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Effects of the Child Development Project on Students' Drug Use and Other Problem Behaviors

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Abstract

The Child Development Project is a comprehensive school reform program that helps elementary schools to become caring communities of learners—environments characterized by supportive interpersonal relationships, shared goals, responsiveness to students' developmental and sociocultural needs, and an emphasis on prosocial values of personal responsibility, concern for others, and fairness, as well as a commitment to learning. The program includes classroom, school-wide, and family involvement activities that, working synergistically, are expected to foster students' positive development and resilience to risk when confronted with stressful life events and circumstances. Following baseline assessments, the program was introduced in schools from six school districts across the U.S. over a period of three years. Similar schools in these same districts served as a comparison group. Evaluation findings indicated that when the program was implemented widely throughout a school, there were significant reductions in students' use of drugs and involvement in other problem behaviors.

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Research on risk and resiliency factors conducted since the early 1980s (e.g., Garmezy, Masten, & Tellegen, 1984; Masten et al., 1988; Rutter, 1985; Werner & Smith, 1989) has led to increasingly sophisticated models of the etiology of problem behaviors (see, e.g., Brook, Nomura, & Cohen, 1989; O'Connor & Rutter, 1996; Petersen, 1993; Zimmerman & Arunkumar, 1994). Whereas initial models emphasized characteristics of individuals that placed them at risk of substance abuse, violence, or similar health-compromising behaviors, current models view problem behaviors as resulting from complex transactions between individuals and their social environments that, over the course of development, operate as interdependent and mutually-reinforcing systems of causal influence (Coie et al., 1993; Sameroff & Fiese, 1990; Tolan, Guerra, & Kendall, 1995; Yoshikawa, 1994). However, these advances in knowledge have had relatively little impact on prevention programs. The field of prevention continues to be dominated by an emphasis on individual-level risk and protective factors, with most contemporary preventive interventions focusing on influencing adolescents' knowledge, attitudes, and/or skills in areas considered immediately relevant to the problem of concern (e.g., knowledge of the risks of using alcohol or other drugs, interpersonal skills to resist peer pressure to engage in problem behaviors; Botvin, Baker, Filazzola, & Botvin, 1990; Ellickson & Bell, 1990; Pentz et al., 1989).

The Child Development Project (CDP) is an approach to prevention that differs radically from most current prevention programs in several respects. Although prevention programs are most commonly implemented in schools, they are virtually always a specific and discrete "curriculum," separate from the regular, ongoing activities of the classroom and school. In contrast, CDP is a comprehensive, ecological approach to intervention (Bronfenbrenner, 1977; Cicchetti & Lynch, 1993) that is designed to influence all aspects of the school—curriculum, pedagogy, organization, management, and climate. In effect, when the CDP program is fully implemented, schooling *is* the preventive intervention.

A second distinguishing aspect of CDP as an approach to prevention is that it is a program for students in elementary school. Most school-based prevention programs are targeted at intermediate or high school students (Hansen, 1992; Tolan & Guerra, 1994), reflecting a dominant view in the field that the optimal timing of a preventive intervention is when a risk factor (e.g., involvement with delinquent peers) has already become manifest, but before it has stabilized and become difficult to influence (Coie et al., 1993; Reiss & Price, 1996). In contrast to this conventional view, CDP is based on the assumption that primary prevention efforts are most likely to be effective when they occur early in development, before maladaptive patterns of behavior have stabilized into mutually reinforcing systems, and when they establish *countervailing* systems of influence that prevent or disrupt the processes that contribute to dysfunction (Schaps & Battistich, 1991; Yoshikawa, 1994). At least with respect to delinquency, there is research evidence consistent with this viewpoint: Three recent reviews (Tolan & Guerra, 1994; Yoshikawa, 1994; Zigler, Taussig, & Black, 1992) all suggested that comprehensive programs for children were much more effective in preventing later delinquency than specifically-focused programs for adolescents.

Consistent with its comprehensiveness and focus on early intervention is a third distinctive aspect of CDP as a prevention program: CDP's emphasis is on the promotion of positive development among all children and youth, rather than on the prevention of disorder among those deemed at risk. CDP thus is a broader and more basic approach to primary prevention than risk-driven programs that concentrate on preventing disorder. Although the potential benefits of promoting positive development among all youth, not just those with identified risk factors, has been recognized by others in the prevention field (Albee, 1996; Cowen, 1985; Cowen, 1994; Cowen, 1996; Cowen, 1997; Elias, 1995; Hawkins & Catalano, 1990), it has received far less consideration than the risk-reduction, prevention of disorder model (Coie et al., 1993; Mrazek & Haggerty, 1994; Reiss & Price, 1996).

The CDP Program

Theoretical Model

As noted, the CDP program attempts to establish a system of mutually reinforcing processes and structures in schools that promote children's positive social, ethical, emotional, and intellectual development. The basic theoretical framework for CDP was derived from theory and research on socialization, learning and motivation, and prosocial development (see: Battistich, Schaps, Solomon, & Watson, 1991a; Battistich, Solomon, Kim, Watson, & Schaps, 1995; Battistich, Solomon, Watson, & Schaps, 1997; Battistich, Watson, Solomon, Schaps, & Solomon, 1991b; Solomon, Watson, Battistich, Schaps, & Delucchi, 1992; Watson, Solomon, Battistich, Schaps, & Solomon, 1989). The overall aim of the program is to help schools become *caring communities of learners*—environments that are characterized by caring and supportive relationships and collaboration among and between students, staff, and parents; a sense of common purpose and a clear commitment to salient norms and values of caring, justice, responsibility, and learning; responsiveness to students' developmental and sociocultural needs, and an accessible, meaningful and engaging curriculum; and opportunities for students to meaningfully participate in decision-making and otherwise be actively involved in the intellectual and social life of the classroom and school.

Actively participating in a caring school community is expected to have two major types of direct effects on students. First, it should facilitate their intellectual and sociomoral development, including their knowledge of subject matter, conceptual understanding, reasoning and thinking skills, social interaction and problem-solving skills, and interpersonal understanding. Second, it should help to meet their basic psychological needs for autonomy or self-direction, competence, and belonging (Baumeister & Leary, 1995; Deci & Ryan, 1985). Satisfaction of students' needs is hypothesized to result in their *attachment* (Bowlby, 1969) or *bonding* (Hawkins & Weis, 1985; Hirschi, 1969) to the school community which, in turn, promotes commitment to and internalization of the community's salient norms and values. Students' commitment to the school's norms and values, including those proscribing drug use and violence and those endorsing personal

responsibility and concern for others, should lead to behavior consistent with them. In a mutually reinforcing cycle or system, such behaviors help to solidify students' commitments to community values, foster their further development of relevant skills and capacities, and strengthen the school practices and climate that constitute a caring community of learners. The experience of being a valued member of a caring school community also should reduce the likelihood that students will seek to satisfy their need for social connection through association with gangs or other counter-cultural peer groups.

