants learn what makes a healthy friendship and are then encouraged to adapt these general principles to other relationships in their lives.

Participants discussed two additional areas covered by the Fourth R program: alcohol and drug use and safe sex. Several participants expressed that drugs and alcohol were also a big part of the program, more so than teen dating violence.

[The] drugs [section] was very long. The ones that stood out were bullying and drugs and alcohol.

Students remembered and were able to describe specific activities related to the substance abuse unit. While they thought learning about drugs and alcohol was fairly interesting, none of the focus group participants thought that drugs and alcohol were big problems at their schools.

In terms of the safe sex lessons, the single male participant at T1 did not remember discussing safe sex or sexually transmitted infections in the Fourth R class at all. He did state that similar topics were covered in his science class. The female participant in the same school stated that they did cover these topics in the Fourth R and also in science class. It is possible that the girls’ class covered it while the boys’ class did not. Most of the participants did remember lessons around sex and safe sex, including learning about sexually transmitted infections. Many of the participants listed specific diseases, such as herpes and HIV/AIDS, as well as specific prevention techniques, such as using condoms or abstinence.

One student reported that she thought this material was too advanced for their age, and that she was uncomfortable discussing it in class, especially with her teachers. She felt seventh graders were too young to be getting this information at school.

It was disgusting talking about it ... Normally your parents would have that [talk] with you, not teachers. It felt really weird for teachers to speak about that... We’re only like 12, 13 years old. We’re not like 15 to know all about it.

Other participants were more neutral about learning about safe sex, stating that they did not think it was good or bad. Some argued that it was good to learn about this in advance of having sex to prepare them for later on.

I really think that it gave us like a step forward, because they told us what was bad about [unsafe sex] and why you shouldn't have [sex] at that age.... So I think it gave us like a start... Okay, we know what age to not have sex, we know what [protection] to use to have [safe] sex.

Participants had mixed reactions in terms of whether or not classes should be sex-segregated. One participant stated that the boys were more immature and that being in a girls-only class was better.

People are ... immature. [I]f they said 'penis' then the whole class was laughing. If they said 'sex' then the whole class would laugh.... Some of them were saying that the boys were being immature... lots of them were screaming at the boys. So maybe it's just the boys.

Participants who had classes sex-segregated seemed to think that it was preferable for girls and boys to be separated so that they feel comfortable discussing the topics together. Other participants felt that having co-ed classes was preferable, explaining that it was more like the “real world” and that both male and female students need to receive the information covered in the curriculum.

I think that [co-ed classes are] fine because boys and girls need to hear this. Because you only have four electives, and boys might never get the chance to have Fourth R. So why not give it a shot? And hey, the world is male and female so what's the difference? ... They're trying to prepare for [sex], like in the future. So I don't think it's bad. I think they're trying to give us a lesson.

Program Impact

Nearly all participants responded that they liked the Fourth R program. They particularly enjoyed the interactive nature of the program.

It wasn't all activities. It was kind of a mixture... Sometimes we had homework... And sometimes we didn't have homework when we did do the activity. And there was like role plays. And it was really fun because you got to step into other peoples' shoes and see how they were feeling.

Participants also had generally positive responses on whether they thought the Fourth R had any impact and whether it affected their own behavior. Some participants said that their own behavior had changed, but many did not think that the behavior of other students had changed. The changes they described were mainly related to improved conflict resolution skills they had learned in the Fourth R program, with several students describing specific personal experiences where they used the lessons they learned.

I have to actually thank [name deleted] because she sits at the table with me and she was like '[Name deleted], calm down' and stuff, and she was like 'Remember what we learned?' And I was like, yeah. So I can actually thank [her]. She was actually doing the right thing, for my getting in trouble.

Okay, so we argued a lot, and we even argue like now. And when we learned 4th R it was like, just breathe, and I need to count like 1-2-3.

One participant expressed frustration that other students did not change their behavior even after participating in the program:

They knew everything but they're like, 'I'm not going to change because of the program.' Like, they don't change their ways. Sometimes people provoke them, like to get them mad, but it's called thinking twice. You have to think twice before you act.

Participants were also asked whether the program made them think any differently about dating. Two of them felt that the program made them more hesitant to date or more likely to wait to begin dating seriously.

Well, teen dating, it kinda got me scared to ever date until I'm like twenty something. 'Cause like I wasn't thinking of dating in my teens, but it just made me think that people are like dating at the wrong age, and if you do that, it just gets really weird.

Well, the ex-boyfriend I had. I went back out with him after Fourth R. And he got upset with me one time and he called me the B-word. So I feel like when you're in a relationship it's kind of a little bit aggressive, because sometimes the boys can put the anger on you. So I just took a break from dating.

Chapter Summary

This chapter describes the implementation of the Fourth R curriculum by Start Strong Bronx. The curriculum, which includes 21 lessons across three units (Personal Safety and Injury Prevention, Healthy Growth and Sexuality, and Substance Use and Abuse), was implemented in 16 Bronx middle schools between 2009 and 2012. Just over 2,000 Bronx middle school students received the Fourth R during this time. Key implementation findings include:

- **Program Length:** While a more comprehensive approach was seen as a strength of the Fourth R curriculum (versus Safe Dates, the shorter alternative program that focuses more exclusively on teen dating violence), implementing more than 26 hours of program material was a serious challenge for teachers with many demands on their time and attention. After the first year of program implementation was well underway (i.e., the year *prior to* the beginning of the study), program staff at Start Strong Bronx saw that many of the teachers simply dropped out after completing 12 to 15 lessons. For this

reason, Start Strong Bronx was interested in exploring the possibility of condensing program materials and reducing the total number of lessons.

- Program Fidelity: Each of the ten schools completed all three program units and only one school completed less than half of the possible activities across the three units. Teachers completed more of Unit 1 (81%) than Units 2 (71%) or 3 (67%); these findings may suggest some program fatigue over time. The average fidelity score indicates that teachers across the ten schools completed nearly 70% of all possible exercises and activities. Since it is not anticipated that *any* teacher will complete 100% of all possible exercises, this represents moderately high overall program fidelity. However, there were significant school-level variations in fidelity (range: 0.35 to 0.86), and these variations would prove to be exceptionally important when examining the impact of the Fourth R curriculum.
- Appropriateness for the Target Audience: Program materials were adapted from the original ninth-grade curriculum. The majority of those interviewed (teachers and students) agreed that the program materials were appropriate for the seventh-grade audience. However, several teachers suggested that their students needed more information on the basic biology of sex before discussing safe and healthy sexual relationships. At least one student expressed concern that the unit on sexual activity was too mature for seventh-graders.
- Reception of Program Material: Both teachers and students provided generally positive feedback about the program materials. Teachers raised some concerns about outdated and unrepresentative videos and scenarios. Teachers generally felt that students were most engaged by activities that were not similar to standard classroom work, particularly noting role playing and scenarios as achieving high positive student response.
- Retention of Program Material: Student participants were able to provide detailed descriptions of lessons having to do with bullying and substance abuse. Students were also able to describe some of the central themes around healthy relationships more generally. However, students had trouble recalling and describing curriculum components specifically targeting dating violence. Start Strong Bronx program staff attributed this lack of recall to the program's emphasis on healthy relationships generally, as opposed to dating violence specifically.
- Program Costs: The program as implemented in the Bronx cost approximately \$12.21 per student or \$676 per school. This compares favorably to the creators' cost estimates (CAD \$16) for the original program.

Chapter 5

Baseline Prevalence Estimates for Victimization and Perpetration

As noted in Chapter 1, most studies of the prevalence of adolescent dating violence focus on students who are older than those in the current sample. Consequently, the baseline prevalence information gained from the current study is, in itself, an important addition to the literature. To contextualize the current findings, reference is made throughout the chapter to prevalence findings of previous studies, particularly those with similar aged samples. Table 5.1 presents a profile of the experimental student sample at baseline.²⁹ The table also compares responses—particularly prevalence rates for violence victimization and perpetration—between male and female students.

Demographic Background

On average, the students were 12 years old at baseline. More than half were female, most had lived in the United States for seven years or more, and, like the Bronx population on the whole, students were predominately Hispanic and/or black.

Baseline Dating and Sexual Activity

Four in five students (80%) reported being interested in the opposite sex, whereas only 15% reported that they were not interested in sex or dating anyone. Virtually no students reported an exclusive interest in same-sex relationships at baseline. Males were more likely than females to report interest in the opposite sex and less likely to report no interest in sex or dating.

Just over half of the students (57%) were already dating. Fewer than one in ten students (8%) were sexually active at baseline. Males were significantly more likely than females to report being sexually active (13% for males v. 4% for females).

Overall, sexual activity findings are consistent with previous research. For instance, 6% of national YRBS respondents said they were sexually active prior to the age of 13 (YRBS 2011). Somewhat surprisingly, the rates in the current sample are also similar to those found in the older ninth-grade sample included in the previous Fourth R evaluation (Wolfe et al. 2009). Dating activity in the current sample, however, is lower than the 75% of seventh-graders who were already dating at baseline in the RWJF Start Strong evaluation (RTI International 2013).

Dating Violence and Sexual Harassment/Assault

Nearly one-fifth of students who had recently dated reported having been the victim of dating violence (20%). Similar rates of *all* students reported having perpetrated sexual harassment (21%) against peers. However, twice as many students (41%) reported having been the victim of sexual harassment/assault. Fewer students (13%) reported perpetrating violence against a dating partner; of those students who had dated someone within the past three months, 13% reported that they had perpetrated dating violence. Corresponding to previous research (e.g., Foshee 1996;

²⁹ Only those respondents whose surveys were matched to a T2 survey are included in the table.

Table 5.1. Baseline Differences Between Female and Male Respondents¹

| | <i>N</i> ² | FEMALE | MALE | TOTAL |
|---|-----------------------|--------|--------|------------|
| | | 282 | 229 | 511 |
| DEMOGRAPHICS | | | | |
| Age | | | | |
| 11 years old | | 15% | 15% | 16% |
| 12 years old | | 68% | 63% | 66% |
| 13 years old | | 13% | 19% | 16% |
| 14 years old | | 4% | 2% | 35% |
| Over 14 years old | | 0% | 0% | 0% |
| Average Age | | 12.1 | 12.1 | 12.0 |
| Race/Ethnicity³ | | | | |
| Black | | 31% | 29% | 30% |
| Hispanic | | 72% | 74% | 73% |
| White | | 4% | 3% | 3% |
| American Indian | | 3% | 1% | 2% |
| Asian/Hawaiian/Pacific Islander | | 0% | 1% | 0% |
| Other | | 17% | 11%* | 8% |
| Years Lived in US ≥ 7 years | | 91% | 90% | 91% |
| LIVING ARRANGEMENTS | | | | |
| Living with single parent | | 44% | 41% | 43% |
| Living with two parents | | 51% | 57% | 54% |
| Living with other relatives | | 4% | 2% | 3% |
| SEXUALITY AND DATING | | | | |
| Sexual Orientation | | | | |
| Interested in opposite sex | | 70% | 92%*** | 80% |
| Interested in same sex | | 1% | 0% | 0% |
| Interested in both sexes | | 9% | 1%*** | 5% |
| Not interested in dating/sex | | 20% | 8%*** | 15% |
| Dating Activity | | | | |
| Ever Dated | | 55% | 60% | 57% |
| Dated in the Past 3 Months | | 43% | 47% | 45% |
| Sexual Activity | | | | |
| Sexually active | | 4% | 13%** | 8% |
| VIOLENCE, HARASSMENT, & BULLYING | | | | |
| Dating Violence⁴ | | | | |
| % Reporting Any Victimization | | 18% | 22% | 20% |
| % Reporting Emotional/Psychological Victimization | | 17% | 19% | 18% |
| % Reporting Physical Victimization | | 6% | 9% | 8% |
| % Reporting Any Perpetration | | 17% | 8%* | 13% |
| % Reporting Emotional/Psychological Perpetration | | 15% | 8%+ | 12% |
| % Reporting Physical Perpetration | | 8% | 1%** | 5% |

Table 5.1. Baseline Differences Between Female and Male Respondents (Continued)¹

| | FEMALES | MALES | TOTAL |
|--|------------|------------|------------|
| <i>N</i> ² | 282 | 229 | 511 |
| Sexual Harassment/Assault | | | |
| % Reporting Any Victimization | 40% | 43% | 41% |
| % Reporting Emotional/Psychological Victimization | 37% | 35% | 36% |
| % Reporting Electronic Victimization | 10% | 8% | 9% |
| % Reporting Physical Victimization | 22% | 22% | 22% |
| % Reporting Any Perpetration | 19% | 23% | 21% |
| % Reporting Emotional/Psychological Perpetration | 14% | 15% | 15% |
| % Reporting Electronic Perpetration | 3% | 1% | 2% |
| % Reporting Physical Perpetration | 7% | 10% | 9% |
| Peer Violence/Bullying | | | |
| % Reporting Any Victimization | 63% | 71% + | 68% |
| % Reporting Emotional/Psychological Victimization | 60% | 61% | 60% |
| % Reporting Physical Victimization | 36% | 48% ** | 41% |
| % Reporting Any Perpetration | 55% | 57% | 56% |
| % Reporting Emotional/Psychological Perpetration | 45% | 43% | 44% |
| % Reporting Physical Perpetration | 42% | 39% | 41% |
| DRUG AND ALCOHOL USE | | | |
| % Reporting Any Recent Drug/Alcohol Use⁵ | 21% | 15% | 14% |
| % Smoked, Past 30 Days | 1% | 4% | 3% |
| % Drank, Past 30 Days | 7% | 11% | 9% |
| % Binge Drinking, Past 3 Months | 3% | 8% * | 6% |
| % Marijuana Use, Past 3 Months | 1% | 6% * | 4% |
| % Inhalant Use, Past 3 Months | 3% | 4% | 4% |
| % Over the Counter Drug Use, Past 3 Months | 6% | 4% | 5% |
| % Rx Drug Use, Past 3 Months | 1% | 1% | 1% |
| % Other "Hard" Drug Use, Past 3 Months | 1% | 0% | 1% |
| SCHOOL SAFETY | | | |
| Feel Safe in School Classrooms | 94% | 89% + | 91% |
| Feel Safe in School Hallway/Stairwells | 73% | 70% | 72% |
| Feel Safe on School Grounds/In Parking Lot | 63% | 57% | 60% |
| Feel Safe in School Bathrooms | 71% | 61% * | 66% |
| Feel Safe in School Cafeteria | 83% | 79% | 81% |
| Threatened/Injured w/Weapon at School | 5% | 9% | 7% |
| Threatened/Injured w/Weapon on way to/from School | 3% | 4% | 4% |
| POSITIVE ATTITUDES/BELIEFS | | | |
| Mean Score, Positive Attitudes/Beliefs Scale | 0.65 | 0.67 | 0.66 |
| % Reporting Any Anti-Violence Beliefs | 100% | 100% | 100% |
| % Rejecting Any Gender Stereotypes | 91% | 93% | 92% |

Table 5.1. Baseline Differences Between Female and Male Respondents (*Continued*)¹

| <i>N</i> ² | FEMALES | MALES | TOTAL |
|--|---------|---------|-------|
| | 282 | 229 | 511 |
| PROSOCIAL BEHAVIORS | | | |
| Any Bullying/Dating Violence Against You/Friend | | | |
| Any Prosocial Response ⁶ | 95% | 89% * | 92% |
| Bullying | | | |
| <i>Bullying Against You</i> | | | |
| Likely to Talk to a Friend | 55% | 45% * | 51% |
| Likely to Talk to a Parent | 55% | 45% * | 51% |
| Likely to Talk to a Teacher/Other Adult | 61% | 55% | 58% |
| Likely to Call a Hotline | 20% | 17% | 19% |
| <i>Bullying Against a Friend</i> | | | |
| Likely to Talk to a Friend | 57% | 62% ** | 70% |
| Likely to Talk to a Parent | 47% | 36% * | 43% |
| Likely to Talk to a Teacher/Other Adult | 61% | 50% * | 56% |
| Likely to Call a Hotline | 22% | 22% | 22% |
| Dating Violence | | | |
| <i>Dating Violence Against You</i> | | | |
| Likely to Talk to a Friend | 74% | 54% *** | 65% |
| Likely to Talk to a Parent | 53% | 32% *** | 44% |
| Likely to Talk to a Teacher/Other Adult | 62% | 43% *** | 54% |
| Likely to Call a Hotline | 17% | 15% | 16% |
| <i>Dating Violence Against a Friend</i> | | | |
| Likely to Talk to a Friend | 65% | 35% *** | 52% |
| Likely to Talk to a Parent | 45% | 29% ** | 38% |
| Likely to Talk to a Teacher/Other Adult | 48% | 29% *** | 40% |
| Likely to Call a Hotline | 11% | 5% * | 8% |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Results from Quasi-Experimental comparison schools are not presented here.

² Only those respondents whose surveys were successfully matched to T2 responses are included in the

³ Because respondents could select more than one race/ethnicity, percentages add up to 100%.

⁴ Of those who dated someone within the past three months.

⁵ Recent drug/alcohol use is measured as cigarette smoking or drinking alcohol within the past 30 days or using other drugs within the past 3 months.

⁶ Includes talking to a friend, parent/teacher/other adult, and/or calling a hotline.

Gray and Foshee 1997; Malik et al. 1997; O’Keefe 1997; Roscoe and Callahan 1985), females were more likely than males to report perpetrating physical violence. The overall prevalence of dating violence in the current sample is similar to those reported by Taylor et al. (2008, 2011). Notably, rates of reported *physical* violence victimization were 8% for dating violence and 22% for sexual harassment.

Peer Violence and Bullying

The majority of students reported having experienced physical peer violence and/or emotional/psychological forms of bullying as either a perpetrator (56%) or victim (68%). When limiting to only physical incidents, 41% of students still reported having perpetrated or been the victim of physical bullying; males were more likely to report being victims of physical bullying. Exactly 41% of students reported both having been victimized by and having perpetrated emotional or psychological forms of violence/bullying.

Drug and Alcohol Use

A small fraction of students (14%) reported recently using drugs or alcohol.³⁰ Males were more likely than females to report engaging in binge drinking or smoking marijuana. Not surprisingly, prevalence rates for our seventh-grade baseline sample were much lower than among the older students included in the YRBS survey.³¹ While the relatively low incidence of drug use among the study sample (no more than 5% reported drug use across several different drug categories) suggests that the current population may be an appropriate target population for *primary* substance abuse prevention efforts (i.e., preventing onset), the relatively high baseline prevalence of violence, harassment, and bullying suggest that *secondary* intervention efforts targeted at these behaviors may be particularly crucial. Overall, the results point strongly to dating violence, harassment, and bullying as substantially greater *current* problems than drug use among the seventh-grade baseline target population.

School Safety

Most students reported feeling safe at school; students were least likely to feel safe in school bathrooms (66%) and on school grounds outside the school building (60%). Females were more likely than males to report feeling safe at school. Fewer than one in ten students reported being threatened or injured with a weapon either at school (7%) or on the way to or from school (4%).

Positive Attitudes/Beliefs

On average, students accepted fewer than half of the pro-violence beliefs and gender stereotypes included on the survey. (Examples of the surveyed pro-violence beliefs are “It is okay for me to hit someone to get them to do what I want,” “Sometimes a person doesn’t have

³⁰ Recent drug/alcohol use is measured as cigarette smoking or drinking alcohol within the past 30 days or using other drugs within the past 3 months.

³¹ The YRBS data indicated that 35% of students in grades 9 through 12 had at least one alcoholic drink during the past 30 days, 21% had engaged in binge drinking in the past 30 days, and nearly one-quarter (23%) had smoked marijuana in the past 30 days (CDC 2013).

any choice but to fight,” and “Sometimes I have only two choices: get punched or punch the other kid first.” Examples of the surveyed gender stereotypes are “Boys cannot be sexually harassed by girls,” “Girls sometimes deserve to be hit by the boys they date,” and “A guy shows he really loves his girlfriend if he gets in fights with other guys about her.”)

Pro-Social Behaviors

Students also reported that they would be more likely to talk to a friend (range: 51-70%) than to talk to a parent (range: 38-51%) or a teacher (range: 40-58%) in the instance of bullying or dating violence. Students were least likely to report that they would call a hotline in such an instance (range: 8-22%). Students were slightly more likely to say that they would engage in pro-social responses to bullying against a friend (50% average, *results not shown*) than if they were the victim of the bullying (46% average, *results not shown*). Female students were more likely than males to engage in pro-social responses on their own or a friend’s behalf (e.g., 62% v. 43% would talk to a teacher or other adult about dating violence perpetrated against themselves; 48% v. 29% would talk to a teacher or other adult about dating violence perpetrated against a friend).

Previous Program Exposure

Students were already familiar with some of the content that was included in the Fourth R curriculum: One-third of students had prior exposure to sex education (31%) and substance abuse (35%) programs. Fewer students (20%), however, had previous experience with programs related to dating violence. Students assigned to the treatment and control groups did not differ significantly on previous exposure to program materials or content. Female students were more likely to report prior exposure to dating violence ($p<.05$) and sex education ($p<.05$) programming. (*Results not shown.*)

Chapter Summary

The previous evaluation of the Fourth R curriculum resulted in the recommendation that the program might show greater impacts with a younger target audience. However, this recommendation was premised on the belief that a younger audience would have significantly lower baseline involvement in target behaviors than the ninth-grade students included in the original evaluation. The findings presented in this chapter suggest that, analogous to previous research with comparably-aged U.S. populations, the prevalence of target behaviors in the current study sample is largely comparable to the older Canadian audience, with the exceptions of drug and alcohol use, which is lower in the current sample.

Chapter 6

Impact of the Fourth R

In this chapter, we present results from the randomized controlled trial, examining the impact of the Fourth R curriculum across five primary and three secondary domains. Primary program impact domains include:

1. Dating violence (victimization and perpetration);
2. Sexual harassment/assault (victimization and perpetration);
3. Peer violence/bullying (victimization and perpetration);
4. Sexual activity; and
5. Drug and alcohol use.

Secondary outcomes, which are addressed by the Fourth R curriculum, but are not the core program focus, include:

6. Perceived school safety;
7. Positive beliefs (e.g., anti-fighting/violence, rejection of gender stereotypes); and
8. Pro-social behaviors.

Brief Review of the Analytic Plan

After first presenting data on the extent to which the eight aforementioned target outcomes are interrelated (e.g., extent to which those who engage in dating violence also engage in peer violence/bullying), the chapter examines the impact of exposure to the Fourth R curriculum on each of those outcomes at the two follow-up periods.

First, using the “difference-in-difference” (DiD) method described in Chapter 2, we examine whether the changes in target behaviors experienced by the treatment sample over time (baseline to T1 and baseline to T2) significantly differed from the changes experienced by the control sample. Many of the behaviors targeted by the Fourth R curriculum are anticipated to naturally increase from the beginning of seventh-grade to the end of eighth-grade, as students become more interested in dating and sexual activity and may begin to experiment with drugs or alcohol. The DiD test enables us to account for this expected change in behavior and look at program impacts based on the relative increase (or decrease) in behaviors when comparing the treatment and control groups. Thus, results of the DiD analyses represent the main program impacts of the Fourth R for the entire student sample.

Second, we examine the mediating effect of program fidelity, utilizing the quantitative fidelity score for each school (see Chapter 4) to test whether schools that, in fact, covered more units of the Fourth R curriculum saw greater program impacts than schools with lower fidelity.

Third, we examine the moderating effect of two types of individual-level student characteristics: student sex (testing for differential impacts with female and male students) and student propensity for negative outcomes—i.e., testing whether students who engaged in more of a given target behavior at baseline were more likely to experience an effect of Fourth R exposure. Interest in the former of these arises from results of the previous Fourth R evaluation, which found males benefitted from the curriculum but females did not. Interest in the latter arises from results of several previous studies that found more favorable intervention effects for youth

Table 6.1. Correlation Matrix: Relationship Between Primary and Secondary Program Outcomes, T1

| | Primary Program Outcomes | | | | | | | | Secondary Program Outcomes | | | | | | | |
|---|--------------------------|----------|----------|----------|----------|----------|----------|----------|----------------------------|-----------|----------|----------|----------|-----------|----------|--|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | |
| VIOLENCE, HARASSMENT, & BULLYING | | | | | | | | | | | | | | | | |
| Dating Violence⁴ | | | | | | | | | | | | | | | | |
| 1 Mean Score, Victimization Scale | | 0.464*** | 0.346*** | 0.226*** | 0.256*** | 0.207*** | 0.207*** | 0.221*** | -0.091* | -0.123** | -0.023 | 0.026 | 0.018 | -0.075 | -0.063 | |
| 2 Mean Score, Perpetration Scale | | | 0.315*** | 0.254*** | 0.220*** | 0.315*** | 0.182** | 0.166* | -0.070 | -0.064 | -0.065 | -0.074 | -0.097 | -0.043 | -0.031 | |
| Sexual Harassment/Assault | | | | | | | | | | | | | | | | |
| 3 Mean Score, Victimization Scale | | | | 0.571*** | 0.468*** | 0.416*** | 0.168** | 0.244*** | -0.219*** | -0.194*** | -0.095* | -0.055 | -0.049 | -0.100* | -0.122* | |
| 4 Mean Score, Perpetration Scale | | | | | 0.331*** | 0.439*** | 0.175*** | 0.151** | -0.151** | -0.214*** | -0.130** | -0.115* | -0.098* | -0.105* | -0.120* | |
| Peer Violence/Bullying | | | | | | | | | | | | | | | | |
| 5 Mean Score, Victimization Scale | | | | | | 0.592*** | 0.061 | 0.227*** | -0.307*** | -0.147** | -0.080+ | -0.044 | -0.044 | -0.086+ | -0.074 | |
| 6 Mean Score, Perpetration Scale | | | | | | | 0.207*** | 0.170*** | -0.198*** | -0.213*** | -0.150** | -0.155** | -0.122** | -0.118** | -0.104* | |
| SEXUALLY ACTIVE | | | | | | | | | | | | | | | | |
| 7 Sexually active | | | | | | | | 0.134** | -0.099* | -0.041 | -0.114* | -0.052 | -0.065 | -0.146** | -0.036 | |
| DRUG AND ALCOHOL USE | | | | | | | | | | | | | | | | |
| 8 Mean Score, Drug/Alcohol Use Scale | | | | | | | | | -0.125** | -0.114* | -0.105* | -0.060 | -0.025 | -0.214*** | -0.048 | |
| PERCEIVE SCHOOL AS SAFE | | | | | | | | | | | | | | | | |
| 9 Mean Score, Perception of Safety Scale | | | | | | | | | | 0.099* | 0.072 | 0.024 | 0.067 | 0.091* | 0.063 | |
| POSITIVE ATTITUDES/BELIEFS | | | | | | | | | | | | | | | | |
| 10 Mean Score, Positive Attitudes Scale | | | | | | | | | | | 0.034 | 0.013 | 0.064 | 0.015 | 0.048 | |
| PROSOCIAL BEHAVIORS | | | | | | | | | | | | | | | | |
| 11 Mean Score, All Pro-Social Responses | | | | | | | | | | | | 0.851*** | 0.869*** | 0.768*** | 0.869*** | |
| 12 Mean Score, Response to Bullying (Others) | | | | | | | | | | | | | 0.662*** | 0.571*** | 0.637*** | |
| 13 Mean Score, Response to Dating Violence (Others) | | | | | | | | | | | | | | 0.483*** | 0.738*** | |
| 14 Mean Score, Response to Bullying (Self) | | | | | | | | | | | | | | | 0.527*** | |
| 15 Mean Score, Response to Dating Violence (Self) | | | | | | | | | | | | | | | | |

+ p<.10 *p<.05 **p<.01 ***p<.001

Table 6.2. Main Program Impact:

Change in Student Behavior, Victimization, and Beliefs from Baseline (B) to End of Program Year (T1)¹

| Number of Students (N) | TREATMENT (Fourth R) | | | CONTROL | | | T-C Difference in Difference |
|---|------------------------------|----------------|----------------|------------------------------|----------------|----------------|------------------------------|
| | Baseline ² 307 | T ₁ | Change in Mean | Baseline ² 263 | T ₁ | Change in Mean | |
| SEXUALITY AND DATING | | | | | | | |
| Dating Activity | | | | | | | |
| Ever Dated | 61% | 71% | 10% | 58% | 71% | 13% | -3% |
| Sexual Activity | | | | | | | |
| Sexually active | 9% | 9% | 0% | 4% | 13% | 9% | -9%* |
| VIOLENCE, HARASSMENT, & BULLYING | | | | | | | |
| Dating Violence³ | | | | | | | |
| Mean Score, Victimization Scale | 0.05 | 0.06 | 0.01 | 0.05 | 0.05 | 0.00 | 0.01 |
| Mean Score, Perpetration Scale | 0.06 | 0.06 | 0.00 | 0.07 | 0.07 | 0.00 | 0.00 |
| Sexual Harassment/Assault | | | | | | | |
| Mean Score, Victimization Scale | 0.12 | 0.15 | 0.03 | 0.13 | 0.17 | 0.04 | -0.01 |
| Mean Score, Perpetration Scale | 0.04 | 0.05 | 0.01 | 0.05 | 0.07 | 0.02 | -0.01 |
| Peer Violence/Bullying | | | | | | | |
| Mean Score, Victimization Scale | 0.19 | 0.23 | 0.04 | 0.21 | 0.23 | 0.02 | 0.02 |
| Mean Score, Perpetration Scale | 0.14 | 0.18 | 0.04 | 0.17 | 0.18 | 0.01 | 0.03 |
| DRUG AND ALCOHOL USE | | | | | | | |
| Mean Score, Drug/Alcohol Use Scale | 0.03 | 0.05 | 0.02 | 0.05 | 0.06 | 0.01 | 0.01 |
| PERCEIVE SCHOOL AS SAFE | | | | | | | |
| Mean Score, Perception of Safety Scale | 0.77 | 0.77 | 0.00 | 0.77 | 0.73 | -0.04 | 0.04 |
| POSITIVE ATTITUDES/BELIEFS | | | | | | | |
| Mean Score, Positive Attitudes Scale | 0.34 | 0.33 | -0.01 | 0.33 | 0.34 | 0.01 | -0.02 |
| PROSOCIAL BEHAVIORS | | | | | | | |
| Mean Score, All Prosocial Responses | 0.57 | 0.57 | 0.00 | 0.58 | 0.55 | -0.03 | 0.03 |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Table includes limited outcome measures; for complete list, see Appendix I.

² Baseline sample includes only those surveys that were successfully matched to a T1 follow-up survey.

³ Of those who dated someone within the past three months.

Table 6.3. Main Program Impact: Change in Student Behavior, Victimization, and Beliefs from Baseline (B) to End of Follow-Up Year (T2)¹

| | TREATMENT (Fourth R) | | | CONTROL | | | T-C Difference in Difference |
|---|-----------------------|----------------|-------------------|-----------------------|----------------|-------------------|------------------------------------|
| | Baseline ² | T ₂ | Change in Mean | Baseline ² | T ₂ | Change in Mean | |
| Number of Students (N) | 263 | | | 248 | | | |
| SEXUALITY AND DATING | | | | | | | |
| Dating Activity | | | | | | | |
| Ever Dated | 58% | 70% | 12% | 57% | 74% | 17% | -5% |
| Sexual Activity | | | | | | | |
| Sexually active | 9% | 13% | 4% | 7% | 13% | 6% | -2% |
| VIOLENCE, HARASSMENT, & BULLYING | | | | | | | |
| Dating Violence³ | | | | | | | |
| Mean Score, Victimization Scale | 0.04 | 0.07 | 0.03 | 0.04 | 0.09 | 0.05 | -0.02 |
| Mean Score, Perpetration Scale | 0.05 | 0.10 | 0.05 | 0.05 | 0.12 | 0.07 | -0.02 |
| Sexual Harassment/Assault | | | | | | | |
| Mean Score, Victimization Scale | 0.13 | 0.15 | 0.02 | 0.12 | 0.19 | 0.07 | -0.05* |
| Mean Score, Perpetration Scale | 0.04 | 0.06 | 0.02 | 0.05 | 0.08 | 0.03 | -0.01 |
| Peer Violence/Bullying | | | | | | | |
| Mean Score, Victimization Scale | 0.19 | 0.20 | 0.01 | 0.19 | 0.23 | 0.04 | -0.03 |
| Mean Score, Perpetration Scale | 0.15 | 0.17 | 0.02 | 0.16 | 0.19 | 0.03 | -0.01 |
| DRUG AND ALCOHOL USE | | | | | | | |
| Mean Score, Drug/Alcohol Use Scale | 0.03 | 0.06 | 0.03 | 0.05 | 0.08 | 0.03 | 0.00 |
| PERCEIVE SCHOOL AS SAFE | | | | | | | |
| Mean Score, Perception of Safety Scale | 0.75 | 0.75 | 0.00 | 0.78 | 0.70 | -0.08 | 0.08* |
| POSITIVE ATTITUDES/BELIEFS | | | | | | | |
| Mean Score, Positive Attitudes Scale | 0.35 | 0.34 | -0.01 | 0.33 | 0.35 | 0.02 | -0.03 |
| PROSOCIAL BEHAVIORS | | | | | | | |
| Mean Score, All Prosocial Responses | 0.56 | 0.54 | -0.02 | 0.58 | 0.54 | -0.04 | 0.02 |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Table includes limited outcome measures; for complete list, see Appendix J.

² Baseline sample includes only those surveys that were successfully matched to a T2 follow-up survey.

³ Of those who dated someone within the past three months.

displaying higher initial levels of aggression (e.g., CPPRG 2007; Simon et al. 2008; Farrell et al. 2003; Farrell, Meyer, and White 2001; Metropolitan Area Child Study Research Group 2002).

Fourth, we utilize multivariate models to identify what factors *other than* Fourth R exposure were associated with the target outcomes at follow-up (see description of methods in Chapter 2).

Relationship among Target Attitudes and Behaviors

Table 6.1 presents simple correlation coefficients among the primary target outcomes at follow-up T1. (T2 results are presented in Appendix I and generally mirror the T1 findings.) Results confirm that the primary target behaviors are largely interrelated. In particular, summary measures for the primary outcomes of interest—dating, sexual, and peer violence/bullying, sexual activity, and drug and alcohol use—were highly inter-related, with 27 of the 28 relationships examined significantly correlated at the $p < .05$ level. The findings indicate that students who experience dating violence, sexual harassment/assault, and peer violence/bullying have been both perpetrators *and* victims of these types of violence.

Although less universally, the primary target outcomes were also significantly related to the secondary outcomes of interest. Specifically, students who had experienced violence and harassment also tended to perceive their school as less safe; maintain more pro-violence beliefs and gender stereotypes; and have a lesser likelihood of engaging in pro-social responses to bullying and dating violence. *Perpetrators* of peer violence/bullying and harassment were particularly less likely to engage in pro-social outreach on behalf of themselves or others.

Main Program Impacts

Table 6.2 presents limited results from the DiD test from baseline to T1 follow-up, and Table 6.3 presents the same for baseline to T2 (for full results, see Appendix J and Appendix K). As anticipated, most of the primary target behaviors increased from baseline to T2 among both students who received the Fourth R curriculum and students in the control group (see positive values in the Change in Mean columns). In addition, perceptions of school safety and acceptance of pro-violence beliefs and gender stereotypes generally worsen or remain unchanged from the beginning of seventh-grade (baseline) to the end of eighth-grade (T2).

Regarding the impact of Fourth R exposure, only a handful of DiD results were statistically significant. Moreover, the exceptionally small number of significant differences (four out of the full 68 parameters tested in Appendices I and J) points to chance variation as the most plausible explanation. The multivariate findings presented in subsequent tables confirms a general lack of significant or meaningful main effects for the entire sample, with one exception: results do suggest that the Fourth R led to some delay in sexual activity among the treatment sample.

Impact on Select Subgroups

Impact by Participant Sex

Based on results from the previous evaluation, which found males to benefit differentially from the Fourth R curriculum (Wolfe et al. 2009), we conducted a number of analyses examining differential program impact on male versus female students. However, results suggest no differential impact by participant sex. Of the 22 outcomes examined, only two (dating violence victimization at T2, sexual activity at T1) showed differential effects for males and females. (See

Table 6.4. Impact of Program Fidelity on Post-Program Outcomes, T1 and T2

| Dependent Variable | Dating Violence | | | | Sexual Harassment/Assault | | | | Peer Violence/Bullying | | | | Sexually Active | | Drug & Alcohol Use | | School Safety Rating | | Positive Beliefs | | Pro-Social Behavior | |
|-----------------------------------|-----------------|----------|---------|----------|---------------------------|-----------|----------|-----------|------------------------|-----------|-----------|-----------|-----------------|-----------|--------------------|-----------|----------------------|----------|------------------|-----------|---------------------|-----------|
| | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 |
| Follow-Up Time Period | | | | | | | | | | | | | | | | | | | | | | |
| Total Sample Size | 456 | 391 | 157 | 129 | 484 | 429 | 492 | 447 | 557 | 494 | 542 | 486 | 412 | 364 | 370 | 319 | 549 | 494 | 476 | 427 | 423 | 375 |
| Treatment Group | 234 | 192 | 89 | 66 | 258 | 221 | 264 | 231 | 299 | 252 | 294 | 249 | 207 | 176 | 180 | 149 | 296 | 254 | 249 | 220 | 213 | 192 |
| Control Group | 222 | 199 | 68 | 63 | 226 | 208 | 228 | 216 | 258 | 242 | 248 | 237 | 205 | 188 | 190 | 170 | 253 | 240 | 227 | 207 | 210 | 183 |
| R Squared ² | 0.090 | 0.073 | 0.045 | 0.050 | 0.151 | 0.080 | 0.051 | 0.078 | 0.239 | 0.161 | 0.196 | 0.141 | 0.294 | 0.235 | 0.092 | 0.112 | 0.058 | 0.054 | 0.136 | 0.095 | 0.269 | 0.190 |
| F | 12.305*** | 8.720*** | 2.822* | 2.695* | 22.469*** | 10.249*** | 7.543*** | 10.479*** | 44.690*** | 24.569*** | 33.871*** | 20.962*** | | | 10.348*** | 11.034*** | 9.498*** | 8.034*** | 19.650*** | 12.128*** | 39.868*** | 23.003*** |
| Constant | 0.043*** | 0.062*** | 0.069** | 0.128*** | 0.113*** | 0.156*** | 0.051*** | 0.058*** | 0.134*** | 0.134*** | 0.099*** | 0.115*** | 0.102*** | 0.119*** | 0.037*** | 0.058*** | 0.528*** | 0.458*** | 0.343*** | 0.461*** | 0.242*** | 0.270*** |
| Group (Control v. Treatment) | -0.009 | 0.230 | -0.202 | -0.017 | 0.065 | -0.143 | 0.174 | -0.080 | 0.101 | -0.012 | 0.433** | 0.230+ | 5.988 | 35.099*** | 0.085 | -0.190 | -0.088 | 0.167 | -0.099 | -0.402 | -0.218 | -0.311 |
| Background Characteristics | | | | | | | | | | | | | | | | | | | | | | |
| Baseline Score | 0.274*** | 0.355*** | 0.231+ | 0.282* | 0.430*** | 0.228** | 0.240*** | 0.323*** | 0.448*** | 0.433*** | 0.464*** | 0.395*** | 39.333*** | 19.526*** | 0.295*** | 0.325*** | 0.245*** | 0.269*** | 0.399*** | 0.268*** | 0.505*** | 0.401*** |
| Baseline *Group | 0.049 | -0.171* | 0.039 | -0.151 | -0.059 | 0.082 | -0.026 | -0.070 | 0.076 | -0.052 | -0.051 | -0.043 | 0.797 | 0.791 | 0.049 | 0.038 | -0.017 | -0.072 | -0.260 | 0.189 | 0.058 | 0.117 |
| Program Fidelity | | | | | | | | | | | | | | | | | | | | | | |
| Fidelity Score | 0.045 | -0.249 | 0.167 | -0.104 | -0.085 | 0.019 | -0.222 | 0.035 | -0.120 | -0.010 | -0.395** | -0.261* | 0.019* | 0.003** | -0.076 | 0.153 | 0.172 | -0.031 | 0.421** | 0.226 | 0.217 | 0.250 |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Results reflect standardized OLS coefficients for continuous dependent variables and odds ratios for the single dichotomous dependent variable (sexually active).

² Adjusted R squared reported for OLS regression; Nagelkerke R squared is reported for logistic regression.

Appendix L, where coefficients for group assignment effectively represent differential program effects for females exposed to the Fourth R curriculum.) These findings suggest no major differences from the main effects analyses presented above and, with only two of 22 outcomes reaching statistical significance, are most prudently interpreted as due to chance.

Impact on High Risk Students

Table 6.4 presents the moderating effect of baseline student risk on key outcomes. Not surprisingly, higher risk students—that is, those who were already involved in the given target behaviors at baseline (measured by the variable Baseline Score)—were significantly more likely to engage in the same behaviors at follow-up. The question of interest, however, is whether exposure to the Fourth R curriculum made a significant difference in producing a relative reduction in these behaviors at follow-up, as compared to what the frequency of these behaviors would have been without the Fourth R. Accordingly, the interaction terms included in the models presented in Table 6.4 (i.e., Baseline*Group) isolate whether the Fourth R had differential impacts for high-risk students.

Indeed, while all students who had experienced dating violence at baseline were more likely to also experience victimization at follow-up, high-risk students who received the Fourth R curriculum experienced significant reductions in dating violence victimization at follow-up (T2), compared to high-risk students who did not receive the curriculum.

Table 6.5 translates the regression findings into more easily interpretable dating violence prevalence rates. While differences in dating violence for high-risk students (i.e., those who had dated and experienced/perpetrated dating violence within the past three months) who received the Fourth R curriculum versus high-risk students assigned to the control condition do not reach statistical significance (likely reflecting low sample size when presenting and analyzing the data as shown in Table 6.5), the raw scores suggest consistently greater reductions among those high risk students who received the program (with the exception of physical dating violence victimization).

Returning to Table 6.4, results reveal that participant risk did not significantly change any other target outcomes besides dating violence.

Impact of Program Fidelity

Finally, Table 6.4 presents the mediating effect of fidelity to the program model. Students who received *more* of the curriculum (as measured by fidelity score, see Chapter 2) perpetrated less peer violence/bullying (T1, $p < .01$; T2, $p < .05$), were less likely to be sexually active (T1, $p < .05$; T2, $p < .01$), and were less likely to subscribe to pro-violence beliefs and gender stereotypes (T1, $p < .01$). While program fidelity did not significantly improve other target outcomes, these findings indicate that, when well-implemented, the Fourth R curriculum has some positive impact on student attitudes and behavior—particularly in regards to bullying and peer violence.³²

³² The coding of the fidelity score (fidelity = 0 for all control students) means the measure essentially acts as an interaction term for program fidelity*experimental group. The coefficient for the experimental group measure, also included in each of the models presented in Table 5.4, then represents the impact of the Fourth R on the outcome of interest, when program fidelity is at the lowest fidelity score reported (0.35, see Table 2.8). Once fidelity is included in the model, students exposed to the lowest dosage of the Fourth R actually perpetrate *more* peer violence/bullying (T1, $p < .01$) and see *increases* in sexual activity (T2, $p < .001$).