Program Components

In order to create a social context that can be characterized as a caring community of learners, CDP has incorporated a variety of elements into a coherent, comprehensive program for elementary schools. The program components are each grounded in four interrelated principles:

1. *Build stable, warm, and supportive relationships.* All of learning takes place within a social context—that is, within a web of relationships with others. The quality of these relationships is crucial to development, and schools therefore need to be places that foster caring, trusting, and supportive relationships. Students' feelings that they are cared about, valued, and supported by teachers and peers plays a major role in promoting their bonding to the school, which is a key protective factor for a variety of problematic developmental outcomes (Resnick et al., 1997).

2. *Attend to the social and ethical dimensions of learning.* Although often not explicitly recognized, schooling conveys important *moral* messages about how we should live our lives and how we should live together as people (e.g., Bryk, 1988). The CDP program makes this "hidden curriculum" (Lickona, 1991) overt and supportive by explicitly addressing students' needs for social and ethical understanding, not just intellectual understanding, and by teaching and modeling what it means to be a caring and principled person.

3. *Teach to the active mind.* Learning is inherently an active process in which students interpret new information in light of previous understandings and experiences, work through discrepancies, and construct new understandings (Piaget, 1950; Vigotsky, 1978). CDP's instructional practices are consistent with this "constructivist" approach to learning, and the

program's curricular materials promote student exploration, problem solving, and construction of meaning. The approach offers students of diverse cultural and ethnic backgrounds, learning styles, and skill levels opportunities to engage the curriculum in ways most appropriate to their own learning needs and interests; at the same time, meaningful interaction among students from different backgrounds and with diverse perspectives broadens the experiential base from which new and deeper understandings emerge.

4. *Honor intrinsic motivation.* A major emphasis of the CDP program is to tap into students' intrinsic motivation to learn and to uphold the values of the school community. Teachers help students to understand that learning is both an inherently satisfying goal and a means to acquire the skills they need for successful, productive lives. Students' self-motivation is fostered by minimizing the use of extrinsic incentives (i.e., rewards and punishments) to influence behavior, promoting collaboration and cooperation rather than competition, helping students to understand the purpose of their learning activities and, whenever possible, to explore their own learning goals and interests. In the social and ethical realms, teachers help students to understand the reasons behind rules and expectations, elicit students' opinions about appropriate behaviors, and involve them in decision-making about classroom norms and rules.

The specific activities and curricula described below constitute one approach to teaching and learning that is consistent with the four principles, but once the principles underlying the program are understood, they can be expressed in many ways within the classroom and school. Thus, the CDP program is more of a framework for fostering students' positive development than a precise recipe.

The CDP program consists of an intensive classroom program, a schoolwide component, and a family involvement component. The classroom component has three major facets: cooperative learning, a literature-based language arts curriculum, and "developmental discipline."

Cooperative learning. The benefits of cooperative learning for students' academic and social development have been well-documented (e.g., Johnson & Johnson, 1989; Johnson, Maruyama, Johnson, Nelson, & Skon, 1981; Sharan, 1990; Slavin, 1990). In CDP's approach to

cooperative learning (Dalton & Watson, 1997; Developmental Studies Center, 1997), students work in pairs or small groups on tasks and projects that require collaboration and have group products (e.g., a report or performance). Tasks are chosen to be inherently interesting and challenging, so that they will be engaging to most students and not require rewards for group participation or performance. Students are helped to understand that their overall goals in cooperative learning activities are to further their own and their partner's learning and to work with their partners in fair, considerate, and responsible ways. The specific learning goals or challenges and the particular social skills and behaviors required for successful collaboration are introduced and discussed with students at the beginning of each activity, and students reflect on and discuss their group interaction at the conclusion of the task. Thus, in addition to being an effective approach to learning, the cooperative activities also help students to build interpersonal bonds and develop social and ethical understanding and skills.

A literature-based reading and language arts curriculum. The multicultural titles and constructivist approach to learning in CDP's reading program (Developmental Studies Center, 1998b; Developmental Studies Center, 1998c) provide an approach to the language arts that accommodates diversity in experience, ability, and achievement, and gives all students access to high-quality literature and opportunities to engage each other's thinking about important social, cultural, and ethical issues that are relevant to their lives. Some of the books are read aloud, so that both good and poor readers have the benefit of thinking about and discussing the stories. In addition to building reading fluency and comprehension, the books and ensuing discussions help to enhance students' understanding of themselves and others, and of how such values as responsibility, fairness, and concern for others apply in complex human situations.

Developmental discipline. CDP's approach to discipline and classroom management is designed to help students develop a personal, internalized commitment to responsible and caring behavior as well as an intrinsic orientation toward learning. Recognizing that students develop social skills and moral understanding in much the same way that they learn academic skills and concepts, developmental discipline emphasizes a proactive, teaching approach to discipline that

provides students with adult guidance, and with opportunities to learn and practice self-control, and to develop the skills needed to apply ethical principles to life situations. Teachers foster student caring and responsibility by establishing a safe and caring classroom environment, minimizing the extrinsic control of behavior, responding to misbehavior in nonpunitive ways, actively involving students in creating and maintaining class rules and norms, and giving students appropriate levels of responsibility for classroom management and decision making (e.g., Developmental Studies Center, 1996b).

Schoolwide activities. These activities are designed to build a caring community throughout the school by involving teachers, students, parents, and extended family members in a wide range of projects and activities that are noncompetitive and inclusive (e.g., a cooperative science fair, family read aloud nights; see Developmental Studies Center, 1994). CDP's schoolwide component also includes a cross-age buddies program (Developmental Studies Center, 1996a) that pairs younger and older students and emphasizes helpful relationships through experiences that might range from a "welcome" tour of the school on the first day to shared projects in reading and mathematics.