Table 6.5. Impact of Student Baseline Risk on T2 Dating Violence Victimization, High Risk Students Only¹

| | TREATMENT (Fourth R) | | | CONTROL | | | T-C Difference in Difference |
|---|-----------------------|----------------|----------------|-----------------------|----------------|----------------|------------------------------|
| | Baseline ² | T ₂ | Change in Mean | Baseline ² | T ₂ | Change in Mean | |
| Number of Students (N) | 32 | | | 30 | | | |
| VIOLENCE, HARASSMENT, & BULLYING, T2 | | | | | | | |
| Number of Students (N) | 32 | | | 30 | | | |
| Dating Violence Victimization³ | | | | | | | |
| % Reporting Any Victimization | 100% | 34% | -66% | 100% | 53% | -47% | -19% |
| % Reporting Any Physical Victimization ⁴ | 33% | 29% | -4% | 45% | 25% | -20% | 16% |
| Mean Score, Victimization Scale | 0.25 | 0.13 | -0.12 | 0.29 | 0.20 | -0.09 | -0.03 |
| Number of Students (N) | 15 | | | 18 | | | |
| Dating Violence Perpetration³ | | | | | | | |
| % Reporting Any Perpetration | 100% | 40% | -60% | 100% | 69% | -31% | -29% |
| % Reporting Any Physical Perpetration ⁴ | 33% | 20% | -13% | 44% | 38% | -6% | -7% |
| Mean Score, Perpetration Scale | 0.24 | 0.13 | -0.11 | 0.27 | 0.25 | -0.02 | -0.09 |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ High-risk defined as those reporting dating violence victimization at baseline.

² Baseline sample includes only those surveys that were successfully matched to a T2 follow-up survey.

³ Of those who dated someone within the past three months.

⁴ Physical dating violence measures includes the following items: slapped or scratched; pushed, grabbed, shoved, or kicked; hit with fist or something hard; beat up; assaulted with a knife or gun; and forced to do something sexual.

Table 6.6. Impact of Program Fidelity on Select Outcomes

| | TREATMENT (Fourth R) | | | CONTROL ¹ | | | T-C Difference in Difference |
|--|-----------------------|-----------|----------------|-----------------------|-----------|----------------|------------------------------|
| | Baseline ² | Follow Up | Change in Mean | Baseline ² | Follow Up | Change in Mean | |
| Number of Students (N) | 164 | | | 248 | | | |
| VIOLENCE & BULLYING, T1 | | | | | | | |
| Peer Violence/Bullying Perpetration | | | | | | | |
| % Reporting Any Perpetration | 55% | 61% | 6% | 59% | 61% | 2% | 4% |
| % Reporting Any Physical Perpetration ³ | 42% | 51% | 9% | 46% | 51% | 5% | 4% |
| Mean Score, Perpetration Scale | 0.16 | 0.17 | 0.01 | 0.17 | 0.18 | 0.01 | 0.00 |
| Number of Students (N) | 117 | | | 227 | | | |
| SEXUALITY AND DATING, T2 | | | | | | | |
| Dating Activity | | | | | | | |
| Ever Dated | 58% | 65% | 7% | 59% | 73% | 14% | -7% |
| Sexual Activity | | | | | | | |
| Sexually active | 4% | 6% | 2% | 5% | 14% | 9% | -7% |
| Number of Students (N) | 138 | | | 227 | | | |
| POSITIVE ATTITUDES/BELIEFS, T1 | | | | | | | |
| Mean Score, Positive Attitudes Scale | 0.67 | 0.69 | 0.02 | 0.67 | 0.66 | -0.01 | 0.03+ |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ The control sample includes all available students assigned to the control condition, as all control students were coded 0 for program fidelity.

² Baseline sample includes only those surveys that were successfully matched to a follow-up survey in the relevant period.

³ Physical peer violence/bullying measures includes the following items: pushed, hit, or kicked; slapped or scratched; beat up; and assaulted with a weapon.

Table 6.6 presents DiD analyses examining differences between students who received a high dosage of the Fourth R curriculum and students assigned to the control condition in the same schools. While the raw findings suggest *greater* peer violence/bullying perpetration among students who received a higher dosage of the Fourth R as compared to the control group (4% difference, not significant), this increase is much smaller than the increase in the low fidelity treatment sample (e.g., 6% increase among students exposed to high-fidelity programming versus 11% increase in perpetration among students in low fidelity schools, results now shown).

Although none of the findings presented in Table 6.6 reach statistical significance (again, likely reflecting low sample size when presenting the results this way), the raw differences suggest a somewhat sizeable difference in dating and sexual activity, with students who received a high program dosage showing a lesser increase in both activities from baseline to T2. Students who received a high program dosage also showed slightly larger gains in positive thinking (i.e., rejection of pro-violence beliefs and gender stereotypes) compared to students in the control sample.

Multivariate Results: Individual and School-Level Predictors

This section seeks to identify which factors *beyond* the Fourth R curriculum impact target behaviors and attitudes. Table 6.7 presents factors associated with each of the primary outcomes of interest at follow-up T1 and T2.

Primary Program Outcomes

Overall, across primary target behaviors, *students who began dating earlier* or who *became sexually active earlier* were more likely to report experiencing an array of negative outcomes—dating violence, sexual harassment/assault, peer violence/bullying victimization, and engagement in sexual activity at follow-up. Significant predictors for each outcome are summarized below.

Dating Violence. Students who began dating earlier and older students and were more likely to report experiencing dating violence at follow-up; and students who became sexually active earlier and females were more likely to report perpetrating dating violence.

Sexual Harassment/Assault. Students who began dating earlier were at greater risk for sexual harassment/assault (victimization and perpetration). Females were also more likely to report experiencing sexual harassment/assault victimization. Students in schools with a higher percentage of students with individualized educational programs (IEPs) reported perpetrating less sexual harassment.

Peer Violence/Bullying. Students who became sexually active earlier were more likely to be report peer bullying victimization. Students in larger schools (and schools with more teachers) reported experiencing more bullying.

Sexual Activity. Importantly, the sexual activity measure includes only whether or not students reported being sexually active; it does not include safe sex behaviors, STI knowledge, or other safer sex practices included in the Fourth R curriculum. (Overall prevalence of sexual activity was low enough that exploring these outcomes was not feasible, given the diminished sample

Table 6.7. Predictors of Primary Outcomes, T1 and T2¹

| Dependent Variable | Dating Violence | | | | Sexual Harassment/Assault | | | | Peer Violence/Bullying | | | | Sexually Active | | Drug & Alcohol Use | |
|--|-----------------|----------|--------------|----------|---------------------------|----------|--------------|----------|------------------------|-----------|--------------|-----------|-----------------|-----------|--------------------|-----------|
| | Victimization | | Perpetration | | Victimization | | Perpetration | | Victimization | | Perpetration | | T1 | T2 | T1 | T2 |
| Follow-Up Time Period | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 |
| Total Sample Size | 437 | 379 | 117 | 127 | 459 | 415 | 367 | 446 | 535 | 406 | 524 | 470 | 396 | 350 | 348 | 307 |
| Treatment Group | 227 | 186 | 65 | 65 | 247 | 213 | 184 | 230 | 288 | 196 | 293 | 241 | 197 | 167 | 168 | 143 |
| Control Group | 210 | 193 | 52 | 62 | 212 | 202 | 183 | 216 | 247 | 210 | 247 | 229 | 199 | 183 | 180 | 164 |
| R Squared ² | 0.144 | 0.081 | 0.141 | 0.090 | 0.225 | 0.110 | 0.123 | 0.075 | 0.298 | 0.149 | 0.250 | 0.156 | 0.469 | 0.454 | 0.119 | 0.133 |
| F | 8.353*** | 5.779*** | 3.730** | 4.130** | 11.253*** | 6.684*** | 6.708*** | 9.961*** | 26.136*** | 18.748*** | 18.471*** | 13.337*** | | | 6.880*** | 12.749*** |
| Constant | -0.484 | 0.540 | 0.315 | -0.231 | -0.208 | 0.096 | -0.263* | 0.069 | -0.293* | 0.215 | -0.132 | 0.160 | 176907.982 | 0.043 | -0.001 | -0.055 |
| Background Characteristics | | | | | | | | | | | | | | | | |
| Baseline Score | 0.268*** | 0.197*** | 0.158+ | 0.155+ | 0.334*** | 0.233*** | 0.168** | 0.279*** | 0.501*** | 0.368*** | 0.413*** | 0.353*** | 16.068*** | 12.395*** | 0.288*** | 0.300*** |
| Age | 0.127** | -0.003 | -0.038 | 0.113 | -0.001 | -0.056 | 0.097+ | -0.012 | 0.070+ | -0.017 | 0.028 | 0.029 | 0.674 | 2.084* | -0.044 | 0.040 |
| Male | -0.008 | -0.049 | -0.216* | -0.248** | -0.097* | -0.075 | -0.012 | -0.002 | 0.000 | -0.067 | -0.065+ | -0.008 | 6.487*** | 5.168*** | 0.035 | -0.120* |
| Ever Dated (at Baseline) | 0.167*** | 0.106* | | 0.002 | 0.149** | 0.121* | 0.139** | | 0.059 | | 0.059 | 0.062 | 6.833** | 3.825** | 0.072 | 0.096+ |
| Sexually Active (at Baseline) | | | 0.283** | | | | 0.094+ | | | 0.037* | | | | | 0.092+ | |
| Interested in the Opposite Sex | | | | | | | 0.089+ | | | | | | | | | |
| Prior Exposure to Program Materials | | | | | | | | | | | | | | | | |
| Substance Use/Abuse Program | 0.050 | | | | | | | | | | | | | | | |
| Dating Abuse Program | 0.030 | | | | 0.038 | | | | | | | | | | | |
| Sex Education | | | | | 0.076 | | | | | | | | | | | |
| School Measures³ | | | | | | | | | | | | | | | | |
| School Score ⁴ | | -0.044 | | | | | | | | | -0.076 | -0.076 | 0.230 | 0.006+ | | |
| Total Enrollment (2011-12) | | | | | 0.218 | 0.061 | 0.090+ | | 0.116** | | 0.159* | | | | | |
| 7th Grade Enrollment (2011-12) | | 0.075 | | | 0.040 | | 0.086+ | | | | 0.066 | | 1.022* | | 0.131* | |
| Grades Served ⁴ | | | | | 0.173 | | | | | | 0.077 | | | | | |
| Middle School Only | | | -0.132 | | | | | | 0.027 | | | | | | | |
| # of Teachers | | | | | -0.104 | 0.127 | | | 0.166* | | | | | | | |
| Teachers w/≤ 3 yrs experience | | | | | | | | | -0.069 | | | | | 0.006 | | |
| Teachers w/advanced education | | | 0.049 | | | | | | -0.069 | | 0.026 | 0.052 | | 1.739 | 0.038 | |
| Attendance Rate | 0.044 | -0.079 | | | | | | | | | | -0.015 | 0.000 | 0.188 | | |
| Suspension rate | | | | | | | | | | | | | | | | |
| Economic Need Index | -0.004 | | | | | | | | | | | | 0.628 | 0.131 | | |
| % Qualify for Free Lunch | | | -0.070 | | | | | | | | | | | | | |
| % IEP | -0.017 | | | | 0.052 | -0.033 | -0.122* | | | | -0.048 | | | | | |
| % ELL | -0.043 | | | | -0.138 | 0.149+ | | 0.063 | | | | | | | | |
| Overall DOE Report Card Score | | | | | 0.003 | 0.075 | | | | | | | | 0.964 | 0.075 | |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Only variables found significant in bivariate analyses were considered for inclusion in multivariate models. Variables found significant in prior multivariate models are included in the final models presented here. Results reflect standardized OLS coefficients for continuous dependent variables and odds ratios for the single dichotomous dependent variable (sexually active).

² Nagelkerke R squared for dichotomous outcome variable (sexually active); adjusted R squared for continuous outcome variables (all others).

³ School measures described in greater detail (including distribution) in Chapter Two.

⁴ Based on the fidelity score; fidelity score for the Treatment sample is assigned to all students in each experimental school.

⁵ Categories include: K-8, 6-8, 6-9, 6-12.

Table 6.8. Predictors of Secondary Outcomes, T1 and T2¹

| Dependent Variable | School Safety Rating | | Positive Beliefs | | Pro-Social Behavior | |
|--|----------------------|----------|------------------|-----------|---------------------|-----------|
| | T1 | T2 | T1 | T2 | T1 | T2 |
| Follow-Up Time Period | | | | | | |
| Total Sample Size | 542 | 486 | 460 | 414 | 409 | 345 |
| Treatment Group | 292 | 249 | 241 | 213 | 205 | 169 |
| Control Group | 250 | 237 | 219 | 201 | 204 | 176 |
| Adjusted R Squared | 0.114 | 0.142 | 0.133 | 0.094 | 0.270 | 0.202 |
| F | 7.929*** | 7.178*** | 15.076*** | 11.747*** | 38.766*** | 22.754*** |
| Constant | -0.235 | -22.670* | -0.413 | 0.513** | 0.017 | 0.141 |
| Background Characteristics | | | | | | |
| Baseline Score | 0.222*** | 0.188*** | 0.302*** | 0.287*** | 0.502*** | 0.430*** |
| Age | 0.018 | 0.024 | 0.027 | -0.016 | 0.058 | 0.027 |
| Male | -0.050 | -0.011 | 0.087* | -0.004 | -0.042 | -0.004 |
| Ever Dated (at Baseline) | | | -0.104* | -0.087+ | -0.042 | |
| Sexually Active (at Baseline) | | | | | | -0.142** |
| Interested in the Opposite Sex | | | | | | |
| Prior Exposure to Program Materials | | | | | | |
| Substance Use/Abuse Program | -0.136** | -0.070 | | | | |
| Dating Abuse Program | | | | | | |
| Sex Education | | | | | | |
| School Measures² | | | | | | |
| School Score ³ | | | | | | |
| Total Enrollment (2011-12) | -0.079+ | | | | | |
| 7th Grade Enrollment (2011-12) | | 0.883+ | | | | |
| Grades Served ⁴ | | -1.278* | | | | |
| Middle School Only | 0.033 | | | | | |
| # of Teachers | -0.037 | 1.922* | | | | |
| Teachers w/≤ 3 yrs experience | -0.028 | -0.991** | | | | |
| Teachers w/advanced education | | | | | | |
| Attendance Rate | 0.059 | 1.510* | 0.108* | | | |
| Suspension rate | | 0.429* | | | | |
| Economic Need Index | | | | | | |
| % Qualify for Free Lunch | | | | | | |
| % IEP | | 2.576* | | | | |
| % ELL | | -2.269* | | | | |
| Overall DOE Report Card Score | 0.067 | -1.625+ | | | | |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹Only variables found significant in bivariate analyses were considered for inclusion in multivariate models. Variables found significant in prior multivariate models are included in the final models presented here. Dependent variable is continuous; standardized OLS coefficients are presented.

²School measures described in greater detail (including distribution) in Chapter Two.

³Based on the fidelity score; fidelity score for the Treatment sample is assigned to all students in each experimental school.

⁴Categories include: K-8, 6-8, 6-9, 6-12.

size when only sexually active students were included.) Not surprisingly, older students and those who began dating earlier were more likely to report sexual activity at follow-up. Male respondents were more likely than females to report being sexually active. Students in larger schools were more likely to be sexually active. It is interesting to note that previous exposure to sex education programs did not make it into the final multivariate models, as it was not significant in preliminary bivariate analyses.

Drug Use. Females and students in larger schools (i.e., with larger seventh-grade enrollment) reported more drug and alcohol use.

Secondary Program Outcomes

Table 6.8 presents predictors of the three secondary program outcomes at T1 and T2.

Perceptions of School Safety. Higher scores on the School Safety scale represent greater perceptions of safety in and around the school grounds. Only one *individual* characteristic was significantly related to believing that school is a generally safe place: students who previously participated in a drug and alcohol prevention program rated their schools as less safe than students who had not participated in such programs.³³ Students in schools with higher attendance and suspension rates, and in schools with a higher percentage of students with IEPs rated their school as safer than students in schools without these characteristics. In contrast, students in schools that serve higher grade levels, in schools with less experienced teaching staff, and in schools with a higher proportion of English Language Learners rated their schools as less safe.

Positive Attitudes/Beliefs. Students who started dating earlier held more pro-violence beliefs and gender stereotypes. Males and students in schools with higher attendance rates held fewer such beliefs.

Prosocial Responses to Bullying and Dating Violence. The only variable significantly related to prosocial responses to bullying and dating violence was sexual activity; students who became sexually active earlier were less likely to engage in prosocial outreach in response to violence perpetrated against themselves or a friend.

Chapter Summary

The findings presented in this chapter suggest limited promising impacts of the Fourth R curriculum as implemented in the Bronx. While any apparent main effects detected seem as likely due to chance (given the extremely small *number* of significant main effects across many parameters), findings suggest that dosage and program delivery matter. Students exposed to *more* of the Fourth R curriculum perpetrated less bullying and were more likely to delay sexual activity. Conversely, poorly implemented programming actually had adverse effects on peer violence/bullying perpetration. Students exposed to more of the curriculum also became significantly less likely to subscribe to pro-violence beliefs and gender stereotypes.

In addition, the findings suggest that target audience matters. The Fourth R significantly reduced dating violence among high-risk students who had previously experienced or perpetrated

³³ Without a theoretical explanation for this finding, it seems likely that it is either due to chance or the vestige of some unmeasured correlate.

dating violence. Insofar as the aim of prevention programming is to reduce negative behaviors among those students who might otherwise have a predisposition to engage in them, the positive findings with high risk students are notable. Whereas previous research found differential impacts by participant sex, the current study did not find program impacts to differ for male and female students. Nonetheless, baseline differences between males and females indicate that there may still be value to sex-specific programming.

A series of additional multivariate findings that did not specifically test the impact of the Fourth R curriculum nonetheless yielded potentially important policy implications for future prevention programming. Of particular import, those who delayed dating and/or sexual activity generally engaged in less violence perpetration and experience less victimization across multiple outcome measures. One implication of this consistent finding may be to identify programming components or alternative programs that specifically address delaying dating and sexual activity—given that delaying these behaviors seems to serve as a potential linchpin to other positive benefits. Study findings may further suggest a need for programming that separately targets young men and young women. Specifically, males reported earlier entrance into sexual activity, but less perpetration of dating violence and less acceptance of pro-violence beliefs and gender stereotypes than females at follow-up. These differences may point to differing needs by sex and, therefore, potential benefits of single-sex programming.

Findings with regard to school-level factors vary, but may generally be interpreted to suggest benefits of smaller schools (operationalized as total enrollment in the seventh grade cohort and total number of teachers) and more personalized programming (i.e., greater percentage IEP) yields more positive effects in reducing sexual activity, bullying, and drug and alcohol use. While principals likely cannot easily alter the size of their school, these findings may suggest that, in the largest schools, extra programming may be needed.

Chapter 7

Diffusion Effects of the Fourth R

A secondary quasi-experimental study enabled us to examine whether implementation of the Fourth R had any school-wide benefits *across* the ten experimental schools, reaching even those students who did not directly receive the Fourth R curriculum. By including three additional quasi-experimental schools, in which *none* of the students received the Fourth R curriculum, we were able to explore whether students in the experimental schools who were assigned to the control condition (i.e., who did not receive the Fourth R curriculum) realized some program benefits anyway, through peer-to-peer or teacher-student diffusion.

There are several mechanisms by which peer-to-peer diffusion might be explained. The Fourth R curriculum enables students to practice peer mentoring, role modeling, and mediation. While the program is not based on a formal bystander intervention model, it also includes some components of bystander intervention. For example, during the second lesson of Unit 1, students learn that in potentially violent scenarios between friends, there may be individuals who play the role of passive bystanders and others who play the role of mediators/peacemakers. The mediators are described as individuals who try to solve a conflict or situation before it becomes violent. In similar ways throughout the curriculum, students build skills that may contribute to the diffusion of program benefits to students who have not received it.

Throughout this chapter, the control sample in the randomized controlled trial is included as the experimental sample; all students who were in seventh-grade at the three quasi-experimental comparison schools at baseline (and successfully matched at follow-up) are included as the comparison sample.

Differences between the Experimental and Comparison Samples

Table 7.1 presents baseline characteristics of the experimental control and quasi-experimental comparison samples. Only those students whose baseline surveys were successfully matched to a T2 follow-up survey are included. The samples appear nearly identical, with only three differences at the $p < .05$ level. There were fewer black students and fewer students who identified as an “other” race in the comparison sample. Students in the comparison sample also reported feeling less safe in school classrooms, though overall scores on the summary school safety measure did not vary between the samples. Three significant variables out of more than sixty examined is less variation than we would expect based on random chance, indicating that the quasi-experimental comparison sample is well-matched to the experimental control sample. Based on the comparability of the two samples at baseline, differences in outcomes examined in the next section are most likely attributable to some factor occurring in the intervening period—for instance, the Fourth R model.

**Table 7.1. Baseline Differences
Between Experimental Control and Comparison Samples**

| | ALL BASELINE | |
|------------------------------------|---|----------------------|
| | Experimental Control Sample ¹ | Comparison Sample |
| <i>N</i> ² | 248 | 192 |
| DEMOGRAPHICS | | |
| Age | | |
| 11 years old | 14% | 13% |
| 12 years old | 69% | 64% |
| 13 years old | 16% | 21% |
| 14 years old | 2% | 3% |
| Over 14 years old | 0% | 0% |
| Average Age | 12.1 | 12.1 |
| Sex | | |
| Male | 39% | 40% |
| Race/Ethnicity³ | | |
| Black | 35% | 24% * |
| Hispanic | 69% | 76% |
| White | 4% | 2% |
| American Indian | 2% | 2% |
| Asian/Hawaiian/Pacific Islander | 1% | 2% |
| Other | 17% | 8% ** |
| Years Lived in US ≥ 7 years | 89% | 86% |
| LIVING ARRANGEMENTS | | |
| Living with single parent | 39% | 43% |
| Living with two parents | 58% | 53% |
| Living with other relatives | 2% | 2% |
| Living with other adults | 0% | 1% |
| SEXUALITY AND DATING | | |
| Sexual Orientation | | |
| Interested in opposite sex | 78% | 76% |
| Interested in same sex | 0% | 1% |
| Interested in both sexes | 6% | 2% + |
| Not interested in dating/sex | 15% | 21% |
| Dating Activity | | |
| Ever Dated | 57% | 55% |
| Dated in the Past 3 Months | 39% | 46% |
| Sexual Activity | | |
| Sexually active | 7% | 7% |

Table 7.1. Baseline Differences Between Experimental Control and Comparison Samples

| | ALL BASELINE | |
|---|--|-------------------|
| | Experimental Control Sample ¹ | Comparison Sample |
| <i>N</i> ² | 248 | 192 |
| VIOLENCE, HARASSMENT, & BULLYING | | |
| Dating Violence⁴ | | |
| Mean Score, Victimization Scale | 0.04 | 0.06 |
| % Reporting Any Victimization | 17% | 28%+ |
| % Reporting Emotional/Psychological Victimization | 17% | 27%+ |
| % Reporting Physical Victimization | 12% | 14% |
| Mean Score, Perpetration Scale | 0.05 | 0.07 |
| % Reporting Any Perpetration | 13% | 20% |
| % Reporting Emotional/Psychological Perpetration | 11% | 15% |
| % Reporting Physical Perpetration | 8% | 9% |
| Sexual Harassment/Assault | | |
| Mean Score, Victimization Scale | 0.12 | 0.13 |
| % Reporting Any Victimization | 40% | 38% |
| % Reporting Emotional/Psychological Victimization | 34% | 35% |
| % Reporting Electronic Victimization | 8% | 11% |
| % Reporting Physical Victimization | 20% | 22% |
| Mean Score, Perpetration Scale | 0.05 | 0.05 |
| % Reporting Any Perpetration | 23% | 19% |
| % Reporting Emotional/Psychological Perpetration | 16% | 16% |
| % Reporting Electronic Perpetration | 3% | 2% |
| % Reporting Physical Perpetration | 10% | 8% |
| Peer Violence/Bullying | | |
| Mean Score, Victimization Scale | 0.19 | 0.20 |
| % Reporting Any Victimization | 67% | 60% |
| % Reporting Emotional/Psychological Victimization | 61% | 56% |
| % Reporting Physical Victimization | 41% | 38% |
| Mean Score, Perpetration Scale | 0.16 | 0.15 |
| % Reporting Any Perpetration | 57% | 52% |
| % Reporting Emotional/Psychological Perpetration | 45% | 40% |
| % Reporting Physical Perpetration | 42% | 41% |
| DRUG AND ALCOHOL USE | | |
| Mean Score, Drug/Alcohol Use Scale | 0.05 | 0.04 |
| % Reporting Any Drug/Alcohol Use | 19% | 17% |
| % Smoked, Past 30 Days | 3% | 1% |
| % Drank, Past 30 Days | 11% | 11% |
| % Binge Drinking, Past 3 Months | 7% | 7% |
| % Marijuana Use, Past 3 Months | 5% | 2% |
| % Inhalant Use, Past 3 Months | 5% | 4% |
| % OTC Drug Use, Past 3 Months | 4% | 5% |
| % Rx Drug Use, Past 3 Months | 1% | 0% |
| SCHOOL SAFETY | | |
| Mean Score, Perception of Safety Scale | 0.78 | 0.74 |
| Feel Safe in School Classrooms | 94% | 84% ^{**} |
| Feel Safe in School Hallway/Stairwells | 72% | 67% |
| Feel Safe on School Grounds/In Parking Lot | 61% | 61% |
| Feel Safe in School Bathrooms | 70% | 66% |
| Feel Safe in School Cafeteria | 83% | 77% |
| Threatened/Injured w/Weapon at School | 6% | 4% |
| Threatened/Injured w/Weapon on way to/from School | 4% | 7% |

Table 7.1. Baseline Differences Between Experimental Control and Comparison Samples

| | ALL BASELINE | |
|--|--|-------------------|
| | Experimental Control Sample ¹ | Comparison Sample |
| | <i>N</i> ² | |
| | 248 | 192 |
| POSITIVE ATTITUDES/BELIEFS | | |
| Mean Score, Positive Attitudes Scale | 0.33 | 0.35 |
| PROSOCIAL BEHAVIORS | | |
| Bullying | | |
| <i>Bullying Against You</i> | | |
| Mean Score, Response to Bullying (Self) | 0.66 | 0.68 |
| Likely to Talk to A Friend | 56% | 47% |
| Likely to Talk to a Parent/Adult/Teacher | 70% | 65% |
| Likely to Call a Hotline | 21% | 20% |
| <i>Bullying Against a Friend</i> | | |
| Mean Score, Response to Bullying (Others) | 0.56 | 0.60 |
| Likely to Talk to A Friend | 76% | 68%+ |
| Likely to Talk to a Parent/Adult/Teacher | 62% | 54% |
| Likely to Call a Hotline | 25% | 24% |
| Dating Violence | | |
| <i>Dating Violence Against You</i> | | |
| Mean Score, Response to Dating Violence (Self) | 0.59 | 0.62 |
| Likely to Talk to A Friend | 70% | 67% |
| Likely to Talk to a Parent/Adult/Teacher | 51% | 43% |
| Likely to Call a Hotline | 17% | 18% |
| <i>Dating Violence Against a Friend</i> | | |
| Mean Score, Response to Dating Violence (Others) | 0.48 | 0.51 |
| Likely to Talk to A Friend | 57% | 52% |
| Likely to Talk to a Parent/Adult/Teacher | 56% | 56% |
| Likely to Call a Hotline | 8% | 12% |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Includes Control Group from the experimental sample only.

² Only those respondents whose surveys were successfully matched to T2 responses are included in the total N.

³ Because respondents could select more than one race/ethnicity, percentages add up to 100%.

⁴ Of those who dated someone within the past three months.

Diffusion Effect on Fourth R Outcomes

Tables 7.2 and 7.3 present limited results from the DiD tests, respectively from baseline to T1 and from baseline to T2 (for full results, see Appendix M and Appendix N). Again, most (though not all) of the primary target behaviors increased from baseline to the follow-up periods (see positive values in the Change in Mean columns); this is true for both students in the experimental and comparison schools.

The results in the T-C Difference in Difference column represent the difference in change over time between the control group from the experimental study and the comparison sample from schools where no one received the Fourth R. Few of these differences were statistically significant. The most notable results of the DiD analysis are the findings that students from the control group at experimental schools saw significantly less increase in drug use from baseline to T1 and significantly less increase in perpetrating any peer violence/bullying from baseline to T1 (see Appendix M). Of the 68 parameters examined, only three reached statistical significance. No significant differences were detected at follow-up T2.

Separate analyses were conducted that isolated control cases from those experimental schools with a fidelity score of 0.60 or above (N=6) to examine whether diffusion of program impacts might improve with greater program fidelity. Differences between the high-fidelity experimental control sample and the comparison sample (not shown) generally mirror the results of the DiD analyses including the full experimental control sample, with one exception: students in the control sample in schools with high program fidelity also saw less increase in *physical* peer violence/bullying victimization and perpetration at T1 (see Table 7.4). Other diffusion benefits with regard to drug use and peer violence/bullying perpetration were maintained regardless of program fidelity.

Chapter Summary

It is important to keep in mind that there may have been other unmeasured programs or changes occurring in either the experimental or comparison schools during the study period. In addition, while findings suggest reductions in drug and alcohol use across the experimental sample, there was *no* impact on drug and alcohol use between the treatment and control groups within the main experimental study. Therefore, the results presented in this chapter should be interpreted with caution. Overall, the findings suggest that there are some school-wide improvements seen across the ten experimental schools, including reduced aging-in to drug and alcohol use and reduced peer violence/bullying perpetration, with additional diffusion benefits in reduced physical peer violence/bullying victimization for control students in schools where the Fourth R was implemented with greater program fidelity. However, most outcome measures did not vary at follow-up, suggesting that diffusion effects, while perhaps present, were limited in scope and significance.

Table 7.2. Diffusion Effect: Change in Student Behavior, Victimization, and Beliefs from Baseline (B) to End of Program Year (T1) in Experimental Control versus Comparison Samples

| | EXPERIMENTAL CONTROL ¹ | | | COMPARISON | | | T-C Difference in Difference |
|---|-----------------------------------|----------------|----------------|-----------------------|----------------|----------------|------------------------------|
| | Baseline ² | T ₁ | Change in Mean | Baseline ² | T ₁ | Change in Mean | |
| Number of Students (N) | 260 | | | 174 | | | |
| SEXUALITY AND DATING | | | | | | | |
| Dating Activity | | | | | | | |
| Ever Dated | 59% | 71% | 12% | 59% | 67% | 8% | 4% |
| Sexual Activity | | | | | | | |
| Sexually active | 5% | 13% | 8% | 7% | 8% | 1% | 7%+ |
| VIOLENCE, HARASSMENT, & BULLYING | | | | | | | |
| Dating Violence³ | | | | | | | |
| Mean Score, Victimization Scale | 0.05 | 0.06 | 0.01 | 0.07 | 0.06 | -0.01 | 0.02 |
| Mean Score, Perpetration Scale | 0.08 | 0.09 | 0.01 | 0.10 | 0.09 | -0.01 | 0.02 |
| Sexual Harassment/Assault | | | | | | | |
| Mean Score, Victimization Scale | 0.13 | 0.18 | 0.05 | 0.14 | 0.18 | 0.04 | 0.01 |
| Mean Score, Perpetration Scale | 0.05 | 0.07 | 0.02 | 0.05 | 0.07 | 0.02 | 0.00 |
| Peer Violence/Bullying | | | | | | | |
| Mean Score, Victimization Scale | 0.21 | 0.23 | 0.02 | 0.21 | 0.23 | 0.02 | 0.00 |
| Mean Score, Perpetration Scale | 0.17 | 0.18 | 0.01 | 0.14 | 0.19 | 0.05 | -0.04+ |
| DRUG AND ALCOHOL USE | | | | | | | |
| Mean Score, Drug/Alcohol Use Scale | 0.05 | 0.05 | 0.00 | 0.04 | 0.09 | 0.05 | -0.05* |
| PERCEIVE SCHOOL AS SAFE | | | | | | | |
| Mean Score, Perception of Safety Scale | 0.78 | 0.74 | -0.04 | 0.74 | 0.70 | -0.04 | 0.00 |
| POSITIVE ATTITUDES/BELIEFS | | | | | | | |
| Mean Score, Positive Attitudes Scale | 0.33 | 0.34 | 0.01 | 0.35 | 0.34 | -0.01 | 0.02 |
| PROSOCIAL BEHAVIORS | | | | | | | |
| Mean Score, All Prosocial Responses | 0.58 | 0.55 | -0.03 | 0.62 | 0.58 | -0.04 | 0.01 |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Includes Control Group from the experimental sample only.

² Baseline sample includes only those surveys that were successfully matched to a T1 follow-up survey.

³ Of those who dated someone within the past three months.

Table 7.3. Diffusion Effect: Change in Student Behavior, Victimization, and Beliefs from Baseline (B) to End of Follow-Up Year (T2) in Experimental Control versus Comparison Samples

| | EXPERIMENTAL CONTROL ¹ | | | COMPARISON | | | T-C Difference in Difference |
|---|-----------------------------------|----------------|-------------------|-----------------------|----------------|-------------------|------------------------------------|
| | Baseline ² N | T ₂ | Change in Mean | Baseline ² | T ₂ | Change in Mean | |
| SEXUALITY AND DATING | 248 | | | 192 | | | |
| Dating Activity | | | | | | | |
| Ever Dated | 59% | 74% | 15% | 56% | 73% | 17% | -2% |
| Sexual Activity | | | | | | | |
| Sexually active | 5% | 14% | 9% | 7% | 9% | 2% | 7% |
| VIOLENCE, HARASSMENT, & BULLYING | | | | | | | |
| Dating Violence³ | | | | | | | |
| Mean Score, Victimization Scale | 0.04 | 0.08 | 0.04 | 0.05 | 0.08 | 0.03 | 0.01 |
| Mean Score, Perpetration Scale | 0.07 | 0.16 | 0.09 | 0.07 | 0.15 | 0.08 | 0.01 |
| Sexual Harassment/Assault | | | | | | | |
| Mean Score, Victimization Scale | 0.12 | 0.19 | 0.07 | 0.13 | 0.23 | 0.10 | -0.03 |
| Mean Score, Perpetration Scale | 0.05 | 0.08 | 0.03 | 0.05 | 0.09 | 0.04 | -0.01 |
| Peer Violence/Bullying | | | | | | | |
| Mean Score, Victimization Scale | 0.20 | 0.23 | 0.03 | 0.20 | 0.21 | 0.01 | 0.02 |
| Mean Score, Perpetration Scale | | | 0.00 | 0.15 | 0.19 | 0.04 | -0.04 |
| DRUG AND ALCOHOL USE | | | | | | | |
| Mean Score, Drug/Alcohol Use Scale | 0.05 | 0.08 | 0.03 | 0.04 | 0.09 | 0.05 | -0.02 |
| PERCEIVE SCHOOL AS SAFE | | | | | | | |
| Mean Score, Perception of Safety Scale | 0.78 | 0.71 | -0.07 | 0.75 | 0.69 | -0.06 | -0.01 |
| POSITIVE ATTITUDES/BELIEFS | | | | | | | |
| Mean Score, Positive Attitudes Scale | 0.33 | 0.34 | 0.01 | 0.35 | 0.37 | 0.02 | -0.01 |
| PROSOCIAL BEHAVIORS | | | | | | | |
| Mean Score, All Prosocial Responses | 0.58 | 0.53 | -0.05 | 0.60 | 0.55 | -0.05 | 0.00 |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Includes Control Group from the experimental sample only.

² Baseline sample includes only those surveys that were successfully matched to a T2 follow-up survey.

³ Of those who dated someone within the past three months.

Table 7.4. Diffusion Effect: Change in Student Behavior, Victimization, and Beliefs from Baseline (B) to End of Program Year (T1) in Experimental Control versus Comparison Samples, Hi-Fidelity Experimental Schools Only

| | EXPERIMENTAL CONTROL ¹ | | | COMPARISON | | | T-C Difference in Difference |
|---|-----------------------------------|----------------|----------------|-----------------------|----------------|----------------|------------------------------|
| | Baseline ² | T ₁ | Change in Mean | Baseline ² | T ₁ | Change in Mean | |
| Number of Students (<i>N</i>) | 141 | | | 174 | | | |
| VIOLENCE & BULLYING | | | | | | | |
| Peer Violence/Bullying | | | | | | | |
| % Reporting Any Victimization | 75% | 77% | 2% | 64% | 74% | 10% | -8% |
| % Reporting Any Physical Victimization ³ | 50% | 53% | 3% | 40% | 57% | 17% | -14% * |
| Mean Score, Victimization Scale | 0.22 | 0.22 | 0.00 | 0.21 | 0.23 | 0.02 | -0.02 |
| % Reporting Any Perpetration | 58% | 62% | 4% | 50% | 64% | 14% | -10% + |
| % Reporting Any Physical Perpetration ³ | 46% | 49% | 3% | 40% | 56% | 16% | 13% * |
| Mean Score, Perpetration Scale | 0.17 | 0.18 | 0.01 | 0.14 | 0.19 | 0.05 | -0.04* |
| DRUG AND ALCOHOL USE | | | | | | | |
| % Reporting Any Drug/Alcohol Use | 19% | 19% | 0% | 13% | 32% | 19% | -19% ** |
| Mean Score, Drug/Alcohol Use Scale | 0.05 | 0.05 | 0.00 | 0.04 | 0.09 | 0.05 | -0.05* |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Limited to the Control Group from those experimental schools with a fidelity score of ≥ 0.60 .

² Baseline sample includes only those surveys that were successfully matched to a T1 follow-up survey.

³ Physical peer violence/bullying measures includes the following items: pushed, hit, or kicked; slapped or scratched; beat up; and assaulted with a weapon.

Chapter 8

Conclusion

This report examined the implementation and impacts of the Fourth R curriculum in ten middle schools in the Bronx, New York. The study sought to determine whether the curriculum, previously found to have some positive impacts among Canadian ninth-graders, might have even greater effects among a younger, diverse, urban population. The design was mainly for an *effectiveness study*, evaluating the Fourth R curriculum as that curriculum might be implemented in future “real world” applications—i.e., the researchers did not actively control or insist upon a certain implementation process (as might be done in what is known as an *efficacy study*). Start Strong Bronx, a program of Bronx-Lebanon Hospital Center, provided training and oversight to all participating schools, which suggests that average fidelity may have exceeded what might be achieving by purchasing Fourth R materials but not having an on-site organization perform direct training; but like the researchers, Start Strong Bronx could *monitor* fidelity but could not and did not control the level of fidelity once the training process was complete. In turn, it was not surprising that program dosage and fidelity to the Fourth R model varied from school-to-school. Hence, the report documents whether relatively greater adherence to the model tangibly affected the resulting impacts.

This chapter reviews the major study findings, identifies study limitations, and discusses implications for other sites wishing to implement the Fourth R or similar programs.

Discussion of Major Findings

Planning and Implementation in the Bronx, New York

- **A Comprehensive Curriculum.** Staff at Start Strong Bronx chose the Fourth R curriculum for its comprehensive approach. By focusing on building healthy relationships and the interrelated nature of the target issues (e.g., links among healthy relationships, drug and alcohol use, and personal empowerment), staff felt that this curriculum eliminates the need for multiple programs targeting overlapping behaviors.
- **Program Length.** While a more comprehensive approach was cited as a strength of the Fourth R curriculum (versus Safe Dates, the shorter alternative program that focuses more exclusively on teen dating violence), implementing more than 26 hours of program material was a serious challenge for teachers with many conflicting demands on their time and attention. After the first year of program implementation was well underway (i.e., the year *prior to* the study), program staff at Start Strong Bronx saw that many of the teachers simply dropped out after completing 12 to 15 lessons. For this reason, Start Strong Bronx was interested in exploring the possibility of condensing program materials and reducing the total number of lessons.
- **Program Fidelity.** In general, schools included in this effectiveness study implemented the program with moderately high program fidelity. Of the ten schools, all completed each of the three units and only one school completed less than half of the possible

activities across the units. Completion declined across the units, with teachers completing more of Unit 1 (81%) than of Units 2 (71%) or 3 (67%); these findings may suggest some program fatigue over time. The mean fidelity score suggests that nearly 70% of exercises and activities were completed across the ten schools. Since it is not anticipated that *any* teacher will complete 100% of all possible exercises, this represents moderately high overall program fidelity. There were significant school-level variations in fidelity (range: 0.35 to 0.86), and these variations would prove to be exceptionally important when examining the impact of the Fourth R curriculum.

- Target schools. Program staff felt that the schools that were the most successful at implementing the Fourth R (i.e., those with the highest program fidelity, lowest drop-out, and greatest buy-in) were generally high-performing schools. While schools that performed worse overall (i.e., scored lower on the DOE report card) might stand to gain more from the Fourth R, these schools faced too many other challenges to effectively implement the program.
- Teacher Preparedness. Two teachers reported that they would have liked more training. Several teachers indicated that they did not reach out to Start Strong staff, even when they had questions or concerns. However, all the teachers interviewed agreed that Start Strong staff offered assistance and was approachable.
- Appropriateness for the Target Population. Program materials were adapted from the original ninth-grade curriculum. Teachers and students generally agreed that the materials included in the Fourth R curriculum were appropriate for the seventh-grade audience. Several teachers suggested that many students this age do not yet have a basic understanding of sex and that lessons in biology were a missing component. A minority of students expressed concern that seventh-grade was too young to address sexual activity; however, the New York City Department of Education (DOE) now requires that middle school students receive standard sex education. Prevalence findings (see below) support feedback from teachers and students that materials presented in the Fourth R are relevant to seventh graders.
- Reception of Program Material. Both teachers and students provided generally positive feedback about the program materials. Teachers raised some concerns about outdated and unrepresentative videos and scenarios. Students had a hard time relating to presentations of students who did not look like them (e.g., in terms of reflecting an urban setting and a racially/ethnically diverse population). Teachers generally felt that students were most engaged by activities that were not similar to standard classroom work, particularly noting role playing and scenarios as achieving high student response.
- Retention of Program Material. Students had moderate to high recall of the bullying and drug and alcohol topics covered in the curriculum, but had less recall of the dating violence component. Start Strong Bronx program staff attributed this lack of recall to the program's emphasis on healthy relationships generally, as opposed to dating violence specifically.

- Program Costs. The estimated \$12.21 per student cost for implementation in the Bronx compares favorably to the creators' cost estimates (CAD \$16) for the original program. Across the ten schools, the average cost per school was \$676.
- Sustainability. The Fourth R program model relies on teacher facilitators to implement program materials. For this reason, program staff felt that the program was more sustainable than comparable programs that rely on professional outside facilitators.

Prevalence of Target Behaviors

The recommendation made by the authors of the earlier Fourth R evaluation that the curriculum might be more effective with a younger population was based on the supposition that a younger population would be less involved in target behaviors. However, the baseline prevalence of target behaviors among the seventh-grade Bronx population was comparable to the older Canadian students (though comparable to other U.S. middle school samples).