Family involvement activities. In addition to involving parents and other family members in many of the schoolwide activities described above, CDP also connects families to the school through "homeside" activities. These are activities related to classroom learning that students do at home with a parent or other caregiver. The activities are designed to promote extended conversations and communication between students and their parents, connect the home to students' experiences in school, and help students gain knowledge and understanding of their family's beliefs, experiences, culture and heritage—information that, when shared in the classroom, helps expand everyone's knowledge and understanding of the world. Many activities involve students' interviewing their parents about topics related to classroom activities, discussing specific issues related to themes in the books students are reading, or learning about their family's history and shared experiences. Homeside activities are designed to help parents develop their child's language skills, build more supportive relationships with their children, convey a sense of pride in

their home language and heritage, and communicate their values and beliefs to their child and their child's teachers.

The purpose of the present research was to examine the effectiveness of the CDP program at reducing student involvement in drug use and other problem behaviors. Program effectiveness was examined in a four year, multi-site demonstration trial involving a diverse sample of elementary schools from across the United States. Interim findings from this study (Battistich, Schaps, Watson, & Solomon, 1996) suggested that the program was associated with reduced use of alcohol and reduced involvement in some delinquent behaviors. The present paper presents the final findings from analyses of data from the entire four years of the demonstration trial. The data on problem behaviors were collected as part of a much more extensive battery of assessments (including measures of students' school-related, personal, and social attitudes, motives, beliefs, and behaviors) that were administered annually. Program effects on other measured outcome variables have been described elsewhere (Solomon, Battistich, Watson, Schaps, & Lewis, 1998; Watson, Battistich, & Solomon, 1997) and only a brief summary will be included here.

Method

Participants and Design

Participants were students and teachers at 24 elementary schools (12 program and 12 comparison) from six school districts (two program and two comparison schools in each district). Program schools in each district were selected first, based on faculty interest and perceived likelihood of being able to implement the program (e.g., willingness and ability to devote professional development activities to CDP for a three year period). Comparison schools that matched the program schools as closely as possible with respect to school size and student characteristics (e.g., poverty level of the student population, student ethnic distribution, percent limited-English speakers, achievement test scores) were then selected in each of the districts. Twelve of the schools are on the West Coast, four are in the South, four are in the Southeast, and four are in the Northeast. They include urban, suburban, and rural schools and serve diverse student populations, ranging from 2% to 95% of students receiving free or reduced school lunch,

26% to 100% members of ethnic minority groups, 0% to 32% limited or non-English speaking, and with average scores ranging from the 24th to the 67th percentile on norm-referenced achievement tests.

Assessments were completed at baseline (during the 1991-92 school year), prior to the introduction of the CDP program, and during each of the subsequent three years (1992-93 through 1994-95). All regular classroom teachers (approximately 550 each year) at the program and comparison schools participated in the research. Teacher assessments included classroom observations each year and annual teacher questionnaires. Effects on student outcomes were assessed using a quasi-experimental, cohort sequential design. Students in the upper three grades at each school (grades 3-5 in four of the districts, and grades 4-6 in the remaining two) whose parents had provided written consent for their participation in the research completed questionnaires each year. Approximately 5,500 students (77% - 82% of the upper-grade students at the schools) were assessed each year. In each of the districts, the sample of students who completed the questionnaires was found to be representative of the population of upper-grade students at the participating schools with respect to gender and ethnicity.

Assessments of drug use and other problem behaviors were limited to students at the top elementary grade (fifth or sixth) at each of the schools. Sample sizes and characteristics for the dependent measures of most concern in the present analyses are shown in Table 1. Demographically, the program and comparison student samples were quite well-matched each year. Overall, the sample generally included slightly fewer boys than girls, and the proportion of non-white students increased in both groups of schools over the four years.

Table 1 here

Measures

Program implementation. A composite index of program implementation was formed using scales from the classroom observation and teacher questionnaire instruments.[1] Seven scales

from the observation instrument that represented teacher practices consistent with the program were used (see Solomon, Battistich, Kim, & Watson, 1997 for more information on the observation measures):

1. *Promotion of student autonomy and influence* (e.g., students participate in planning; 11 items, Cronbach's $\alpha = .63$).

2. *Use of cooperative learning activities* (e.g., percent of observation periods during which students were working in cooperative pairs or small groups; 6 items, $\alpha = .72$).

3. *Promotion of social understanding and prosocial values* (e.g., teacher mentions, discusses, or encourages understanding of others' motives, feelings, or perspectives; 14 items, $\alpha = .83$).

4. *Degree of personal relationship between teacher and students* (e.g., teacher makes effort to relate personally to students; 6 items, $\alpha = .69$).

5. *Minimization of extrinsic control* (e.g., teacher uses or threatens punishment [reversed]; 7 items, $\alpha = .78$).

6. *Emphasis on intrinsic motivation* (e.g., teacher talks about inherent interest of academic activities; 5 items, $\alpha = .65$).

7. *Elicitation of student thinking and active discussion* (e.g., teacher encourages students to follow-up on each other's ideas; 13 items, $\alpha = .78$).

CDP is as much about teachers' *beliefs* about students and *attitudes* toward teaching and learning as it is about specific practices. Further, because the observation instrument was designed to be applicable to comparison classrooms as well as program classrooms (and because observers were blind to condition, as indicated below), the observation measures were unlikely to be sensitive to subtle aspects of the program, and could not distinguish some aspects of program implementation from similar practices unrelated to CDP (e.g., use of CDP's literature program versus use of literature in general). For these reasons, four measures of teacher attitudes and beliefs from the teacher questionnaire were also used in the index of program implementation:

1. *Optimism about students' learning potential* (e.g., there really is very little I can do to insure that most of my students achieve at a high level [reversed]; 10 items, $\alpha = .67$).

2. *Trust in students* (e.g., students can be trusted to work together without supervision; 3 items, $\alpha = .61$).

3. *Belief in constructivist teaching and learning* (e.g., students learn best when they are involved in exploring things, inventing and trying out their own ways of doing things; 9 items, $\alpha = .80$).

4. *Control ideology* (i.e., the extent to which the teacher tends to provide choices and actively involve students in resolving a problem versus being highly directive; Deci, Schwartz, Sheinman, & Ryan, 1981).