- Dating Violence, Harassment, and Assault. Both physical bullying victimization and physical dating violence were more prevalent among the seventh-grade students than among the ninth graders in the previous study. Nearly one-fifth of students reported experiencing dating violence (20%) or *physical* sexual harassment/assault (20%) or perpetrating sexual harassment/assault (21%) against peers; twice as many students (41%) reported having been the victim of any sexual harassment/assault. Incidence of physical dating violence was lower (8%). The overall prevalence of dating violence in the current sample is similar to those reported by Taylor et al. (2008, 2011).
- Peer Violence/Bullying. Most students had experienced (68%) or perpetrated (56%) peer violence/bullying. Sixty percent of students had been victims of *physical* bullying; males were more likely than females to report physical victimization.
- Sexual Activity. Eight percent of students reported that they were sexually active at baseline. Males were significantly more likely than females to report being sexually active.
- Drug and Alcohol Use. A minority of students (14%) reported recently using drugs or alcohol. Males were more likely than females to report engaging in binge drinking or smoking marijuana.
- Pro-Social Attitudes: Students rejected more than half of the pro-violence beliefs and gender stereotypes included in the survey (e.g., "It is okay for me to hit someone to get them to do what I want," "Girls sometimes deserve to be hit by the boys they date"). Nearly all students (92%) reported that they would undertake *some* pro-social response if they or a friend experienced dating violence or bullying. Students also reported that they would be more likely to talk to a friend (range: 51-70%) than to talk to a parent (range: 38-51%) or a teacher (range: 40-58%) in the instance of bullying or dating violence. Students were least likely to report that they would call a hotline in such an instance (range: 8-22%).

- Interrelation among Target Behaviors: Behaviors targeted by the Fourth R are strongly interrelated. That is, students who experience one type of violence/harassment are likely to experience other types of violence/harassment. Additionally, students who experience dating violence, sexual harassment/assault, and peer violence/bullying have been both perpetrators *and* victims of these types of violence. Early onset of dating and sexual activity, in particular, was predictive of negative outcomes (e.g., increased dating and peer violence/bullying, sexual harassment/assault, and endorsement of pro-violence beliefs and gender stereotypes).

Impact of the Fourth R

The findings point to a handful of positive program impacts when considering both main effects combined with subgroup effects for students who had a particular predisposition to engage in the target behaviors and for schools that implemented the Fourth R curriculum particularly well. Notable effects were as follows:

- Dating Violence: The Fourth R significantly reduced dating violence among high-risk students who had already experienced or perpetrated dating violence at baseline.
- Peer Violence/Bullying: Students in schools with high program fidelity perpetrated less peer violence or bullying (relative to the control group) than students who received lower dosages of the curriculum. Students across the experimental schools (whether or not they received the curriculum directly) also realized program benefits in terms of overall reductions in peer violence/bullying perpetration (as compared to students in schools where no one received the Fourth R). When students from the control sample in *high fidelity* experimental schools were isolated, additional diffusion benefits were seen with regard to reductions in physical peer violence/bullying victimization and perpetration.
- Sexual Activity: Students exposed to the Fourth R were more likely than control students to delay sexual activity; and students in higher-fidelity schools experienced even greater improvements, which extended into follow-up one year after program completion.
- Drug and Alcohol Use: Students across the experimental schools reported less drug and alcohol use than students in schools where no one received the Fourth R curriculum.
- Secondary Target Behaviors: Students exposed to a higher dosage of the Fourth R (i.e., higher fidelity) showed significantly reduced pro-violence attitudes and beliefs.
- Differential Impacts on Male and Female Students: Based on results from the previous evaluation, which found males to benefit differentially from the Fourth R curriculum (Wolfe et al. 2009), we conducted a number of analyses examining differential program impact on male versus female students. However, results suggest no differential impact by participant sex.
- Impact of Program Setting: Several school-level factors were related to key outcomes. In general, these findings suggest that smaller schools and schools with more personalized programming (i.e., higher percentage of students with individualized educational

programs) yield more positive effects in reducing sexual activity, bullying, and drug and alcohol use.

The results reveal one iatrogenic effect as well. Specifically, students who received the Fourth R were more likely to report being bullied at the end of the program year; whereas this finding may reflect increased awareness of the definition of bullying—which would logically spur more reporting—such interpretation is speculative and other explanations cannot be ruled out.

Of the nine hypotheses outlined in Chapter 1, eight (all except Hypothesis 8) were at least partially confirmed. While not as unequivocal as hypothesized (given the many effects that were not statistically significant), these findings generally suggest limited positive short-term impacts of the Fourth R program, with a few sustained impacts seen in reduced dating violence among high risk students; and reduced peer violence/bullying perpetration, delays in sexual activity, and improved perceptions of school safety among students who received a higher program dosage.

Study Limitations

The current study suffered from a few data limitations worth mentioning. First, as outlined in Chapter 2, the “pseudo-identifiers” used to link students’ responses across survey waves proved problematic. While we feel confident that the final sample represents accurate matches, we may have experienced a slight loss of statistical power due to a failure to match a small number of students who responded to our surveys at both baseline and follow-up. However, a greater barrier to sample size had to do with lower than expected response rates (about 60% of T1 and T2 surveys were for students who also completed a baseline survey). In turn, these response rates largely reflect differential absences of different sets of students on the dates that surveys were administered in each school (coupled with implementing the study in comparatively low attendance schools on average), as well as some students who were present not choosing to complete a survey at one or multiple surveying periods and, in some cases, students moving or switching schools for other reasons between survey waves.

Next, several of our outcome measures were somewhat limited, either due to low overall prevalence or inability to create a cohesive sub-construct allowing for greater specificity. Specifically, the relatively low number of sexually active students meant that further examination of safe sex behaviors such as condom use and sexual empowerment was not feasible. In addition, attempts to create scaled measures for various subtypes of peer and dating violence (e.g., physical, emotional, electronic) resulted in low alphas and the analyses were, therefore, unfeasible. Again, this stems in part from low incidence of some types of violence among the target population. However, as an alternative, we isolated *physical* violence and harassment and examined dichotomous (rather than scaled) measures of those outcomes.

Teachers in six of the ten experimental schools were designated as both Fourth R teachers and control group teachers, thus raising concerns about contamination. While some possibility for contamination exists, interviews with several of these teachers indicate that they were fully aware of the research study being conducted and were aware that the research team was testing the impact of the Fourth R program. For this reason, these teachers stated that they intentionally focused on ensuring that there was no crossover of program materials, exercises and activities, or topics and format as part of their teaching of both classes. Multiple teachers stated that they realized that it was important that they be kept separate so that the evaluation could answer the

question of whether or not the Fourth R has an impact. Therefore, we feel relatively certain that any contamination brought about by dually assigned teachers was minimal. Despite this, the possibility of inadvertent contamination remains a limitation of this study.

We believe that the fidelity measure used accurately captures the dosage of programming students received, but it is not an ideal measure of the *quality* of program delivery. Without ongoing classroom observations, the quality of program delivery was largely unmeasured. Finally, while the diffusion analyses presented in Chapter 7 suggest that there are some school-wide benefits to even *some* students receiving the Fourth R (particularly in terms of drug and alcohol use), we do not have a more general understanding of what other programming or factors might be influencing student behavior at the school level. Therefore, the findings in Chapter 7 should be interpreted with particular caution.

Implications for Future Implementation and Research

The previous section on major findings suggests several implications for schools seeking to implement the Fourth R (and possibly similar programs). First, given the baseline rates of many of the target behaviors, it may be that seventh grade is already late for primary prevention efforts targeting dating violence, sexual harassment/assault, and peer violence/bullying. Larger impacts might be expected with a population with lower initial prevalence, as the earlier Wolfe et al. (2009) study suggested. Primary prevention efforts targeting drug and alcohol use—where some of the largest school-wide diffusion effects were found—may be more appropriately targeted to this seventh-grade population, whose baseline rates of substance use were still relatively low. Alternatively, a somewhat different implication that could be drawn from this research is that program effects at the middle school level are, quite logically, more likely to be in evidence among high risk target populations that have already shown a predisposition to engage in the target behaviors. Whereas universal prevention efforts (that reach all students and class sections) are easier to implement, these findings suggest that once students reach middle school, some sorting of predispositions and risk levels has already occurred, and schools and school systems might be mindful of this information when determining which schools or classes to target for high dosage programming.

In terms of adherence to the original program model, our findings suggest that implementation matters. Students who received a higher dosage of the Fourth R curriculum showed greater program gains than students who received less of the program. In fact, low program fidelity actually had iatrogenic effects in several instances, increasing both peer violence perpetration and early sexual activity. This finding may be particularly important, given the many demands on teachers' time. In a real-world setting, it may be difficult for teachers and principals to commit to completing all or even most of the program activities. Particularly given feedback from Start Strong Bronx staff that teachers seemed to burn out somewhere between 12 to 15 lessons, future research might seek to tease out whether there is a clear-cut point of diminishing returns in terms of program impact.

While our findings point to differential program effects for both high risk students who were already involved in target behaviors at baseline and those students who received higher program dosage, the sample size of the current study did not allow for finer subgroup analysis isolating impacts for students meeting both criteria: high-risk for target behaviors *and* received high fidelity programming. However, intuitively, our findings suggest that this may be the ideal scenario for maximizing program impact. Future research that draws from a known high risk

population (e.g., drawn from a juvenile justice setting) and/or includes sufficient numbers to isolate additional subgroups might seek to test the impact of a more strictly implemented efficacy study (i.e., maximizing program fidelity) on only high risk participants.

Findings from multivariate models presented in Chapter 6 suggested that large schools were particularly likely to face many of the problem behaviors targeted by the Fourth R curriculum. Therefore, teachers and principals in such schools may want to consider additional methods for disseminating anti-violence methods—for instance, by implementing some of the building-based strategies that were successful in the Shifting Boundaries project (Taylor et al. 2011).

Finally, the current study evaluates a single-year implementation of the Fourth R curriculum. Students in the study did not receive any additional Fourth R programming during the follow-up year prior to the final T2 survey wave. This decision was made for reasons of the study design, in order to measure persistence of program impacts over time. Future research might examine whether an additional program booster—either in the form of a second year of programming or in a shorter booster session—might enhance or extend program impacts.

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Appendix A. Baseline Differences Between Treatment and Control Samples¹

| | ALL BASELINE | |
|---|-----------------------|------------|
| | 4th R | Control |
| | <i>N</i> ² | |
| | 263 | 248 |
| DEMOGRAPHICS | | |
| Age | | |
| 11 years old | 16% | 15% |
| 12 years old | 63% | 69% |
| 13 years old | 17% | 15% |
| 14 years old | 5% | 2% |
| Over 14 years old | 0% | 0% |
| Average Age | 12.1 | 12.0 |
| Sex | | |
| Male | 51% | 38% ** |
| Race/Ethnicity³ | | |
| Black | 27% | 33% |
| Hispanic | 75% | 70% |
| White | 3% | 4% |
| American Indian | 2% | 2% |
| Asian/Hawaiian/Pacific Islander | 0% | 1% |
| Other | 7% | 10% |
| Years Lived in US ≥ 7 years | 91% | 90% |
| LIVING ARRANGEMENTS | | |
| Living with single parent | 46% | 39% |
| Living with two parents | 50% | 58% + |
| Living with other relatives | 3% | 2% |
| SEXUALITY AND DATING | | |
| Sexual Orientation | | |
| Interested in opposite sex | 81% | 78% |
| Interested in same sex | 0% | 0% |
| Interested in both sexes | 5% | 6% |
| Not interested in dating/sex | 14% | 16% |
| Dating Activity | | |
| Ever Dated | 57% | 57% |
| Dated in the Past 3 Months | 51% | 39% * |
| Sexual Activity | | |
| Sexually active | 9% | 7% |
| VIOLENCE, HARASSMENT, & BULLYING | | |
| Dating Violence⁴ | | |
| % Reporting Any Victimization | 22% | 17% |
| % Reporting Emotional/Psychological Victimization | 20% | 17% |
| % Reporting Physical Victimization | 8% | 7% |
| % Reporting Any Perpetration | 14% | 13% |
| % Reporting Emotional/Psychological Perpetration | 14% | 11% |
| % Reporting Physical Perpetration | 5% | 5% |
| Sexual Harassment/Assault | | |
| % Reporting Any Victimization | 42% | 40% |
| % Reporting Emotional/Psychological Victimization | 38% | 34% |
| % Reporting Electronic Victimization | 10% | 8% |
| % Reporting Physical Victimization | 23% | 20% |
| % Reporting Any Perpetration | 19% | 23% |
| % Reporting Emotional/Psychological Perpetration | 16% | 13% |
| % Reporting Electronic Perpetration | 2% | 3% |
| % Reporting Physical Perpetration | 7% | 10% |

Baseline Differences Between Treatment and Control Samples

*(Continued)*¹

| | ALL BASELINE | |
|--|----------------|------------|
| | 4th R | Control |
| | N ² | |
| | 263 | 248 |
| Peer Violence/Bullying | | |
| <i>% Reporting Any Victimization</i> | 66% | 67% |
| % Reporting Emotional/Psychological Victimization | 41% | 40% |
| % Reporting Physical Victimization | 60% | 61% |
| <i>% Reporting Any Perpetration</i> | 55% | 57% |
| % Reporting Emotional/Psychological Perpetration | 43% | 45% |
| % Reporting Physical Perpetration | 39% | 43% |
| DRUG AND ALCOHOL USE | | |
| <i>% Reporting Any Drug/Alcohol Use</i> ⁵ | 12% | 16% |
| % Smoked, Past 30 Days | 2% | 3% |
| % Drank, Past 30 Days | 7% | 11% |
| % Binge Drinking, Past 3 Months | 4% | 7% |
| % Marijuana Use, Past 3 Months | 2% | 5% |
| % Inhalant Use, Past 3 Months | 3% | 5% |
| % OTC Drug Use, Past 3 Months | 5% | 4% |
| % Rx Drug Use, Past 3 Months | 1% | 1% |
| SCHOOL SAFETY | | |
| Feel Safe in School Classrooms | 89% | 94%* |
| Feel Safe in School Hallway/Stairwells | 71% | 72% |
| Feel Safe on School Grounds/In Parking Lot | 59% | 61% |
| Feel Safe in School Bathrooms | 63% | 70%+ |
| Feel Safe in School Cafeteria | 80% | 83% |
| Threatened/Injured w/Weapon at School | 8% | 6% |
| Threatened/Injured w/Weapon on way to/from School | 3% | 4% |
| POSITIVE ATTITUDES/BELIEFS | | |
| <i>Mean Score, Positive Attitudes/Beliefs Scale</i> | 0.67 | 0.65 |
| % Reporting Any Anti-Violence Beliefs | 100% | 100% |
| % Rejecting Any Gender Stereotypes | 93% | 91% |
| PROSOCIAL BEHAVIORS | | |
| Bullying | | |
| <i>Bullying Against You</i> | | |
| Likely to Talk to A Friend | 45% | 56%* |
| Likely to Talk to a Parent/Adult/Teacher | 68% | 70% |
| Likely to Call a Hotline | 16% | 21% |
| <i>Bullying Against a Friend</i> | | |
| Likely to Talk to A Friend | 64% | 76%** |
| Likely to Talk to a Parent/Adult/Teacher | 55% | 62% |
| Likely to Call a Hotline | 18% | 25% |
| Dating Violence | | |
| <i>Dating Violence Against You</i> | | |
| Likely to Talk to A Friend | 61% | 70%+ |
| Likely to Talk to a Parent/Adult/Teacher | 47% | 51% |
| Likely to Call a Hotline | 15% | 17% |
| <i>Dating Violence Against a Friend</i> | | |
| Likely to Talk to A Friend | 47% | 57%+ |
| Likely to Talk to a Parent/Adult/Teacher | 52% | 56% |
| Likely to Call a Hotline | 7% | 8% |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Results from Quasi-Experimental comparison schools are not presented here.

² Only those respondents whose surveys were successfully matched to T2 responses are

³ Because respondents could select more than one race/ethnicity, percentages add up to

⁴ Of those who dated someone within the past three months.

⁵ Recent drug/alcohol use is measured as cigarette smoking or drinking alcohol within the past 30 days or using other drugs within the past 3 months.

Appendix B. Parental Information Packet and Dissent

Dear Parent/Guardian:

[NAME OF PARTICIPATING SCHOOL] has agreed to partner with Start Strong Bronx and the Center for Court Innovation to bring the Fourth R, a program promoting healthy relationships, to your child's school. The results of this research will add to our knowledge about what works in preventing gender violence/harassment in middle schools. While there are benefits to participating in this project, the purpose of this letter is to provide an overview of the project, to answer questions that we anticipate you might have, and to provide contact information that you can use to contact the project staff.

The Fourth R teaches students about healthy relationships and dating violence, bullying, abstinence, safe sex, and drug and alcohol abuse. It was previously shown to decrease dating violence among Canadian ninth grade students. The program will be provided as part of your child's regular seventh-grade [CLASSROOM SETTING] curriculum.

As part of the research, we are asking your child to complete a 20- to 30-minute Healthy Relationships Survey that will help researchers increase the capacity of programs to promote healthy relationships. Your child will be asked to complete the Healthy Relationships Survey twice during the current school year. On the attached form, we explain further how we will maintain your child's confidentiality and the potential benefits and risks of participating. A copy of the blank survey is available by request to cissnera@courtinnovation.org.

If you will allow your child to complete the Healthy Relationships Survey, you do not need to take any additional actions. **If you do not want your child to complete the Healthy Relationships Survey**, you must sign the attached form and return it to research staff using the attached stamped envelope to: Fourth R Research, 520 8th Avenue, 18th Floor, New York, NY 10018.

In closing, I hope that you allow your child to participate in this important research. Attached to this letter, you will find answers to frequently asked questions about this project. If you have any further questions, feel free to contact [NAME and CONTACT INFO OF NYC DOE/CCI IRB CONTACT]. Or feel free to contact me at (607)342-5272 or cissnera@courtinnovation.org. If you wish to receive this information in a language other than English or Spanish, please contact me for assistance.

Sincerely,

Amanda B. Cissner
Principal Investigator
Center for Court Innovation

FREQUENTLY ASKED QUESTIONS

1) Why is this research being conducted?

This research is being conducted to promote healthy relationships among students in select Bronx middle schools. National estimates show that as many as a quarter of teenagers experience violence in their dating relationships. Students who experience dating violence are more likely to participate in other risky behaviors and to suffer negative consequences to their physical and mental health. Consequently, New York City public schools are implementing programs such as the Fourth R to improve the safety of all students.

2) Who is conducting the research?

This research project is being conducted by the Center for Court Innovation (CCI), in partnership with Start Strong Bronx. CCI is a non-profit organization that conducts research on difficult problems like domestic and dating violence, addiction, mental illness, and juvenile delinquency. Start Strong Bronx is based at Bronx-Lebanon Hospital Center Department of Pediatrics and received funding from the Robert Wood Johnson Foundation to implement the Fourth R curriculum in select middle schools throughout the Bronx. This research is funded through a grant from the National Institute of Justice, the research arm of the U.S. Department of Justice.

3) What am I being asked to do?

As part of the research, your child will be asked to complete a 20-30 minute Healthy Relationships Survey during a regular class period. Your student will be asked to complete the Healthy Relationships Survey twice—once at the beginning of this school year and again at the end of the school year. The Healthy Relationships Survey asks about healthy relationships, dating violence, bullying, drugs and alcohol, and safe sex. Participation in the Healthy Relationships Survey is completely voluntary and confidential. Your child will also be told that the survey is voluntary and will be allowed to refuse to complete the survey at any point during the process.

If you will allow your child to complete the Healthy Relationships Survey, you do not need to take any additional actions. **If you do not want your child to complete the Healthy Relationships Survey**, please sign the attached form and return it in the attached, stamped envelope to research staff at: Fourth R Research, 520 8th Avenue, 18th Floor, New York, NY 10018.

4) What if I change my mind and no longer want my child to participate in the research?

If you change your mind and no longer want your child to complete the Healthy Relationships Survey, you can contact the researchers at CCI to decline further participation at any time, for any reason. There is no penalty to your child for not participating in the Healthy Relationships Survey. You can contact the researchers at (607)342-5272 or at cissnera@courttinnovation.org.

5) Does my child have to participate in the research?

No. Participation in the research is completely voluntary. If your child decides to participate in the research and later changes his/her mind, your child can stop participating at any point in the research. Your child can skip any question he/she does not want to respond to.

6) How will this research benefit the school and my child?

This project will help your school comply with state and federal laws on preventing harassment and will make the school environment safer for student learning. This study will provide scientific data on the effectiveness of gender violence prevention programming. It also demonstrates that the school is innovative in its approach to promoting healthy student relationships. Although your child will receive no *direct* benefit from completing the Healthy Relationships Survey, he or she may enjoy participating in the survey or take pride in being involved in a research study that is helping us to understand more about these topics. He or she may also benefit from a safer school environment as a result of this program.

7) How will my child’s privacy and well-being be protected?

The researchers will provide contact information for a school counselor with whom students can speak in case the topics raised in the survey make them uncomfortable. Information obtained about your child as part of this study will be strictly confidential. Neither your child’s name nor any other information that could identify them personally will be collected as part of the Healthy Relationships Survey. No one at your child’s school will see the completed surveys; only the researchers will see the survey your child completes. The information provided by your child will be used for research purposes only.

8) Will completing the Healthy Relationships Survey put my child at any risk?

There is a small risk that your child may be upset by the content of survey questions. However, we do not anticipate that the questions will unduly stress students and will take precautions to refer any students upset by the surveys instrument to counseling services.

PARENTAL DECLINE FORM

[NAME OF PARTICIPATING SCHOOL]

September 2011

Directions: Please complete this form and return it using the attached, stamped envelope to: Fourth R Research, 520 8th Avenue, 18th Floor, New York, NY 10018.

I DECLINE to have my child participate in the Healthy Relationships Survey. *I have read and understand the information about the Healthy Relationships Survey. I understand that by signing this paper, I am asserting my right to remove my child from completing the survey. I understand that my child will not suffer any penalties or other consequences for not completing the survey.*

Please check the box below, fill in the information requested, sign, and have your child return it to the teacher or return it by mail to the address above.

I **do not** give my permission for my child to complete the Healthy Relationships Survey.

Parent/Guardian Name (*Please Print*) _____

Child Name _____

Date _____

Signature of Parent/Guardian _____

Appendix C. Student Assent to Participate in Survey Research

[NAME OF PARTICIPATING SCHOOL]

October 2011

Your school has agreed to take part in a study on student relationships. This study is being conducted by the Center for Court Innovation, a New York City research organization that works on issues related to violence and crime prevention.