The measures were rescaled as necessary to place them on a common metric. The individual measures from each instrument were then averaged, and the composite index was constructed by averaging the observation and questionnaire scores, so that classroom practices and teacher attitudes and beliefs were equally weighted in the final composite index. The internal consistency of the composite measure (assessed by considering each of the 11 component subscales as an "item") was $\alpha = .74$. The intercorrelations among the 11 subscales ranged from .20 to .59.[2]

Sense of school community. The sense of the school as a community plays a critical mediating role in the theoretical model that forms the basis for CDP. Previous research has demonstrated both that when the CDP program is well-implemented, students' sense of the school as a community increases significantly (Solomon, Watson, Battistich, Schaps, & Delucchi, 1996), and that use of the cluster of classroom practices consistent with the CDP program is positively associated with students' sense of school community (Solomon et al., 1997). Increases in the sense of school community thus could be considered a proxy indicator of effective program implementation, and was therefore examined here.

Students' sense of the school as a community was measured using a 38-item scale composed of three subscales [see Roberts, Hom, & Battistich (1995) for detailed information on

the measurement, antecedents, and correlates of the sense of school community]: *student autonomy and influence in the classroom* (e.g., in my class the teacher and students together decide what the rules will be; 10 items, $\alpha = .81$); *classroom supportiveness* (e.g., students in my class help each other learn; 14 items, $\alpha = .85$); and *school supportiveness* (e.g., people care about each other in this school; 14 items, $\alpha = .86$). The reliability of the overall scale was $\alpha = .91$.

Problem behaviors. Students' use of *cigarettes*, *alcohol*, and *marijuana* were each assessed through single questions: "Do you smoke cigarettes/drink alcohol (beer, wine, liquor)/smoke marijuana ("pot," "grass")?" Students indicated their use of each substance using a five-category scale (1 = "never; " 2 = "once or twice;" 3 = "once in a while;" 4 = "often;" 5 = "used previously, but not anymore"). Response categories 1 and 5 were combined so that each of the measures reflects current use of the substance.

Frequency of involvement in each of 10 *delinquent* behaviors during the past year was also assessed using a five-point scale (1 = "never;" 2 = "once or twice;" 3 = "3-5 times;" 4 = "6-9 times;" 5 = "10 or more times"). The 10 behaviors were: (1) running away from home; (2) skipping school; (3) damaging someone else's property on purpose; (4) throwing objects (rocks, bottles) at people or cars; (5) stealing money or property; (6) carrying a weapon; (7) threatening to harm someone; (8) hurting someone on purpose; (9) taking a car without the owner's permission; and (10) being involved in a "gang fight." Frequency of being the subject of six types of *victimization* at school during the past year was assessed using the same five-point scale. The victimization acts were: (1) being teased, insulted, or called names; (2) having one's property damaged on purpose; (3) having property stolen from one's desk; (4) having money or property taken by force or threat of harm; (5) being threatened with harm; and (6) being physically attacked.

Procedures

Staff development. The CDP program was introduced into the schools using a modified "training-of-trainers" approach. During the baseline year (1991-92), project staff worked with small groups of 8-15 principals, teachers, and staff developers or resource teachers from each of the districts to begin developing their understanding of CDP principles and facility with CDP practices.

Project staff continued to work with these "implementation teams" during the subsequent three years. The team members worked with project staff to introduce CDP into the two program schools in their district during the 1992-93 through 1994-95 school years, with the team members taking increasing responsibility for conducting workshops and providing support to program teachers in their district in successive years. Teachers at the program schools also were encouraged to work collaboratively in small groups to plan, implement, and reflect upon their attempts to implement aspects of the CDP program. For more information on the approach to staff development used in the project, see Kendzior & Dasho (1996), Watson (1996), and Watson, Kendzior, Dasho, Rutherford, and Solomon (1998).

Assessments. Beginning during the baseline year, four 90-minute observations of each classroom in the program and comparison schools were conducted each year. Observations were conducted by separate groups of observers in each district—all of whom were unaware of the intervention—using a structured observation system derived from those used by Solomon and Kendall (1979) and Solomon, Watson, Delucchi, Schaps, and Battistich (1988). All observers were trained by the same project staff member, using a combination of criterion-scored videotapes of classroom interactions and training visits to classrooms in other schools in their district. Videotapes were scored by observers throughout the school year to maintain reliability. Average overall observer agreement with the criterion scores was 75% over all four years (using an index that controls for the likelihood of agreement on infrequent events: Clement, 1976). All teachers at the program and comparison schools also were given questionnaires to complete in the spring of each year.

Student outcomes and sense of school community were assessed through questionnaires administered in the spring of each year. The student questionnaires were administered in the classroom or another room in the school by teams of two administrators. Teachers or other school staff were not present during the questionnaire administration. Except for sensitive questions, such as those involving use of drugs, one of the two administrators read the questions aloud while students followed along in their questionnaire booklets; the administrator also read the response

categories for the first few questions in each section, to help assure that students accurately understood what they were being asked and how to indicate their responses. (Where necessary, questionnaire booklets were available in Spanish as well as English, and a Spanish-speaking administrator was used.) The second administrator circulated among the students, answering questions and providing additional help to any students who needed it. For the sensitive questions, students read the items themselves while both administrators circulated through the room to provide individual assistance when needed.

Students recorded their answers to the questions on separate scannable forms. The answer forms contained only item numbers and the response scales, not the questions being answered, and students were identified on the forms only by bar-coded identification numbers.

Analysis

Program effects on all measures were examined using planned contrasts comparing linear changes from baseline at the program and matched comparison schools. Note that these are between-groups comparisons as a different cohort of students provided information about their involvement with problem behaviors during each of the four years. Analyses of student outcomes controlled for student gender, ethnicity, and grade level. For analyses involving multiple dependent measures (i.e., the problem behavior measures), multivariate analysis of covariance was used, followed by the univariate planned contrasts.[3]

Results

Preliminary Analyses

Preliminary analyses revealed that the response distributions for many of the measures of problem behaviors were quite skewed. Consequently, these measures were all log-transformed prior to analysis.

Intercorrelations among the problem behavior measures ranged from -.08 to .59 (average $r = .24$). Although with the large sample size all of these relationships are statistically significant ($ps < .01$), the relationships are small to moderate in magnitude and none of the correlations is large enough to indicate redundancy among the measures.

Program Implementation

Analyses of the implementation data revealed considerable variability among the sample of 12 program schools in the extent to which the teachers showed meaningful changes from baseline during the three years of intervention, *vis-a-vis* teachers at the comparison schools. At five of the program schools, most or all of the teachers showed at least moderate positive changes in implementation scores from the baseline year. The *t*-values for the planned contrasts between changes at these five program schools and changes at their matched comparison schools ranged from 1.77 ($p < .09$; ES = .41) to 4.83 ($p < .001$; ES = 1.10).[4] For the remaining seven program schools, the *t*-values for the planned contrasts with their comparison schools were all less than 1.00 (ns), and the ESs ranged from -.06 to .20. Thus, meaningful progress toward implementing the CDP program could only be said to have been made at five of the 12 program schools.[5]

Students' Sense of the School as a Community

Consistent with the findings from analyses of the composite implementation scores, students at the five "high change" program schools increased in their sense of community scores during the three intervention years, whereas the sense of community scores for students at their matched comparison schools declined following baseline (contrast $t = 9.04$, $p < .001$; ES = .47). Among students at the seven "low change" schools, sense of community scores actually *declined* somewhat more following baseline than among students at their matched comparison schools (contrast $t = -2.15$, $p < .05$; ES = -.09).

Student Involvement in Problem Behaviors

Given the findings for the implementation and sense of community scores, two sets of analyses were conducted for the problem behavior data. The first (studywide analyses) included all 24 schools; the second (high change analyses) included only the five high change program schools and their five matched comparison schools.

Mean scores for the problem behavior measures by status (program or comparison) and year for the complete sample of program and comparison schools are presented in Table 2. Contrast *t*-values are also shown in the table. The multivariate status x year interaction was

statistically significant, $F(57, 16895) = 1.45$, $p < .02$. However, only two of the 19 univariate planned contrasts approached significance: program students declined following baseline in their use of alcohol ($M = -.05$), whereas comparison students showed a small increase ($M = .01$; $p < .10$; ES = .15); and the frequency of throwing objects at people or vehicles *increased* among program students ($M = .03$) but declined among comparison students ($M = -.01$; $p < .10$; ES = -.09). Thus, studywide, there was little evidence of program effects on students' involvement in problem behaviors.

Table 2 here

Mean problem behavior scores and contrast *t*-values for students at the five high change program schools and their matched comparison schools are presented in Table 3. Once again, the multivariate status x year interaction was statistically significant, $F(57, 6842) = 1.75$, $p < .001$. However, in contrast to the findings from the studywide analyses, the univariate planned contrasts yielded a number of significant differences between students at the five high change schools and students at their matched comparison schools.

Table 3 here

Changes from baseline in students' use of both alcohol and marijuana were significantly different for the five high change program schools and their matched comparison schools. Program students declined over time in their use of alcohol ($M = -.06$), whereas comparison students increased slightly in alcohol consumption ($M = .01$; $p < .05$; ES = .18). Similarly, marijuana use declined among students at the five high change program schools ($M = -.02$) but increased among students at the comparison schools ($M = .03$; $p < .01$; ES = .22). Program students also showed greater declines than comparison students in cigarette use, but the difference in trend was not statistically significant.

The planned contrasts also revealed a number of marginally significant effects on students' involvement in delinquent behaviors and on one measure of victimization. Program students declined in their frequency of running away from home (M = -.02), taking a vehicle without the owner's permission (M = -.03), and being involved in gang fights (M = -.03), whereas comparison students increased from baseline in their reported frequency of involvement in each of these behaviors (Ms = .02, .01, .03, respectively; ps < .10; ES = .14, .14, .15, respectively). With respect to victimization, reports of having one's property damaged intentionally at school increased following baseline among both program and comparison students, but the increase was twice as large among comparison (M = .17) as among program students (M = .08; p < .10; ES = .17).

Effects on Other Student Outcomes

The findings from analyses of other student outcome variables (see: Developmental Studies Center, 1998a; Solomon et al., 1998) paralleled those described above for students' involvement in problem behaviors. Studywide, there were a smattering of small (ESs ranged from -.19 to .11), significant or marginally significant effects, some of which favored the program schools and others of which favored the comparison schools. For the five high change schools, however, there was a clear pattern of positive effects. Significant or marginally significant positive program effects were found for students' *academic attitudes, motivation, and behavior* (e.g., liking for school, task orientation toward learning, frequency of reading books outside of school), and for their *social attitudes, values, and behavior* (e.g., concern for others, commitment to democratic values, conflict resolution skill, altruistic behavior). In total, significant effects favoring program students in the high change schools were found for 52% of the outcome variables examined (ESs ranged from .09 to .33), and there were no significant effects favoring comparison students. Ignoring significance levels, 93% of the outcome variables examined showed changes from baseline that favored program students at the five high change schools.

Discussion

Overall, the findings indicate that when the CDP program was implemented widely throughout a school, there were significant reductions in students' use of alcohol and marijuana,

and marginally significant reductions in student involvement in several delinquent behaviors. Given that CDP represents a different approach to prevention from what is most common in the field, it is worth considering CDP's preventive effects in light of those found in evaluations of more typical prevention programs. A recent meta-analysis (Tobler & Stratton, 1997) examined the effectiveness of 120 school-based drug prevention programs for students in 5th through 12th grades. The investigators divided the programs into two types: "non-interactive" programs that relied primarily on didactic presentations designed to influence students' drug-use-related knowledge and/or attitudes and feelings (e.g., DARE); and "interactive" programs that emphasized student participation in structured small group activities and focused on developing skills to resist peer pressure to use drugs and/or more comprehensive life skills (e.g., assertiveness, communication skills). The meta-analysis indicated that, on average, the non-interactive prevention programs (n = 45) were not effective (mean ES = .02). The average effect of the interactive programs (n = 75) was significantly higher: ES = .18. Thus, CDP's effects on student alcohol (ES = .18) and marijuana use (ES = .22) in the five high change schools were virtually the same magnitude as the average effect of the most effective type of drug prevention programs identified in the meta-analysis (and were found in conjunction with a large number of positive effects on other aspects of students' development).[6]

How did exposure to the CDP program result in decreases in drug use? In their review of drug prevention, Tobler and Stratten (1997) examined the effectiveness of "placebo" treatment programs that used an interactive group process but did not include drug-use-related content, and found that these programs were as ineffective as the non-interactive programs. This finding seems to imply that a program like CDP, which does not include any drug-related content, would *not* be effective as a prevention program. However, it is important to keep in mind that CDP is a comprehensive and systemic approach to schooling that is dramatically different from the typical, narrowly-focused prevention program (including the "placebo" programs examined in Tobler and Stratton's review). CDP's theoretical model clearly suggests how it might result in meaningful prevention effects. That is, the model suggests that students' experience of the school as a caring

community increases their affective bonding to the school. By helping schools to meet students' need to belong, CDP may reduce or eliminate the tendencies of some students to seek community through affiliation with countercultural groups, thereby reducing drug use and other problem behaviors even in the absence of explicit content related to such behaviors. Moreover, it seems likely that most schools, including elementary schools, participate in at least some activities aimed at preventing student drug use (e.g., "red ribbon week") that, at the very least, communicate the school's anti-drug norms to students. Theoretically, meeting students' need to belong will increase their commitment to the school community's salient norms and values, whether those norms and values are an explicit part of the CDP program (i.e., caring, fairness, responsibility, learning) or derive from other sources (e.g., anti-drugs). Consistent with this model, the findings from a recent large scale longitudinal study of a representative sample of adolescents in 7th through 12th grades found that school "connectedness" was protective against emotional distress, suicidal thoughts and behavior, drug use (cigarettes, alcohol, and marijuana), violence, and early sexual activity (Resnick et al., 1997).