We are asking you to help with this study by filling out the attached Student Relationships Survey. This survey asks questions about dating, drugs and alcohol, fighting and violence, and safe sex behaviors. You will be asked to fill out this survey now and a similar survey at the end of the school year.

If any of the questions included in this survey upset you or make you feel uncomfortable and you wish to talk to someone about this, please feel free to skip the upsetting survey question(s) or contact your guidance counselor in your school who can help you. You can also decide to stop taking the survey at any time.

Students may contact guidance counselor staff by phone at _____

You may contact the following counselor(s) _____

Guidance counselors' offices are located in Room _____.

Guidance counselors' regular office hours are from __:00 a.m. to __:00 p.m.

If you have experienced dating violence or sexual abuse or assault, there are people who can help you. You can talk to someone about your experience by calling the free numbers below. Someone is available to talk 24 hours a day, 365 days a year. Translators and services for the hearing/speech impaired are available.

NYC Domestic Violence Hotline: 1-800-621-HOPE (1-800-621-4673)

1-866-604-5350 (For hearing and speech impaired)

NYC Sexual Assault Hotline: 1-212-227-3000

Day One (a teen dating violence prevention organization) www.dayoneny.org

Please tear off and keep this top page.

To protect your privacy, the survey does not ask anything that personally identifies you (like your full name, social security number, or student number). Our research team will be the only people to see your survey responses; no teachers or other school staff will see your responses. The researchers will not tell your teachers, parent(s)/guardian(s), principal, or friends what you write. At the end of the study, researchers will combine your answers with the responses given by all of the other students from participating schools. Then they will write a report on the overall survey results and this report will be made available to all students, their parents, and their schools.

It is very important that you feel comfortable answering the questions honestly. You do not have to answer any questions that you do not want to answer. *You can stop being part of the study at any time.*

Does anyone have any questions? If you understand everything I just explained and would like to participate in this study, please sign your name on the form immediately below. If you do not agree to participate, check the final paragraph below (your name and signature are optional if you decline to participate).

- I agree to participate in the study on student relationships. I understand that I do not have to answer any questions that I do not want to answer. I understand that I can stop participating in the study at any time.*

Name: _____ School: _____

Signature: _____ Date: _____

- I do not agree to participate in the study on student relationships.*

Name: _____ School: _____

Signature: _____ Date: _____

Appendix D. Baseline Survey Instrument



Student Relationships Survey October 2011



This is a survey about you and your family, friends, school, relationships, and health. The information you give will be used to develop better health education for young people like yourself.

Some questions may seem personal and some may not apply to you. Take your time and please be sure to answer each question based on what you really think. If you don't find an answer that fits exactly, choose the one that comes closest. If you are unsure about what a question means, just leave it blank. Please be as honest as you can – all of your answers are private and confidential and no one from home or school will see what you write.

Please DO NOT write your name on this survey. The questions that ask about your background will be used to describe the types of students completing this survey. The information will not be used to find out your name. No names will ever be reported to anyone.

Completing the survey is voluntary. Whether or not you answer the questions will not affect your grade in this class. If you are not comfortable answering a question, just leave it blank.

Make sure to read every question. When you are finished, follow the instructions of the person giving you the survey.

Thank you very much for your help.

Marking Instructions:

Fill in response completely

Completely erase any marks you wish to change

CORRECT MARK ● **INCORRECT** ✎ ✕

Write your answers to the next three questions on the lines provided below. Your answers will not be used to find out who you are and will only be used to match your answers to another survey at the end of the year.

What are the first two letters of your first name? (For example, if your first name is Alex the first two letters of your first name are "AL".) _____

What is your birthday? (Day and month only-- For example, if your birthday is December 31, write "12/31".)
_____/_____
month day

What is the first letter of your last name? (For example, if your last name is Jones the first letter of your last name is "J".) _____





ABOUT YOU...

Please read each question carefully. Completely fill in the circle to mark the best answer. Select only one answer unless the question tells you to mark ALL that apply.

1) How old are you?

- 11 years old
- 12 years old
- 13 years old
- 14 years old
- Other age: _____

2) What is your sex?

- Female
- Male

3) How do you describe yourself? (Mark ALL that apply to you.)

- American Indian or Alaska Native
- Asian or Asian American
- Black or African American
- Hispanic or Latino/Latina
- Hawaiian or Other Pacific Islander
- White
- Other – please write it here: _____

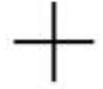
4) How long have you lived in the United States?

- Less than one year
- 1 to 3 years
- 4 to 6 years
- 7 or more years

5) At this time (right now), with what adults do you live? (Mark ALL that apply to you.)

- Mother
- Stepmother
- Father
- Stepfather
- Other adult relatives (for example, an aunt or grandmother)
- Other adults (for example, a foster parent/guardian or mother's boyfriend)
- I do not live with any adults. (If you do not live with any adults, please explain who you live with.) _____





6) How long have you been a student at this school?

Since the beginning of this school year (September 2011)

1 year before this one

2 years before this one

3 years or more

7) Have you ever attended a class or program about sexual harassment, dating violence, or family/domestic violence?

Yes

No

Unsure

7a) If YES, where? (Mark ALL that apply.)

In a class at school

In an after-school program

Church/Temple/Mosque

Boys/Girls Club

Other – please write it here: _____

8) Have you ever attended a class or program about safe sex or sexually transmitted diseases (STDs)?

Yes

No

Unsure

8a) If YES, where? (Mark ALL that apply.)

In a class at school

In an after-school program

Church/Temple/Mosque

Boys/Girls Club

Other – please write it here: _____

9) Have you ever attended a class or program about drugs and alcohol?

Yes

No

Unsure

9a) If YES, where? (Mark ALL that apply.)

In a class at school

In an after-school program

Church/Temple/Mosque

Boys/Girls Club

Other – please write it here: _____





YOUR EXPERIENCES AT SCHOOL...

The next questions ask about school and things that may have happened at school or during a school activity (like field trips, bus rides, or sports events). Choose one answer for each row.

| 10) How safe do you feel in the following places? | Very unsafe | A little unsafe | Neither | A little safe | Very safe |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a. School classrooms | <input type="radio"/> |
| b. School hallways and stairwells | <input type="radio"/> |
| c. School grounds or parking lot | <input type="radio"/> |
| d. School bathrooms | <input type="radio"/> |
| e. Cafeteria/lunchroom | <input type="radio"/> |

11) During the **past 30 days**, on how many days did you feel **unsafe** at school or on the way to or from school?

0 days

1 day

2 or 3 days

4 or 5 days

6 or more days

12) During the **past 30 days**, on how many days has someone threatened or injured you with a knife, gun, or other weapon on school property?

0 days

1 day

2 or 3 days

4 or 5 days

6 or more days

13) During the **past 30 days**, on how many days has someone threatened or injured you with a knife, gun, or other weapon on the way to or from school?

0 days

1 day

2 or 3 days

4 or 5 days

6 or more days





The next few questions ask about things that may or may not have happened to you in the past 3 months. When you answer questions 14 and 15, only think about your PEERS (people about the same age as you) - NOT people you were dating. Remember that no one will see your answers. Choose one answer for each row.

| 14) During the past 3 months , how often has one of your peers done the following things TO YOU ? | Zero | 1 to 3 times | 4 to 9 times | 10 times or more |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| a. Pushed, hit, or kicked you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. Slapped or scratched you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. Beat you up? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. Assaulted you with a knife or gun? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e. Threatened to hurt you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f. Insulted or made fun of you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g. Left you out of a group or activity on purpose? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h. Spread rumors or gossip about you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i. Told other people not to be friends with you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| j. Pressured you to do something you did not want to do? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| k. Electronically bullied you using the internet, Facebook, e-mail, phone, or text messages? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| l. Followed, watched, or spied on you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| 15) During the past 3 months , how often have YOU DONE the following things to one of your peers? | Zero | 1 to 3 times | 4 to 9 times | 10 times or more |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| a. Pushed, hit, or kicked someone? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. Slapped or scratched someone? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. Beat someone up? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. Assaulted someone with a knife or gun? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e. Threatened to hurt someone? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f. Insulted or made fun of someone? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g. Left someone out of a group or activity on purpose? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h. Spread rumors or gossip about someone? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i. Told someone not to be friends with someone else? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| j. Pressured someone to do something they did not want to do? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| k. Electronically bullied someone using the internet, Facebook, e-mail, phone, or text messages? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| l. Followed, watched, or spied on someone? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



The next few questions are about things that may have happened with someone you were dating or on a date with. This includes girls or boys who you were "going out with," "dating," "seeing" or "hooking up with" now or in the past. For these questions, a "date" could include activities like meeting someone at the mall, a park, or a basketball game, as well as activities like going out to eat or a movie together.

16) Have you ever dated someone or been on a date?
 Yes (If YES, continue with the questions below)
 No (IF NO, SKIP TO QUESTION #21 ON THE NEXT PAGE WHERE YOU SEE 😊)

17) What was the length of your longest dating relationship?
 A week or less
 More than 1 week and less than one month
 1 to 6 months
 More than 6 months and less than a year
 1 year or more

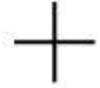
18) Have you dated someone or been on a date in the past 3 months?
 Yes (If YES, continue with the questions below)
 No (IF NO, SKIP TO QUESTION #21 ON THE NEXT PAGE WHERE YOU SEE 😊)

19) During the past 3 months, how many times has anyone you were dating or on a date with done the following things **TO YOU**?

| | Zero | 1 to 3 times | 4 to 9 times | 10 times or more |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| a. Said something to hurt your feelings? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. Slapped or scratched you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. Insulted or made fun of you in front of others? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. Would not let you do things with other people? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e. Pushed, grabbed, shoved, or kicked you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f. Made you describe where you were every minute of the day? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g. Hit you with their fist or with something else hard? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h. Threatened to hurt you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i. Beat you up? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| j. Assaulted you with a knife or gun? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| k. Forced you to do something sexual that you did not want to do? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

20) During the past 3 months, how many times did **YOU DO** each of the following things to a girl or boy you were dating or on a date with?

| | Zero | 1 to 3 times | 4 to 9 times | 10 times or more |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| a. Said something to hurt their feelings? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. Slapped or scratched them? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. Insulted or made fun of them in front of others? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. Would not let them do things with other people? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e. Pushed, grabbed, shoved, or kicked them? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f. Made them describe where they were every minute of the day? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g. Hit them with your fist or with something else hard? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h. Threatened to hurt them? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i. Beat them up? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| j. Assaulted them with a knife or gun? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| k. Forced them to do something sexual that they did not want to do? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



The next questions ask about sexual harassment. **SEXUAL HARASSMENT is unwanted and unwelcome sexual behavior that interferes with someone's life.** Choose one answer for each row.

| 21) During the past 3 months, how many times has any girl or boy done the following things TO YOU when you did not want them to? | Zero | 1 to 3 times | 4 to 9 times | 10 times or more |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| a. Made sexual comments, jokes, gestures, or looks about/to you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. Showed or gave you sexual pictures, messages, or notes? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. Sent you sexual text messages, emails, voicemails, or instant messages? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. Posted sexual messages, comments, or photos on your Facebook or online account? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e. Spread sexual rumors about you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f. Said you were gay or a lesbian, as an insult? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g. Touched, grabbed, or pinched you in a sexual way? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h. Pulled your clothing off or down? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i. Made you kiss him or her? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| j. Made you do something sexual, other than kissing? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| 22) During the past 3 months, how many times did YOU DO any of the following things to any girl or boy when they did not want you to? | Zero | 1 to 3 times | 4 to 9 times | 10 times or more |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| a. Made sexual comments, jokes, gestures, or looks about/to someone? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. Showed or gave sexual pictures, messages, or notes to someone? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. Sent someone sexual text messages, emails, voicemails, or instant messages? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. Posted sexual messages, comments, or photos on someone's Facebook or online account? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e. Spread sexual rumors about someone? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f. Said someone was gay or a lesbian, as an insult? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g. Touched, grabbed, or pinched someone in a sexual way? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h. Pulled someone's clothing off or down? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i. Made someone kiss you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| j. Made someone do something sexual, other than kissing? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |





YOUR BELIEFS ...

The next questions ask about your beliefs or what you believe you would do in certain situations. Choose one answer for each row.

| 23) How much do you agree or disagree with each of the following statements? (Please fill in the circle that best describes your belief for each statement) | Disagree a lot | Disagree a little | Agree a little | Agree a lot |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| a. It's O.K. for me to hit someone to get them to do what I want. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. Sometimes a person doesn't have any choice but to fight. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. If someone disrespects me, they deserve to have rumors spread about them. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. If I walk away from a fight, I'd be a coward. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e. Sometimes I have only two choices: get punched or punch the other kid first. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f. If people do something to make me really mad, they deserve to be beaten up. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g. It's okay to hit someone who hits you first. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h. Gossip and rumor spreading are just what teenagers do and it's not a big deal. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i. It is O.K. for my group of friends to ignore someone in our group if we are mad at that person. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| j. As long as you are just joking around, what you say or do to someone cannot be considered sexual harassment. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| k. Boys cannot be sexually harassed by girls. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| l. There are better ways to solve problems than fighting. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| m. A guy who doesn't fight back when other kids push him around will lose respect. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| n. If a person is not physically harming someone, then they are not really abusive. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| o. I don't need to fight because there are other ways to deal with being mad. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| p. When my friends fight, I try to get them to stop. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| q. I try to talk out a problem instead of fighting. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| r. Violence between dating partners is a personal matter and people should not interfere. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| s. A guy shows he really loves his girlfriend if he gets in fights with other guys about her. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| t. Girls sometimes deserve to be hit by the boys they date. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| u. Boys sometimes deserve to be hit by the girls they date. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| v. There are times when violence between dating partners is okay. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| 24) If you were being bullied, how likely would you be to do the following things: | Not Likely | Somewhat Likely | Likely |
|--|-----------------------|-----------------------|-----------------------|
| a. Talk to a friend about what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. Tell your parent or guardian what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. Tell a school staff person what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. Tell another trusted adult what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e. Ignore what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f. Avoid the bully? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g. Call or text a hotline to report the bullying? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |





| 25) If you knew of a friend who was being bullied, how likely would you be to do the following things: | Not Likely | Somewhat Likely | Likely |
|--|-----------------------|-----------------------|-----------------------|
| a. Talk to your friend about what is happening to him/her? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. Tell your parent or guardian what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. Tell a school staff person what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. Tell another trusted adult what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e. Ignore what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f. Avoid your friend so that you are not targeted by bullies too? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g. Call or text a hotline to report the bullying? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| 26) If you were being physically hurt in a dating relationship, how likely would you be to do the following things: | Not Likely | Somewhat Likely | Likely |
|---|-----------------------|-----------------------|-----------------------|
| a. Talk to a friend about what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. Tell your parent or guardian what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. Tell a school staff person what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. Tell another trusted adult what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e. End the relationship? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f. Call or text a hotline to talk about what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g. Stay in the relationship if that was the only bad thing about the person? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| 27) If you knew of a friend who was being physically hurt in a dating relationship, how likely would you be to do the following things: | Not Likely | Somewhat Likely | Likely |
|---|-----------------------|-----------------------|-----------------------|
| a. Talk to your friend about what is happening to him/her? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. Tell your parent or guardian what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. Tell a school staff person what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. Tell another trusted adult what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e. Ignore what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f. Avoid your friend? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g. Call or text a hotline to talk about what is happening? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

The next questions ask about sexuality and behavior. All of these questions are asking about sexual behavior that you agreed to do.

| |
|---|
| 28) Who are you interested in dating or having sexual contact with? |
| <input type="radio"/> Females |
| <input type="radio"/> Males |
| <input type="radio"/> Females and males |
| <input type="radio"/> No one |





29) How old were you when you had sex for the first time?

- I have never had sex
- 11 years old or younger
- 12 years old
- 13 years old
- 14 years old

30) The last time you had sex, did you or your partner use a condom?

- I have never had sex
- Yes
- No

31) How often do you or your partner use a condom when having sex?

- I have never had sex
- Never
- Sometimes
- Always
- Not sure

32) Can some people have a sexually transmitted disease (STD) and not know it?

- Yes
- No
- Not sure

33) Can you tell if someone has a sexually transmitted disease (STD) by looking at him or her?

- Yes
- No
- Not sure

34) It's OK for a person to say no to sex, even if their boyfriend or girlfriend wants to do it.

- Agree a lot
- Agree a little
- Disagree a little
- Disagree a lot

35) Suppose your boyfriend or girlfriend wanted to have sex with you, and you didn't want to. How comfortable would you be telling that person you didn't want to have sex?

- Very comfortable
- Kind of comfortable
- Kind of uncomfortable
- Very uncomfortable





36) If you have sex, how likely are you to use a condom?

I'm sure I would

I probably would

I probably would not

I am sure I would not

The next questions ask about smoking, drugs, and alcohol. Alcohol includes drinking beer, wine, or liquor such as rum, gin, vodka, or whiskey. For these questions, drinking alcohol does not include drinking a few sips of wine for religious purposes.

37) During the **past 30 days**, on how many days did you smoke cigarettes?

0 days

1 or 2 days

3 to 5 days

6 to 9 days

10 to 19 days

20 to 29 days

All 30 days

38) During the **past 30 days**, on how many days did you have at least one drink of alcohol?

0 days

1 or 2 days

3 to 5 days

6 to 9 days

10 to 19 days

20 to 29 days

All 30 days

| 39) During the PAST 3 MONTHS , about how many times have you used... | 0 times | 1 to 2 times | 3 to 5 times | 6 to 9 times | 10 times or more |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a. Marijuana (also called weed or pot) | <input type="radio"/> |
| b. Inhalants (sniffed glue or inhaled any paints or sprays to get high) | <input type="radio"/> |
| c. Over-the-counter drugs when you weren't sick (such as cough or cold medicine, Sudafed, etc.) | <input type="radio"/> |
| d. Prescription drugs without a doctor's prescription (such as OxyContin, Percocet, codeine, Ritalin, or Xanax, etc.) | <input type="radio"/> |
| e. Other hard drugs (cocaine, heroin, Ecstasy, or other) | <input type="radio"/> |

40) During the **PAST 3 MONTHS**, about how many times did you have 3 or 4 alcoholic drinks in a row?

0 times

1 or 2 times

3 to 5 times

6 to 9 times

10 times or more





| |
|--|
| 41) Suppose a friend wanted you to drink alcohol or do drugs, and you didn't want to. How comfortable would you be telling that person you didn't want to? |
| <input type="radio"/> Very comfortable |
| <input type="radio"/> Kind of comfortable |
| <input type="radio"/> Kind of uncomfortable |
| <input type="radio"/> Very uncomfortable |

THANK YOU very much for completing the survey. We appreciate that you answered the questions and gave us your time and attention today. We know some of the questions were personal and sensitive, so we thank you for answering honestly. If you are upset or thinking about any of the questions asked or have any questions about any of the topics in the survey, a good person to talk to about these things would be one of your teachers or guidance counselors.

- Please fill in this bubble to show us that you have read this paragraph.**

You have now finished the survey. Please seal it in the attached envelope and raise your hand and someone will collect it from you.

Thank you for your time and best of luck for the rest of the school year!

Appendix E. Survey Implementation by School

Appendix E. Survey Implementation by School

| | EXPERIMENTAL SCHOOLS | | | | | | | | | | QUASI-EXPERIMENTAL SCHOOLS | | |
|---|----------------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|----------------------------|------------|------------|
| | School E1 | School E2 | School E3 | School E4 | School E5 | School E6 | School E7 | School E8 | School E9 | School E10 | School Q11 | School Q12 | School Q13 |
| Total 7th Grade Students, 2011-2012 ¹ | 64 | 130 | 157 | 83 | 107 | 116 | 113 | 94 | 133 | 110 | 255 | 123 | 92 |
| Total 8th Grade Students, 2012-2013 ² | 58 | 121 | 147 | 82 | 103 | 102 | 119 | 81 | 118 | 104 | 218 | 104 | 89 |
| Baseline | | | | | | | | | | | | | |
| <i>Completion</i> | | | | | | | | | | | | | |
| Total # Surveys Collected | 52 | 97 | 107 | 69 | 95 | 93 | 90 | 77 | 89 | 95 | 162 | 91 | 66 |
| Baseline Response Rate ³ | 81% | 75% | 68% | 83% | 89% | 80% | 80% | 82% | 67% | 86% | 64% | 74% | 72% |
| <i>Refusal</i> | | | | | | | | | | | | | |
| Total Parental Declines ⁴ | 4 | 6 ⁶ | 6 | 3 | 0 | 0 | 2 | 7 | 1 | 2 ⁷ | 14 | 9 | 1 |
| Total Student Declines | 1 | 13 | 2 | 0 | 6 | 6 | 21 | 9 | 21 | 4 | 47 | 0 | 12 |
| Baseline Refusal Rate ⁵ | 8% | 15% | 5% | 4% | 6% | 5% | 20% | 17% | 17% | 5% | 24% | 7% | 14% |
| <i>Missing (absent, excluded, etc.)⁶</i> | 11% | 11% | 27% | 13% | 6% | 15% | 0% | 1% | 17% | 8% | 13% | 19% | 14% |
| T1 Follow-Up | | | | | | | | | | | | | |
| <i>Completion</i> | | | | | | | | | | | | | |
| Total # Surveys Collected | 50 | 94 | 100 | 66 | 89 | 86 | 67 | 67 | 93 | 91 | 132 | 84 | 75 |
| T1 Response Rate ³ | 78% | 72% | 64% | 80% | 83% | 74% | 59% | 71% | 70% | 83% | 52% | 68% | 82% |
| <i>Refusal</i> | | | | | | | | | | | | | |
| Total Parental Declines | 4 | 9 | 6 | 3 | 0 | 0 | 2 | 7 | 1 | 3 | 14 | 9 | 1 |
| Total Student Declines | 1 | 12 | 5 | 5 | 5 | 5 | 20 | 6 | 16 | 1 | 45 | 1 | 3 |
| T1 Refusal Rate ⁵ | 8% | 16% | 7% | 10% | 5% | 4% | 19% | 14% | 13% | 4% | 23% | 8% | 4% |
| <i>Missing (absent, excluded, etc.)⁶</i> | 14% | 12% | 29% | 11% | 12% | 22% | 21% | 15% | 17% | 14% | 25% | 24% | 14% |
| <i>Successfully Matched to Baseline</i> | | | | | | | | | | | | | |
| # Successfully Matched to Baseline | 37 | 54 | 83 | 55 | 69 | 60 | 36 | 51 | 45 | 80 | 76 | 63 | 36 |
| T1 Successful Match Rate ⁷ | 71% | 56% | 78% | 80% | 73% | 65% | 40% | 66% | 51% | 84% | 47% | 69% | 55% |
| T2 Follow-Up | | | | | | | | | | | | | |
| <i>Completion</i> | | | | | | | | | | | | | |
| Total # Surveys Collected | 51 | 97 | 144 | 64 | 91 | 62 | 85 | 64 | 87 | 65 | 131 | 90 | 61 |
| T2 Response Rate ³ | 88% | 80% | 98% | 78% | 88% | 61% | 71% | 79% | 74% | 63% | 60% | 87% | 69% |
| <i>Refusal</i> | | | | | | | | | | | | | |
| Total Parental Declines ⁸ | 1 | 0 | 1 | 1 | 2 | 1 | 0 | 3 | 0 | 3 | 4 | 0 | 2 |
| Total Student Declines | 0 | 11 | 2 | 1 | 4 | 4 | 22 | 14 | 13 | 13 | 46 | 14 | 4 |
| T2 Refusal Rate ⁵ | 2% | 9% | 2% | 2% | 6% | 5% | 18% | 21% | 11% | 15% | 23% | 13% | 7% |
| <i>Missing (absent, excluded, etc.)⁶</i> | 10% | 11% | 0% | 20% | 6% | 34% | 10% | 0% | 15% | 22% | 17% | 0% | 25% |
| <i>Successfully Matched to Baseline</i> | | | | | | | | | | | | | |
| # Successfully Matched to Baseline | 41 | 57 | 89 | 50 | 65 | 42 | 32 | 44 | 43 | 54 | 81 | 78 | 33 |
| T2 Successful Match Rate ⁶ | 79% | 59% | 83% | 72% | 68% | 45% | 36% | 57% | 48% | 57% | 50% | 86% | 50% |

¹ Information obtained via the New York State Department of Education Report Card at <https://reportcards.nysed.gov>.