It is widely known that accomplishing sustained, comprehensive school reform is very difficult, and that most such reform efforts are not successful (e.g., Cuban, 1992; Fullan, 1993). This being the case, it may be disappointing but it is hardly surprising that only five of the 12 program schools achieved widespread changes in program practices by the end of three years of intervention. At the beginning of the project, it was expected that most schools would require at least three years to achieve widespread implementation of the CDP program, and the results appear in line with this expectation. It is also worth emphasizing that some of the teachers at all of the program schools did make meaningful changes in practice during the course of the study. With additional time, it is possible that more of the schools would have achieved schoolwide implementation. Indeed, anecdotal reports and informal observations of project staff suggested that more widespread implementation of CDP was beginning to occur in some of the seven "low change" schools during the final year of intervention. Unfortunately, this was apparently too late in the course of the study for these changes to have significantly affected student outcomes.

The variability in implementation found in this study highlights a general consideration for evaluations of intervention programs. If evaluation resources had not been devoted to gathering reliable information on program-relevant practices and associated beliefs, and thereby allowing the differentiation of those schools that had succeeded in implementing the program widely from those that had not, the conclusions drawn from this study would have been quite different. Although measuring implementation as well as outcomes is becoming more common in evaluation research, "black box" evaluations are still conducted. Without adequate information about how well an intervention was implemented (or whether it was even implemented at all), such studies provide virtually no basis for drawing conclusions about program effectiveness (cf. Battistich, 1996; Cooley & Lohnes, 1976). Moreover, measuring program practices and implementation-related conditions provides information about *how* programs produced any observed outcomes, and allows for explicit testing of the underlying theoretical model of intervention effects. The availability of measures of program-relevant classroom practices and mediating variables (i.e., sense of school community) in this project allowed for direct tests of the program's theoretical model of effects on outcome variables. The empirical support for the model obtained from these "process" analyses (e.g., Solomon et al., 1998; Watson et al., 1997) provides important additional evidence of program efficacy.

Finally, it is worth emphasizing that, consistent with the CDP's ecological or contextual approach to prevention, increases in students' sense of the school as a community, and thus the range of positive outcomes for students expected from attending a school that functions as a community, were only observed when the program was implemented widely throughout a school. The findings from this study thus support the increasing attention in the literature to the importance of contextual influences in general, and of the social context of the school in particular, to children's developmental outcomes (Battistich & Hom, 1997; Battistich et al., 1995; Battistich et al., 1997; Brook et al., 1989; Cicchetti & Lynch, 1993; Hawkins & Catalano, 1990; Petersen, 1993; Sameroff & Fiese, 1990; Tolan et al., 1995). Of course, important questions remain about how contextual influences operate. James Coleman (Coleman & Hoffer, 1987) has suggested that a community

facilitates children's socialization through the salient normative consensus among community members, yielding both increased clarity about appropriate and inappropriate behaviors, and increased monitoring and enforcement of community norms. We, and others (Hawkins & Weis, 1985), have argued that the affective bonds that develop between the child and the community are what promotes acceptance and internalization of community norms. Most likely, both types of processes contribute to effective socialization (Battistich et al., 1991b). It remains the task of future research to clarify the mechanisms through which social context moderates the relationships between risk and protective factors and developmental outcomes.

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Footnotes

[1] Of course, this can only be considered a measure of program implementation for teachers at the program schools. For comparison teachers, it is a measure of the extent to which their "regular" practices and beliefs were similar to those of the CDP program.

[2] As one indication of the validity of this measure, it is worth noting that a discriminant function analysis using the 11 subscale scores of three groups of teachers—those teachers nominated by project staff developers as particularly good implementers, all other program teachers, and the comparison teachers—strongly differentiated the three groups on each of the 11 measures, and correctly classified 90% of the nominated teachers on the basis of the discriminant function scores.

[3] A preferable analytic approach would be multi-level regression, which takes the clustering of students within schools into account. Unfortunately, with a sample of only 24 schools, statistical power to detect the status x year interaction effects of interest here is inadequate (Bassiri, 1988; Snijders & Bosker, 1993). It is worth noting, however, that a multi-level analysis of cross-sectional data examining the effects of school community on problem behaviors found both significant positive student-level (within-school) effects, and significant positive school-level (between school) effects (Battistich & Hom, 1997).

[4] The measure of effect size (ES) is the difference in mean changes from baseline in the program and comparison school(s), divided by the pooled within-groups standard deviation.

[5] It should be noted that some number of teachers at each of the program schools showed positive changes from baseline in implementation scores; however, about as many teachers at the seven "low change" schools showed no changes from baseline, or actually declined in implementation scores, relative to teachers at their comparison schools. It also should be noted that progress in program implementation did not appear to be associated with region of the country or school characteristics. That is, both the high and low change groups included urban and non-urban

schools, schools serving middle class student populations and those serving predominantly poor students, and schools serving relatively low and very high proportions of minority students.

[6] Effects of this size typically are considered to be “small” effects. However, it should be kept in mind that CDP’s effects were found for students in elementary school—an age at which few children have already initiated their use of drugs or begun to exhibit other problem behaviors. Small effect sizes are to be expected when baseline prevalence rates are low, but even small early differences may yield large preventive effects as children mature. The fact that CDP’s effects on alcohol and marijuana use were comparable to the typical effects of effective prevention programs in the meta-analysis is also noteworthy because the vast majority of programs included in the meta-analysis were targeted on adolescents and young adults, ages at which prevalence rates are much higher than among children in elementary school.