² Information obtained via the New York City Department of Education Class Size Report at <http://schools.nyc.gov/AboutUs/data/classsize/classsize20130215.htm>.

³ T1 Response Rate = Total # of surveys collected/Total # 7th grade students, 2011-2012; T2 Response Rate = Total # of surveys collected/Total # 8th grade students, 2012-2013.

⁴ Three additional parental declinations were received after the baseline survey was administered.

⁵ T1 Refusal Rate = (Total # parental declines + Total # student declines)/Total # 7th grade students, 2011-2012; T2 Refusal Rate = (Total # parental declines + Total # student declines)/Total # 8th grade students, 2012-2013.

⁶ One school excluded two sections from randomization at the principal's request. The excluded sections included one special education section and one bilingual education section. The principal in this school did not feel comfortable altering the standard curriculum for students in these sections.

⁷ T1 Match Rate = Total # of T1 Surveys Collected/Total # of Baseline Surveys Collected; T2 Match Rate = Total # of T2 Surveys Collected/Total # of Baseline Surveys Collected.

⁸ One additional parental declination was received after the baseline survey was administered.

Appendix F. Baseline Demographics and Other Characteristics: Successfully Matched v. Follow-Up Missing Cases¹

| | Baseline to T1 | | Baseline to T2 | |
|---|----------------------|-------------------|----------------------|-------------------|
| | Successfully Matched | Follow-Up Missing | Successfully Matched | Follow-Up Missing |
| <i>N</i> | 570 | 294 | 517 | 347 |
| DEMOGRAPHICS | | | | |
| Age | ** | | ** | |
| 11 years old | 15% | 10% | 15% | 11% |
| 12 years old | 66% | 60% | 66% | 62% |
| 13 years old | 16% | 24% | 16% | 22% |
| 14 years old | 3% | 6% | 3% | 5% |
| Over 14 years old | <1% | <1% | 0% | 1% |
| Sex | | | | |
| Male | 44% | 52% * | 45% | 50% |
| Race/Ethnicity² | | | | |
| Black | 28% | 32% | 30% | 29% |
| Hispanic | 74% | 73% | 72% | 75% |
| White | 4% | 2%+ | 3% | 3% |
| American Indian | 2% | 3% | 2% | 2% |
| Asian/Hawaiian/Pacific Islander | 2% | 1% | 1% | 2% |
| Other | 13% | 16% | 14% | 13% |
| Years Lived in US ≥ 7 years | 90% | 84% * | 90% | 85% * |
| LIVING ARRANGEMENTS | | | | |
| Living with single parent | 43% | 48% | 43% | 48% |
| Living with two parents | 53% | 47%+ | 54% | 46% * |
| Living with other relatives | 3% | 3% | 3% | 4% |
| SEXUALITY AND DATING | | | | |
| Sexual Orientation | | | | |
| Interested in opposite sex | 1% | 1% | 1% | 1% |
| Interested in same sex | 80% | 77% | 79% | 80% |
| Interested in both sexes | 4% | 7% | 6% | 4% |
| Not interested in dating/sex | 15% | 15% | 15% | 16% |
| Dating Activity | | | | |
| Ever Dated | 60% | 62% | 57% | 66% * |
| Dated in the Past 3 Months ³ | 45% | 48% | 45% | 48% |
| Sexual Activity | | | | |
| Sexually active | 7% | 11% | 8% | 10% |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Includes only the ten experimental schools.

² Because respondents could select more than one race/ethnicity, percentages add up to 100%.

³ Of those respondents who have ever dated.

Appendix G. Sample Fidelity Tracking Form

Instructions

- *The purpose of this log is to provide information about the delivery of each lesson of the Fourth R curriculum.*
- *Please complete the appropriate table and accompanying questions on the following page after delivery of each lesson.*
- *Your honest feedback is very important to the success of the program.*
- *If the course is being co-taught, the class room teacher should fill out this fidelity form.*
- *Use this form for your grade 7 classrooms only.*
- *Please be sure to keep a copy of this form for your records.*

Thank you very much for completing these forms. Your efforts on these forms will contribute immensely to improving the program for future implementation. We greatly appreciate your time.

Please make sure that lesson forms included in this tracking guide are returned at the end of the week in which sessions were taught.

The “Background Information Form” should be turned in with Lesson 1. Thank you.

Please be sure to provide “Final Submission Sheets” by the end of the quarter/semester by the following date: _____

BACKGROUND INFORMATION

Please complete the following questions in the beginning of initiating grade 7 Fourth R lessons. Please complete and turn this form in along with Unit I. Thank you.

School or Agency: _____ Teacher's Name: _____

How long is the usual class period during which you deliver Fourth R? _____ minutes

How much time is set aside to deliver Fourth R during this class time? _____ minutes

Please complete the table below and provide information for each grade 7 class *in which you are teaching Fourth R.*

| | Number of Students Enrolled in each Class | What class is the curriculum taught in? (for example, English, homeroom, Health, PE) |
|---------|---|--|
| Class 1 | | |
| Class 2 | | |
| Class 3 | | |
| Class 4 | | |

FINAL SUBMISSION SHEETS

Please complete the following questions after finishing all Fourth R lessons for grade 7 classes. Please turn this form in at the end of the semester/quarter.

Please complete the table below and provide information for each grade 7 class in which you taught Fourth R.

| | Start Date | End Date | Was there a co-teacher for this class? |
|---------|------------|----------|--|
| Class 1 | | | <input type="checkbox"/> Start Strong staff, please name _____ <input type="checkbox"/> Another adult instructor, please name _____ |
| Class 2 | | | <input type="checkbox"/> Start Strong staff, please name _____ <input type="checkbox"/> Another adult instructor, please name _____ |
| Class 3 | | | <input type="checkbox"/> Start Strong staff, please name _____ <input type="checkbox"/> Another adult instructor, please name _____ |
| Class 4 | | | <input type="checkbox"/> Start Strong staff, please name _____ <input type="checkbox"/> Another adult instructor, please name _____ |

Did you have any peer/teen co-facilitators for teaching the Fourth R program?

Yes _____ → if yes, how many? _____ No _____

Which session(s) did they co-teach? _____

Did you bring in any outside community resources (speakers, videos etc) as a supplement or extension of the Fourth R curriculum with any of these groups/classes of students? No _____ Yes _____ If yes, please describe briefly:

Did you (or other teacher/presenter in the classroom) refer any student(s) from these groups/classes for further assistance, in relation to the Fourth R material?

Yes _____ → Number? _____ No _____

If Yes, what types of referrals were made? (circle all that apply)

School Counselor

School Nurse

SRO

Outside community resource

Law Enforcement

Other : _____

Unit 1 - Personal Safety and Injury Prevention
 Unit 1— Lesson 1: Focus on Healthy Relationships

Teacher’s Name or Initials: _____ Date(s) Taught: _____

Grade 7 only

Indicate with a check mark if activity was completed. Please complete one box for each grade 7 class that received Fourth R.
For example, if you are teaching the Fourth R to three grade 7 classes (this number of classes will also be indicated on the first page), please complete the first 3 boxes, one for each class.

| | Introduction Rationale for developing “relationship skills” | Activity #1: Create-Guidelines for Group Discussions | Activity #2 (option 1): Relationship Myths & Facts (1.1 H) | Activity #2 (option 2): Relationship Myths & Facts - Communication Line Strategy (1.1 REF) | Activity #3: Healthy/Unhealthy Friendship/Relationship – Looks Like, Sounds Like, Feels Like (1.2 REF & 1.3 REF) | Activity #4: Comfort Zone Continuum (1.4 REF) | Activity #5: Debrief | Activity #6: Student Developed Example | Homework: Rights & Responsibilities (1.5H) | ** see instructions below, describe any disruptions in class |
|---------|---|--|--|--|--|---|----------------------|--|--|--|
| Class 1 | | | | | | | | | | |
| Class 2 | | | | | | | | | | |
| Class 3 | | | | | | | | | | |
| Class 4 | | | | | | | | | | |

***Were there any disruptions or interruptions that shortened the length of the class (e.g. fire drill, weather-related, student emergency etc)?*
 If yes, please check the box of the class period(s) when this happened and provide a brief explanation in the box.

For each of the following questions, mark your level of agreement:

| | Strongly Agree | Agree | Unsure | Disagree | Strongly Disagree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a. The issues presented were relevant to the students. | <input type="radio"/> |
| b. The activities were appropriate for the grade level of your students. | <input type="radio"/> |
| c. The activities were equally well-received by boys and girls. | <input type="radio"/> |

Was the time allotted for this session/lesson: Too long Just Right Too short

(Mark the best response category).

Was there a specific section or activity that was well-received? Or that had a particular impact on students? If so, please identify what section(s) and describe why you think it was well-received or had a particular impact on students.

Was there a specific section or activity that was problematic? If so, please identify what section(s) and why it was problematic.

Were there differences in how boys and girls responded to the curriculum that you observed? Please describe.

In what ways should this lesson or these activities be adapted to better meet the student learning expectations (i.e., time, subject matter, etc)?

Please offer any other feedback or suggestions for improvement to the activities.

Appendix H. Sample Lesson Items, Unit 1

| | | |
|--|--|---|
| Unit One: Personal safety and injury prevention | Lesson 1: Focus on healthy relationships | <p>Introduction: Rationale for developing 'relationship skills'</p> <p>Introduction: Create 'Guidelines for Health Class'</p> <p>Activity #1: Looks Like; Sounds Like; Feels Like - 'A Good Friend/ Someone Who is Not a Good Friend'</p> <p>Activity #2: Fold the Line Strategy - Friendship</p> <p>Homework: 'When Conflict Escalates...'</p> |
| | Lesson 2: Barriers to Healthy Relationships | <p>Activity #1: Word Wall Strategy: Take up Homework</p> <p>Activity #2: Post It Pile It - 'Examples of Behaviors'</p> <p>Activity #3: Graphic Organizer Strategy: 'Types of Bullying Graphic Organizer'</p> <p>Homework: Explain and assign 'Empathy Journal'</p> <p>Homework: Consequences to the Bully; Bullied and Bystander'</p> |
| | Lesson 3: Contributors to Violence | <p>Activity #1: Take up homework - 'Consequences to the Bully; Bullied and Bystander'</p> <p>Activity #2: Huddle Up Strategy - Electronic/Cyber Bullying questions</p> <p>Activity #3: Graffiti Activity - Gangs</p> <p>Homework: Support Services for Victims of Violence'</p> |
| | Lesson 4: Conflict and Conflict Resolution | <p>Activity #1: Homework Discussion: 'Support Services for Victims of Violence'</p> <p>Activity #2: Mingle To Music Strategy: 'Media Violence'</p> <p>Activity #3: KWL Strategy - 'Key Concepts of Media Literacy'</p> <p>Activity #4: Analysis of Print Media - Partner work and assignment</p> |
| | Lesson 5: Media Violence | <p>Activity #1: Present Analysis of Print Media - student presentations</p> <p>Activity #2: (Extension Activity) 'Media Tracking Sheet'</p> <p>Activity #3: Video: Skills for Effective Relationships - Recognizing Skills</p> <p>Activity #4: Timed Retell - Bullying and Bystanders</p> <p>Homework: Practicing Skills for Effective Relationships at Home</p> <p>Homework: Complete Empathy Journal and bring to class</p> |
| | Lesson 6: Conflict Resolution Skills | <p>Activity #1: Decision Making Model: 'Making Good Decisions'</p> <p>Activity #2: Analysing Scenarios and Acting on Decisions - 'Making Good Decisions'</p> <p>Activity #3: Group Work - Making Good Decisions - pairs</p> |
| | Lesson 7: Action in the School and Community | <p>Activity #1: Homework discussion: Practicing Skills for Effective Relationships at Home</p> <p>Activity #2: Scenario' Presentation and Discussion</p> <p>Activity #3: Culminating Activity: 'Mind Map Assignment'</p> |

Appendix I. Correlation Matrix: Relationship Between Primary and Secondary Program Outcomes, T2

| | | Primary Program Outcomes | | | | | | | | Secondary Program Outcomes | | | | | | |
|---|--|--------------------------|--------|----------|----------|----------|----------|----------|-----------|----------------------------|-----------|----------|----------|----------|----------|----------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| Primary Program Outcomes | Sexual Activity | | | | | | | | | | | | | | | |
| | 1 Sexually active | | 0.118* | 0.062 | 0.099+ | -0.076 | 0.078 | 0.053 | 0.163** | -0.086+ | -0.095+ | -0.148** | -0.108* | -0.081 | -0.154** | -0.152** |
| | VIOLENCE AND HARASSMENT | | | | | | | | | | | | | | | |
| | Peer Violence | | | | | | | | | | | | | | | |
| | 2 Mean Score, Victimization Scale | | | 0.608*** | 0.345*** | 0.268*** | 0.572*** | 0.294*** | 0.314*** | -0.264*** | -0.254*** | -0.120* | -0.056 | -0.099+ | -0.141** | -0.119* |
| | 3 Mean Score, Perpetration Scale | | | | 0.434*** | 0.481*** | 0.514*** | 0.489*** | 0.327*** | -0.183*** | -0.417*** | -0.127** | -0.087+ | -0.101* | -0.109* | -0.110* |
| | Dating Violence⁴ | | | | | | | | | | | | | | | |
| | 4 Mean Score, Victimization Scale | | | | | 0.665*** | 0.476*** | 0.207*** | 0.255*** | -0.159** | -0.260*** | -0.002 | 0.012 | 0.045 | -0.032 | 0.001 |
| 5 Mean Score, Perpetration Scale | | | | | | 0.305*** | 0.364*** | 0.127* | -0.056 | -0.292*** | -0.078 | -0.046 | -0.068 | -0.076 | -0.077 | |
| Sexual Harassment | | | | | | | | | | | | | | | | |
| 6 Mean Score, Victimization Scale | | | | | | | 0.523*** | 0.394*** | -0.238*** | -0.267*** | -0.106* | -0.071 | -0.001 | -0.140** | -0.110* | |
| 7 Mean Score, Perpetration Scale | | | | | | | | 0.301*** | -0.155** | -0.268*** | -0.097* | -0.062 | -0.092 | -0.040 | -0.126* | |
| DRUG AND ALCOHOL USE | | | | | | | | | | | | | | | | |
| 8 Mean Score, Drug/Alcohol Use Scale | | | | | | | | | -0.161** | -0.253*** | -0.119* | -0.084+ | -0.023 | -0.158** | -0.107* | |
| Secondary Program Outcomes | PERCEIVE SCHOOL AS SAFE | | | | | | | | | | | | | | | |
| | 9 Mean Score, Perception of Safety Scale | | | | | | | | | | 0.092+ | 0.080 | 0.080 | 0.016 | 0.108* | 0.050 |
| | POSITIVE ATTITUDES/BELIEFS | | | | | | | | | | | | | | | |
| | 10 Mean Score, Positive Attitudes Scale | | | | | | | | | | | 0.089+ | 0.088+ | 0.098+ | 0.051 | 0.082 |
| | PROSOCIAL BEHAVIORS | | | | | | | | | | | | | | | |
| | 11 Mean Score, All Pro-Social Responses | | | | | | | | | | | | 0.851*** | 0.866*** | 0.773*** | 0.875*** |
| | 12 Mean Score, Response to Bullying (Others) | | | | | | | | | | | | | 0.689*** | 0.548*** | 0.628*** |
| 13 Mean Score, Response to Dating Violence (Others) | | | | | | | | | | | | | | 0.479*** | 0.728*** | |
| 14 Mean Score, Response to Bullying (Self) | | | | | | | | | | | | | | | | 0.567*** |
| 15 Mean Score, Response to Dating Violence (Self) | | | | | | | | | | | | | | | | |

+ p<.10 *p<.05 **p<.01 ***p<.001

Appendix J. Main Program Impact: Change in Student Behavior, Victimization, and Beliefs from Baseline (B) to End of Program Year (T1), Full Outcome List

| | TREATMENT (Fourth R) | | | CONTROL | | | T-C Difference in Difference |
|---|----------------------|----------------|----------------|-----------------|----------------|----------------|------------------------------|
| | Baseline 307 | T ₁ | Change in Mean | Baseline 263 | T ₁ | Change in Mean | |
| SEXUALITY AND DATING | | | | | | | |
| Sexual Orientation | | | | | | | |
| Interested in opposite sex | 84% | 87% | 3% | 77% | 85% | 8% | -5% |
| Interested in same sex | 0% | 0% | 0% | 1% | 1% | 0% | 0% |
| Interested in both sexes | 3% | 8% | 5% | 5% | 8% | 3% | 2% |
| Not interested in dating/sex | 13% | 5% | -8% | 17% | 6% | -11% | 3% |
| Dating Activity | | | | | | | |
| Ever Dated | 61% | 71% | 10% | 58% | 71% | 13% | -3% |
| Dated in the Past 3 Months | 49% | 60% | 11% | 41% | 56% | 15% | -4% |
| Sexual Activity | | | | | | | |
| Sexually active | 9% | 9% | 0% | 4% | 13% | 9% | -9% * |
| VIOLENCE, HARASSMENT, & BULLYING | | | | | | | |
| Dating Violence¹ | | | | | | | |
| % Reporting Any Victimization | 17% | 26% | 9% | 16% | 20% | 4% | 5% |
| % Reporting Any Physical Victimization ² | 13% | 21% | 8% | 17% | 15% | -2% | 10% |
| Mean Score, Victimization Scale | 0.05 | 0.06 | 0.01 | 0.05 | 0.05 | 0.00 | 0.01 |
| % Reporting Any Perpetration | 22% | 28% | 6% | 29% | 31% | 2% | 4% |
| % Reporting Any Physical Perpetration ² | 9% | 11% | 2% | 16% | 7% | -9% | 11% + |
| Mean Score, Perpetration Scale | 0.06 | 0.06 | 0.00 | 0.07 | 0.07 | 0.00 | 0.00 |
| Sexual Harassment/Assault | | | | | | | |
| % Reporting Any Victimization | 41% | 48% | 7% | 43% | 52% | 9% | -2% |
| % Reporting Any Physical Victimization ³ | 22% | 25% | 3% | 22% | 30% | 8% | -5% |
| Mean Score, Victimization Scale | 0.12 | 0.15 | 0.03 | 0.13 | 0.17 | 0.04 | -0.01 |
| % Reporting Any Perpetration | 17% | 20% | 3% | 21% | 25% | 4% | -1% |
| % Reporting Any Physical Perpetration ³ | 6% | 7% | 1% | 9% | 9% | 0% | 1% |
| Mean Score, Perpetration Scale | 0.04 | 0.05 | 0.01 | 0.05 | 0.07 | 0.02 | -0.01 |
| Peer Violence/Bullying | | | | | | | |
| % Reporting Any Victimization | 66% | 76% | 10% | 74% | 75% | 1% | 9% * |
| % Reporting Any Physical Victimization ⁴ | 41% | 55% | 14% | 46% | 54% | 8% | 6% |
| Mean Score, Victimization Scale | 0.19 | 0.23 | 0.04 | 0.21 | 0.23 | 0.02 | 0.02 |
| % Reporting Any Perpetration | 55% | 63% | 8% | 59% | 61% | 2% | 6% |
| % Reporting Any Physical Perpetration ⁴ | 38% | 52% | 14% | 46% | 51% | 5% | 9% + |
| Mean Score, Perpetration Scale | 0.14 | 0.18 | 0.04 | 0.17 | 0.18 | 0.01 | 0.03 |
| DRUG AND ALCOHOL USE | | | | | | | |
| % Reporting Any Drug/Alcohol Use | 14% | 22% | 8% | 17% | 23% | 6% | 2% |
| Mean Score, Drug/Alcohol Use Scale | 0.03 | 0.05 | 0.02 | 0.05 | 0.06 | 0.01 | 0.01 |
| PERCEIVE SCHOOL AS SAFE | | | | | | | |
| Mean Score, Perception of Safety Scale | 0.77 | 0.77 | 0.00 | 0.77 | 0.73 | -0.04 | 0.04 |
| POSITIVE ATTITUDES/BELIEFS | | | | | | | |
| Mean Score, Positive Attitudes Scale | 0.34 | 0.33 | -0.01 | 0.33 | 0.34 | 0.01 | -0.02 |
| PROSOCIAL BEHAVIORS | | | | | | | |
| Mean Score, All Prosocial Responses | 0.57 | 0.57 | 0.00 | 0.58 | 0.55 | -0.03 | 0.03 |
| Bullying | | | | | | | |
| Mean Score, Response to Bullying (Self) | 0.66 | 0.63 | -0.03 | 0.67 | 0.62 | -0.05 | 0.02 |
| Mean Score, Response to Bullying (Others) | 0.54 | 0.56 | 0.02 | 0.57 | 0.53 | -0.04 | 0.06 |
| Dating Violence | | | | | | | |
| Mean Score, Response to Dating Violence (Self) | 0.59 | 0.61 | 0.02 | 0.59 | 0.58 | -0.01 | 0.03 |
| Mean Score, Response to Dating Violence (Others) | 0.47 | 0.52 | 0.05 | 0.49 | 0.49 | 0.00 | 0.05 |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Of those who dated someone within the past three months.