Table 1

Demographic Characteristics of Study Sample

Variable	Group	Year 1991-92[a]	1992-93	1993-94	1994-95
Sample Size	Comp.	679	799	873	830
	Prog.	755	823	878	826
% Sixth Grade	Comp.	35.2	33.2	30.1	34.3
	Prog.	40.2	38.2	30.9	38.6
% Males	Comp.	45.5	47.6	47.5	52.0
	Prog.	48.7	51.2	48.0	48.7
% White, non-Hispanic	Comp.	46.7	41.7	39.4	41.1
	Prog.	53.5	53.4	47.2	47.7
% African-American	Comp.	20.6	23.8	27.3	26.0
	Prog.	20.5	20.6	22.5	24.1
% Hispanic	Comp.	22.2	23.2	21.0	20.6
	Prog.	16.7	18.4	19.6	18.4
% Asian	Comp.	8.6	9.7	9.6	10.8
	Prog.	6.6	5.2	8.5	8.7
% Other[b]	Comp.	1.9	1.6	2.7	1.5
	Prog.	2.7	2.5	2.3	1.1

Note. Prog. = program school students; Comp. = comparison school students.

[a]Baseline year

[b]Includes Native American, Alaskan Native, and Pacific Islander

Table 2

Adjusted[a] Mean Frequency of Involvement in Problem Behaviors Among Program and Comparison Students: Studywide Comparisons

		Year				Contrast
Variable (log)	Group	1991-92[a]	1992-93	1993-94	1994-95	t-Value
Drug Use (current use)						
Use of Cigarettes	Comp.	.14	.14	.09	.08	<1.00
		(.33)[b]	(.32)	(.29)	(.27)	
	Prog.	.17	.13	.11	.11	
		(.35)	(.31)	(.28)	(.28)	
Use of Alcohol	Comp.	.34	.36	.38	.28	1.65[+]
		(.41)	(.40)	(.40)	(.38)	
	Prog.	.36	.33	.33	.29	
		(.40)	(.40)	(.39)	(.38)	
Use of Marijuana	Comp.	.04	.03	.05	.05	1.53
		(.17)	(.18)	(.24)	(.24)	
	Prog.	.05	.03	.03	.04	
		(.20)	(.19)	(.17)	(.21)	

Table 2 (continued)

Variable (log)	Group	Year 1991-92[a]	1992-93	1993-94	1994-95	Contrast t-Value
Status Offenses and Delinquent Behaviors (in past year)						
Ran Away from Home	Comp.	.08	.09	.09	.07	<1.00
		(.29)	(.29)	(.28)	(.31)	
	Prog.	.09	.10	.08	.08	
		(.28)	(.29)	(.26)	(.28)	
Skipped School	Comp.	.14	.14	.12	.12	<1.00
		(.33)	(.36)	(.33)	(.34)	
	Prog.	.12	.14	.11	.13	
		(.34)	(.36)	(.31)	(.35)	
Damaged Property on Purpose	Comp.	.29	.27	.25	.22	<1.00
		(.44)	(.45)	(.44)	(.42)	
	Prog.	.27	.29	.24	.20	
		(.43)	(.48)	(.43)	(.43)	

Table 2 (continued)

Variable (log)	Group	Year 1991-92[a]	1992-93	1993-94	1994-95	Contrast t-Value
Stolen Money or Property	Comp.	.29	.23	.24	.20	-1.38
(or attempted to)		(.47)	(.43)	(.44)	(.41)	
	Prog.	.26	.23	.24	.24	
		(.45)	(.47)	(.42)	(.42)	
Carried a Knife, Gun, or Other Weapon	Comp.	.27	.22	.22	.15	<1.00
		(.50)	(.49)	(.46)	(.41)	
	Prog.	.25	.23	.20	.17	
		(.50)	(.50)	(.46)	(.44)	
Threatened to Hurt Someone	Comp.	.40	.41	.36	.33	<1.00
		(.52)	(..54)	(.51)	(.51)	
	Prog.	.43	.44	.39	.38	
		(.54)	(.57)	(.54)	(.52)	
Hurt Someone on Purpose	Comp.	.34	.39	.36	.33	1.05
		(.50)	(.54)	(.51)	(.51)	
	Prog.	.37	.40	.35	.33	
		(.52)	(.56)	(.51)	(.51)	

Table 2 (continued)

Variable (log)	Group	Year 1991-92[a]	1992-93	1993-94	1994-95	Contrast t-Value
Taken a Car Without the Owner's	Comp.	.06	.04	.08	.04	<1.00
Permission		(.29)	(.25)	(.30)	(.27)	
	Prog.	.04	.05	.04	.04	
		(.23)	(.25)	(.23)	(.21)	
Been Involved in a Gang Fight	Comp.	.13	.14	.13	.09	<1.00
		(.36)	(.39)	(.36)	(.32)	
	Prog.	.13	.13	.12	.09	
		(.35)	(.37)	(.35)	(.30)	
Thrown Objects (like rocks or bottles)	Comp.	.24	.24	.25	.19	-1.66^{+}
at People or Cars		(.44)	(.48)	(.46)	(.42)	
	Prog.	.20	.28	.23	.20	
		(.41)	(.48)	(.45)	(.42)	

Table 2 (continued)

Variable (log)	Group	Year 1991-92[a]	1992-93	1993-94	1994-95	Contrast t-Value
Victimization at School (in past year)						
Been Made Fun Of, Called Names, or	Comp.	.93	1.08	1.02	.97	<1.00
Insulted		(.58)	(.56)	(.57)	(.57)	
	Prog.	.96	1.08	1.03	.99	
		(.58)	(.54)	(.56)	(.55)	
Had Property Damaged on Purpose	Comp.	.39	.51	.50	.46	<1.00
		(.50)	(.54)	(.52)	(.52)	
	Prog.	.43	.53	.49	.48	
		(.51)	(.53)	(.53)	(.52)	
Had Property Stolen from Desk	Comp.	.51	.53	.59	.58	<1.00
		(.53)	(.54)	(.56)	(.58)	
	Prog.	.55	.67	.62	.56	
		(.53)	(.58)	(.58)	(.55)	

Table 2 (continued)

Variable (log)	Group	Year 1991-92[a]	1992-93	1993-94	1994-95	Contrast t-Value
Had Money or Property Taken by Force	Comp.	.15	.15	.19	.15	<1.00
or Threat of Harm		(.38)	(.39)	(.43)	(.42)	
	Prog.	.14	.17	.15	.15	
		(.36)	(.41)	(.40)	(.38)	
Been Threatened with Harm	Comp.	.38	.46	.49	.39	1.12
		(.53)	(.53)	(.56)	(.54)	
	Prog.	.42	.48	.43	.43	
		(.53)	(.58)	(.54)	(.54)	
Been Physically Attacked	Comp.	.20	.25	.27	.26	<1.00
		(.42)	(.45)	(.47)	(.47)	
	Prog.	.22	.27	.24	.25	
		(.43)	(.48)	(.45)	(.45)	

[a]Controlling for gender, ethnicity, and grade.

[b]Standard deviations shown in parentheses.

$^{+}p < .10$

Table 3

Adjusted[a] Mean Frequency of Involvement in Problem Behaviors Among Program and Comparison Students: High Change Group

		Year				Contrast
Variable (log)	Group	1991-92[a]	1992-93	1993-94	1994-95	t-Value
Drug Use (lifetime)						
Use of Cigarettes	Comp.	.15	.15	.10	.12	1.09
		(.35)	(.34)	(.31)	(.32)	
	Prog.	.21	.17	.15	.13	
		(.38)	(.35)	(.32)	(.30)	
Use of Alcohol	Comp.	.29	.31	.30	.29	2.12*
		(.39)	(.39)	(.39)	(.40)	
	Prog.	.37	.34	.31	.27	
		(41)	(.41)	(.39)	(.39)	
Use of Marijuana	Comp.	.02	.04	.06	.07	2.49**
		(.17)	(.20)	(.30)	(.28)	
	Prog.	.06	.05	.02	.04	
		(.21)	(.23)	(.14)	(.22)	

Table 3 (continued)

Variable (log)	Group	Year 1991-92[a]	1992-93	1993-94	1994-95	Contrast t-Value
Status Offenses and Delinquent Behaviors (in past year)						
Ran Away from Home	Comp.	.06	.08	.09	.10	1.65^{+}
		(.28)	(.29)	(.29)	(.34)	
	Prog.	.11	.11	.07	.09	
		(.30)	(.30)	(.24)	(.30)	
Skipped School	Comp.	.15	.15	.14	.15	<1.00
		(.33)	(.36)	(.33)	(.37)	
	Prog.	.16	.14	.11	.16	
		(.36)	(.36)	(.31)	(.38)	
Damaged Property on Purpose	Comp.	.24	.25	.20	.27	<1.00
		(.42)	(.43)	(.39)	(.45)	
	Prog.	.28	.29	.27	.23	
		(.45)	(.48)	(.45)	(.45)	

Table 3 (continued)

Variable (log)	Group	Year 1991-92[a]	1992-93	1993-94	1994-95	Contrast t-Value
Stolen Money or Property	Comp.	.26	.19	.25	.25	<1.00
(or attempted to)		(.46)	(.39)	(.45)	(.45)	
	Prog.	.28	.27	.26	.26	
		(.44)	(.47)	(.45)	(.43)	
Carried a Knife, Gun, or Other Weapon	Comp.	.28	.25	.27	.23	<1.00
		(.49)	(.51)	(.48)	(.45)	
	Prog.	.30	.28	.24	.24	
		(.53)	(.55)	(.47)	(.49)	
Threatened to Hurt Someone	Comp.	.38	.41	.40	.43	<1.00
		(.52)	(.54)	(.52)	(.57)	
	Prog.	.47	.53	.46	.45	
		(.56)	(.58)	(.56)	(.56)	
Hurt Someone on Purpose	Comp.	.33	.40	.34	.37	<1.00
		(.49)	(.52)	(.50)	(.55)	
	Prog.	.40	.49	.38	.40	
		(.52)	(.60)	(.51)	(.54)	

Table 3 (continued)

		Year				Contrast
Variable (log)	Group	1991-92[a]	1992-93	1993-94	1994-95	t-Value
Taken a Car Without the Owner's	Comp.	.06	.04	.09	.09	1.65^{+}
Permission		(.32)	(.23)	(.33)	(.34)	
	Prog.	.08	.06	.04	.03	
		(.30)	(.29)	(.25)	(.21)	
Been Involved in a Gang Fight	Comp.	.14	.20	.16	.14	1.67^{+}
		(.39)	(.44)	(.41)	(.40)	
	Prog.	.16	.16	.11	.10	
		(.39)	(.43)	(.37)	(.35)	
Thrown Objects (like rocks or bottles)	Comp.	.22	.26	.23	.23	<1.00
at People or Cars		(.43)	(.48)	(.45)	(.47)	
	Prog.	.23	.31	.26	.22	
		(.44)	(.51)	(.47)	(.44)	

Table 3 (continued)

Variable (log)	Group	Year 1991-92[a]	1992-93	1993-94	1994-95	Contrast t-Value
Victimization at School (in past year)						
Been Made Fun Of, Called Names, or	Comp.	.91	1.06	1.00	.99	<1.00
Insulted		(.61)	(.59)	(.58)	(.57)	
	Prog.	.94	1.14	1.02	.98	
		(.61)	(.54)	(.54)	(.54)	
Had Property Damaged on Purpose	Comp.	.35	.53	.46	.56	1.63^{+}
		(.51)	(.54)	(.53)	(.56)	
	Prog.	.44	.58	.53	.44	
		(.51)	(.55)	(.54)	(.52)	
Had Property Stolen from Desk	Comp.	.51	.55	.55	.67	<1.00
		(.52)	(.56)	(.55)	(.61)	
	Prog.	.52	.62	.62	.49	
		(.53)	(.58)	(.58)	(.54)	

Table 3 (continued)

Variable (log)	Group	Year 1991-92[a]	1992-93	1993-94	1994-95	Contrast t-Value
Had Money or Property Taken by Force or Threat of Harm	Comp.	.15	.19	.24	.22	<1.00
		(.39)	(.42)	(.48)	(.49)	
	Prog.	.17	.25	.18	.17	
		(.39)	(.46)	(.40)	(.40)	
Been Threatened with Harm	Comp.	.39	.44	.51	.47	<1.00
		(.56)	(.53)	(.57)	(.57)	
	Prog.	.42	.56	.44	.45	
		(.54)	(.61)	(.54)	(.55)	
Been Physically Attacked	Comp.	.19	.27	.27	.34	<1.00
		(.41)	(.47)	(.49)	(.53)	
	Prog.	.23	.32	.24	.28	
		(.43)	(.52)	(.45)	(.47)	

[a]Controlling for gender, ethnicity, and grade.

[b]Standard deviations shown in parentheses.

$^{+}p < .10$ $^{*}p < .05$ $^{**}p < .01$