² Physical dating violence measures includes the following items: slapped or scratched; pushed, grabbed, shoved, or kicked; hit with fist or something hard; beat up; assaulted with a knife or gun; and forced to do something sexual.

³ Physical sexual harassment measures includes the following items: touched, grabbed, or pinched; pulled clothing down/off; forced kiss; and forced to do something sexual.

⁴ Physical peer violence/bullying measures includes the following items: pushed, hit, or kicked; slapped or scratched; beat up; and assaulted with a weapon.

Appendix K. Main Program Impact: Change in Student Behavior, Victimization, and Beliefs from Baseline (B) to End of Follow-Up Year (T2), Full Outcome List

| | TREATMENT (Fourth R) | | | CONTROL | | | T-C Difference in Difference |
|---|----------------------|----------------|-------------------|-----------------|----------------|-------------------|------------------------------------|
| | Baseline 263 | T ₂ | Change in Mean | Baseline 248 | T ₂ | Change in Mean | |
| Number of Students (N) | | | | | | | |
| SEXUALITY AND DATING | | | | | | | |
| Sexual Orientation | | | | | | | |
| Interested in opposite sex | 81% | 87% | 6% | 78% | 88% | 10% | -4% |
| Interested in same sex | 1% | 2% | 1% | 0% | 0% | 0% | 1% |
| Interested in both sexes | 5% | 6% | 1% | 6% | 10% | 4% | -3% |
| Not interested in dating/sex | 14% | 4% | -10% | 15% | 2% | -13% | 3% |
| Dating Activity | | | | | | | |
| Ever Dated | 58% | 70% | 12% | 57% | 74% | 17% | -5% |
| Dated in the Past 3 Months | 50% | 58% | 8% | 39% | 66% | 27% | -19% + |
| Sexual Activity | | | | | | | |
| Sexually active | 9% | 13% | 4% | 7% | 13% | 6% | -2% |
| VIOLENCE, HARASSMENT, & BULLYING | | | | | | | |
| Dating Violence¹ | | | | | | | |
| % Reporting Any Victimization | 17% | 21% | 4% | 15% | 26% | 11% | -7% |
| % Reporting Any Physical Victimization ² | 10% | 15% | 5% | 14% | 17% | 3% | 2% |
| Mean Score, Victimization Scale | 0.04 | 0.07 | 0.03 | 0.04 | 0.09 | 0.05 | -0.02 |
| % Reporting Any Perpetration | 23% | 32% | 9% | 25% | 44% | 19% | -10% |
| % Reporting Any Physical Perpetration ² | 8% | 12% | 4% | 11% | 22% | 11% | -7% |
| Mean Score, Perpetration Scale | 0.05 | 0.10 | 0.05 | 0.05 | 0.12 | 0.07 | -0.02 |
| Sexual Harassment/Assault | | | | | | | |
| % Reporting Any Victimization | 44% | 47% | 3% | 40% | 55% | 15% | -12% + |
| % Reporting Any Physical Victimization ³ | 23% | 28% | 5% | 21% | 33% | 12% | -7% |
| Mean Score, Victimization Scale | 0.13 | 0.15 | 0.02 | 0.12 | 0.19 | 0.07 | -0.05* |
| % Reporting Any Perpetration | 18% | 23% | 5% | 21% | 27% | 6% | -1% |
| % Reporting Any Physical Perpetration ³ | 6% | 10% | 4% | 9% | 16% | 7% | -3% |
| Mean Score, Perpetration Scale | 0.04 | 0.06 | 0.02 | 0.05 | 0.08 | 0.03 | -0.01 |
| Peer Violence/Bullying | | | | | | | |
| % Reporting Any Victimization | 67% | 67% | 0% | 70% | 75% | 5% | -5% |
| % Reporting Any Physical Victimization ⁴ | 41% | 49% | 8% | 41% | 51% | 10% | -2% |
| Mean Score, Victimization Scale | 0.19 | 0.20 | 0.01 | 0.19 | 0.23 | 0.04 | -0.03 |
| % Reporting Any Perpetration | 56% | 58% | 2% | 59% | 63% | 4% | -2% |
| % Reporting Any Physical Perpetration ⁴ | 39% | 45% | 6% | 43% | 51% | 8% | -2% |
| Mean Score, Perpetration Scale | 0.15 | 0.17 | 0.02 | 0.16 | 0.19 | 0.03 | -0.01 |
| DRUG AND ALCOHOL USE | | | | | | | |
| % Reporting Any Drug/Alcohol Use | 12% | 27% | 15% | 16% | 29% | 13% | 2% |
| Mean Score, Drug/Alcohol Use Scale | 0.03 | 0.06 | 0.03 | 0.05 | 0.08 | 0.03 | 0.00 |
| PERCEIVE SCHOOL AS SAFE | | | | | | | |
| Mean Score, Perception of Safety Scale | 0.75 | 0.75 | 0.00 | 0.78 | 0.70 | -0.08 | 0.08* |
| POSITIVE ATTITUDES/BELIEFS | | | | | | | |
| Mean Score, Positive Attitudes Scale | 0.35 | 0.34 | -0.01 | 0.33 | 0.35 | 0.02 | -0.03 |
| PROSOCIAL BEHAVIORS | | | | | | | |
| Mean Score, All Prosocial Responses | 0.56 | 0.54 | -0.02 | 0.58 | 0.54 | -0.04 | 0.02 |
| Bullying | | | | | | | |
| Mean Score, Response to Bullying (Self) | 0.65 | 0.61 | -0.04 | 0.66 | 0.61 | -0.05 | 0.01 |
| Mean Score, Response to Bullying (Others) | 0.53 | 0.52 | -0.01 | 0.56 | 0.54 | -0.02 | 0.01 |
| Dating Violence | | | | | | | |
| Mean Score, Response to Dating Violence (Self) | 0.59 | 0.57 | -0.02 | 0.59 | 0.56 | -0.03 | 0.01 |
| Mean Score, Response to Dating Violence (Others) | 0.47 | 0.46 | -0.01 | 0.48 | 0.48 | 0.00 | -0.01 |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Of those who dated someone within the past three months.

² Physical dating violence measures includes the following items: slapped or scratched; pushed, grabbed, shoved, or kicked; hit with fist or something hard; beat up; assaulted with a knife or gun; and forced to do something sexual.

³ Physical sexual harassment measures includes the following items: touched, grabbed, or pinched; pulled clothing down/off; forced kiss; and forced to do something sexual.

⁴ Physical peer violence/bullying measures includes the following items: pushed, hit, or kicked; slapped or scratched; beat up; and assaulted with a weapon.

Appendix L. Impact of Student Sex on Select Outcomes¹

| Dependent Variable | Dating Violence | | Sexually Active | |
|-----------------------------------|-----------------|----------|-----------------|----------|
| | Victimization | | | |
| Follow-Up Time Period | T1 | T2 | T1 | T2 |
| Total Sample Size | 522 | 451 | 493 | 429 |
| Treatment Group | 278 | 230 | 231 | 219 |
| Control Group | 244 | 221 | 232 | 210 |
| R Squared ² | -0.003 | 0.007 | 0.179 | 0.099 |
| F | 0.439 | 2.017 | | |
| Constant | 0.051*** | 0.104*** | 0.072*** | 0.109*** |
| Group (Control v. Treatment) | 0.066 | -0.143* | 0.099* | 0.333+ |
| Background Characteristics | | | | |
| Male | 0.021 | -0.122+ | 4.312*** | 2.179+ |
| Male*Group | -0.046 | 0.171* | 7.698+ | 3.739+ |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Results reflect standardized OLS coefficients for continuous dependent variables and odds ratios for the single dichotomous dependent variable (sexually active).

² Adjusted R squared reported for OLS regression; Nagelkerke R squared is reported for logistic regression.

Appendix M. Diffusion Effect: Change in Student Behavior, Victimization, and Beliefs from Baseline (B) to End of Program Year (T1) in Experimental Control versus Comparison Samples, Full Outcome List

| | EXPERIMENTAL CONTROL ¹ | | | COMPARISON | | | T-C Difference in Difference |
|---|-----------------------------------|----------------|----------------|-----------------------|----------------|----------------|------------------------------|
| | Baseline ² | T ₁ | Change in Mean | Baseline ² | T ₁ | Change in Mean | |
| Number of Students (N) | 260 | | | 174 | | | |
| SEXUALITY AND DATING | | | | | | | |
| Sexual Orientation | | | | | | | |
| Interested in opposite sex | 76% | 84% | 8% | 76% | 76% | 0% | 8% |
| Interested in same sex | 1% | 2% | 1% | 1% | 3% | 2% | -1% |
| Interested in both sexes | 6% | 9% | 3% | 4% | 9% | 5% | -2% |
| Not interested in dating/sex | 18% | 6% | -12% | 20% | 13% | -7% | -5% |
| Dating Activity | | | | | | | |
| Ever Dated | 59% | 71% | 12% | 59% | 67% | 8% | 4% |
| Dated in the Past 3 Months | 45% | 63% | 18% | 52% | 69% | 17% | 1% |
| Sexual Activity | | | | | | | |
| Sexually active | 5% | 13% | 8% | 7% | 8% | 1% | 7%+ |
| VIOLENCE, HARASSMENT, & BULLYING | | | | | | | |
| Dating Violence³ | | | | | | | |
| % Reporting Any Victimization | 22% | 25% | 3% | 33% | 26% | -7% | 10% |
| % Reporting Any Physical Victimization ⁴ | 17% | 15% | -2% | 21% | 17% | -4% | 2% |
| Mean Score, Victimization Scale | 0.05 | 0.06 | 0.01 | 0.07 | 0.06 | -0.01 | 0.02 |
| % Reporting Any Perpetration | 20% | 27% | 7% | 29% | 23% | -6% | 13% |
| % Reporting Any Physical Perpetration ⁴ | 16% | 7% | -9% | 16% | 16% | 0% | -9% |
| Mean Score, Perpetration Scale | 0.08 | 0.09 | 0.01 | 0.10 | 0.09 | -0.01 | 0.02 |
| Sexual Harassment/Assault | | | | | | | |
| % Reporting Any Victimization | 42% | 52% | 10% | 39% | 50% | 11% | -1% |
| % Reporting Any Physical Victimization ⁵ | 22% | 30% | 8% | 26% | 30% | 4% | 4% |
| Mean Score, Victimization Scale | 0.13 | 0.18 | 0.05 | 0.14 | 0.18 | 0.04 | 0.01 |
| % Reporting Any Perpetration | 21% | 25% | 4% | 21% | 27% | 6% | -2% |
| % Reporting Any Physical Perpetration ⁵ | 9% | 9% | 0% | 10% | 10% | 0% | 0% |
| Mean Score, Perpetration Scale | 0.05 | 0.07 | 0.02 | 0.05 | 0.07 | 0.02 | 0.00 |
| Peer Violence/Bullying | | | | | | | |
| % Reporting Any Victimization | 72% | 75% | 3% | 64% | 74% | 10% | -7% |
| % Reporting Any Physical Victimization ⁶ | 46% | 5% | -41% | 40% | 57% | 17% | -58%+ |
| Mean Score, Victimization Scale | 0.21 | 0.23 | 0.02 | 0.21 | 0.23 | 0.02 | 0.00 |
| % Reporting Any Perpetration | 58% | 60% | 2% | 50% | 64% | 14% | -12%* |
| % Reporting Any Physical Perpetration ⁶ | 46% | 51% | 5% | 40% | 56% | 16% | -11%+ |
| Mean Score, Perpetration Scale | 0.17 | 0.18 | 0.01 | 0.14 | 0.19 | 0.05 | -0.04+ |
| DRUG AND ALCOHOL USE | | | | | | | |
| % Reporting Any Drug/Alcohol Use | 17% | 23% | 6% | 13% | 32% | 19% | -13%** |
| Mean Score, Drug/Alcohol Use Scale | 0.05 | 0.05 | 0.00 | 0.04 | 0.09 | 0.05 | -0.05* |
| PERCEIVE SCHOOL AS SAFE | | | | | | | |
| Mean Score, Perception of Safety Scale | 0.78 | 0.74 | -0.04 | 0.74 | 0.70 | -0.04 | 0.00 |
| POSITIVE ATTITUDES/BELIEFS | | | | | | | |
| Mean Score, Positive Attitudes Scale | 0.33 | 0.34 | 0.01 | 0.35 | 0.34 | -0.01 | 0.02 |
| PROSOCIAL BEHAVIORS | | | | | | | |
| Mean Score, All Prosocial Responses | 0.58 | 0.55 | -0.03 | 0.62 | 0.58 | -0.04 | 0.01 |
| Bullying | | | | | | | |
| Mean Score, Response to Bullying (Self) | 0.66 | 0.62 | -0.04 | 0.68 | 0.65 | -0.03 | -0.01 |
| Mean Score, Response to Bullying (Others) | 0.57 | 0.53 | -0.04 | 0.62 | 0.57 | -0.05 | 0.01 |
| Dating Violence | | | | | | | |
| Mean Score, Response to Dating Violence (Self) | 0.59 | 0.57 | -0.02 | 0.62 | 0.58 | -0.04 | 0.02 |
| Mean Score, Response to Dating Violence (Others) | 0.48 | 0.49 | 0.01 | 0.54 | 0.52 | -0.02 | 0.03 |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Includes Control Group from the experimental sample only.

² Baseline sample includes only those surveys that were successfully matched to a T1 follow-up survey.

³ Of those who dated someone within the past three months.

⁴ Physical dating violence measures includes the following items: slapped or scratched; pushed, grabbed, shoved, or kicked; hit with fist or something hard; beat up; assaulted with a knife or gun; and forced to do something sexual.

⁵ Physical sexual harassment measures includes the following items: touched, grabbed, or pinched; pulled clothing down/off; forced kiss; and forced to do something sexual.

⁶ Physical peer violence/bullying measures includes the following items: pushed, hit, or kicked; slapped or scratched; beat up; and assaulted with a weapon.

Appendix N. Diffusion Effect: Change in Student Behavior, Victimization, and Beliefs from Baseline (B) to End of Follow-Up Year (T2) in Experimental Control versus Comparison Samples, Full Outcome List

| | EXPERIMENTAL CONTROL ¹ | | | COMPARISON | | | T-C Difference in Difference |
|---|-----------------------------------|----------------|-------------------|------------------------------|----------------|-------------------|------------------------------------|
| | Baseline ² N 248 | T ₂ | Change in Mean | Baseline ² 192 | T ₂ | Change in Mean | |
| SEXUALITY AND DATING | | | | | | | |
| Sexual Orientation | | | | | | | |
| Interested in opposite sex | 78% | 86% | 8% | 75% | 80% | 5% | 3% |
| Interested in same sex | 1% | 0% | -1% | 1% | 2% | 1% | -2% |
| Interested in both sexes | 6% | 11% | 5% | 3% | 11% | 8% | -3% |
| Not interested in dating/sex | 14% | 3% | -11% | 21% | 8% | -13% | 2% |
| Dating Activity | | | | | | | |
| Ever Dated | 59% | 74% | 15% | 56% | 73% | 17% | -2% |
| Dated in the Past 3 Months | 42% | 67% | 25% | 48% | 61% | 13% | 12% |
| Sexual Activity | | | | | | | |
| Sexually active | 5% | 14% | 9% | 7% | 9% | 2% | 7% |
| VIOLENCE, HARASSMENT, & BULLYING | | | | | | | |
| Dating Violence³ | | | | | | | |
| % Reporting Any Victimization | 19% | 31% | 12% | 22% | 30% | 8% | 4% |
| % Reporting Any Physical Victimization ⁴ | 14% | 17% | 3% | 13% | 16% | 3% | 0% |
| Mean Score, Victimization Scale | 0.04 | 0.08 | 0.04 | 0.05 | 0.08 | 0.03 | 0.01 |
| % Reporting Any Perpetration | 16% | 41% | 25% | 22% | 49% | 27% | -2% |
| % Reporting Any Physical Perpetration ⁴ | 11% | 22% | 11% | 9% | 13% | 4% | 7% |
| Mean Score, Perpetration Scale | 0.07 | 0.16 | 0.09 | 0.07 | 0.15 | 0.08 | 0.01 |
| Sexual Harassment/Assault | | | | | | | |
| % Reporting Any Victimization | 40% | 54% | 14% | 37% | 60% | 23% | -9% |
| % Reporting Any Physical Victimization ⁵ | 21% | 33% | 12% | 22% | 40% | 18% | -6% |
| Mean Score, Victimization Scale | 0.12 | 0.19 | 0.07 | 0.13 | 0.23 | 0.10 | -0.03 |
| % Reporting Any Perpetration | 21% | 27% | 6% | 19% | 26% | 7% | -1% |
| % Reporting Any Physical Perpetration ⁵ | 9% | 16% | 7% | 8% | 16% | 8% | -1% |
| Mean Score, Perpetration Scale | 0.05 | 0.08 | 0.03 | 0.05 | 0.09 | 0.04 | -0.01 |
| Peer Violence/Bullying | | | | | | | |
| % Reporting Any Victimization | 68% | 75% | 7% | 61% | 68% | 7% | 0% |
| % Reporting Any Physical Victimization ⁶ | 41% | 51% | 10% | 38% | 50% | 12% | -2% |
| Mean Score, Victimization Scale | 0.20 | 0.23 | 0.03 | 0.20 | 0.21 | 0.01 | 0.02 |
| % Reporting Any Perpetration | 58% | 63% | 5% | 53% | 62% | 9% | -4% |
| % Reporting Any Physical Perpetration ⁶ | 43% | 51% | 8% | 41% | 54% | 13% | -5% |
| Mean Score, Perpetration Scale | | | 0.00 | 0.15 | 0.19 | 0.04 | -0.04 |
| DRUG AND ALCOHOL USE | | | | | | | |
| % Reporting Any Drug/Alcohol Use | 16% | 29% | 13% | 12% | 33% | 21% | -8% |
| Mean Score, Drug/Alcohol Use Scale | 0.05 | 0.08 | 0.03 | 0.04 | 0.09 | 0.05 | -0.02 |
| PERCEIVE SCHOOL AS SAFE | | | | | | | |
| Mean Score, Perception of Safety Scale | 0.78 | 0.71 | -0.07 | 0.75 | 0.69 | -0.06 | -0.01 |
| POSITIVE ATTITUDES/BELIEFS | | | | | | | |
| Mean Score, Positive Attitudes Scale | 0.33 | 0.34 | 0.01 | 0.35 | 0.37 | 0.02 | -0.01 |
| PROSOCIAL BEHAVIORS | | | | | | | |
| Mean Score, All Prosocial Responses | 0.58 | 0.53 | -0.05 | 0.60 | 0.55 | -0.05 | 0.00 |
| Bullying | | | | | | | |
| Mean Score, Response to Bullying (Self) | 0.66 | 0.61 | -0.05 | 0.67 | 0.62 | -0.05 | 0.00 |
| Mean Score, Response to Bullying (Others) | 0.56 | 0.53 | -0.03 | 0.60 | 0.52 | -0.08 | 0.05 |
| Dating Violence | | | | | | | |
| Mean Score, Response to Dating Violence (Self) | 0.59 | 0.55 | -0.04 | 0.62 | 0.59 | -0.03 | -0.01 |
| Mean Score, Response to Dating Violence (Others) | 0.50 | 0.47 | -0.03 | 0.51 | 0.48 | -0.03 | 0.00 |

+ p<.10 *p<.05 **p<.01 ***p<.001

¹ Includes Control Group from the experimental sample only.

² Baseline sample includes only those surveys that were successfully matched to a T2 follow-up survey.

³ Of those who dated someone within the past three months.

⁴ Physical dating violence measures includes the following items: slapped or scratched; pushed, grabbed, shoved, or kicked; hit with fist or something hard; beat up; assaulted with a knife or gun; and forced to do something sexual.

⁵ Physical sexual harassment measures includes the following items: touched, grabbed, or pinched; pulled clothing down/off; forced kiss; and forced to do something sexual.

⁶ Physical peer violence/bullying measures includes the following items: pushed, hit, or kicked; slapped or scratched; beat up; and assaulted with a weapon.