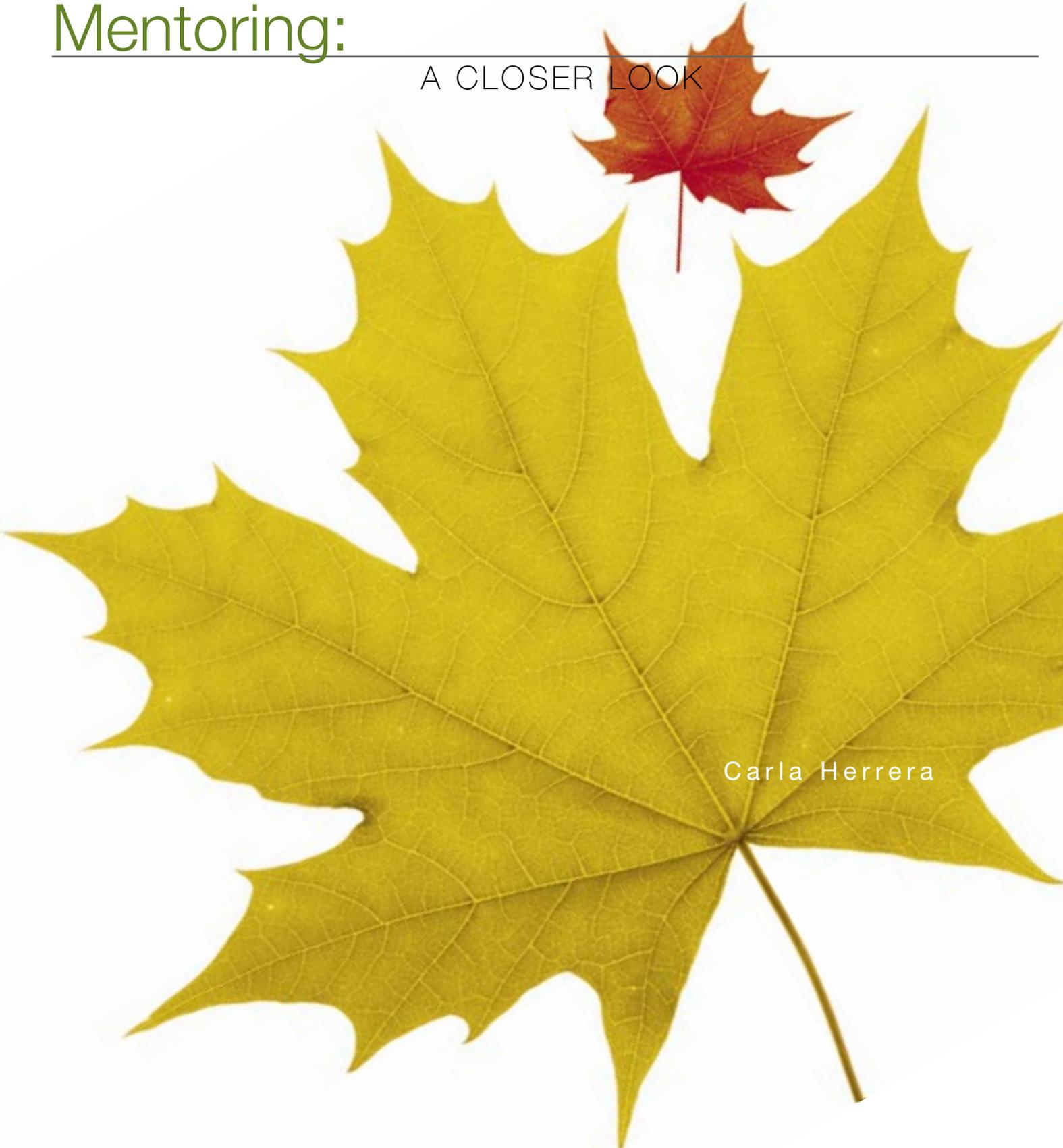


# School-Based Mentoring:

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A CLOSER LOOK

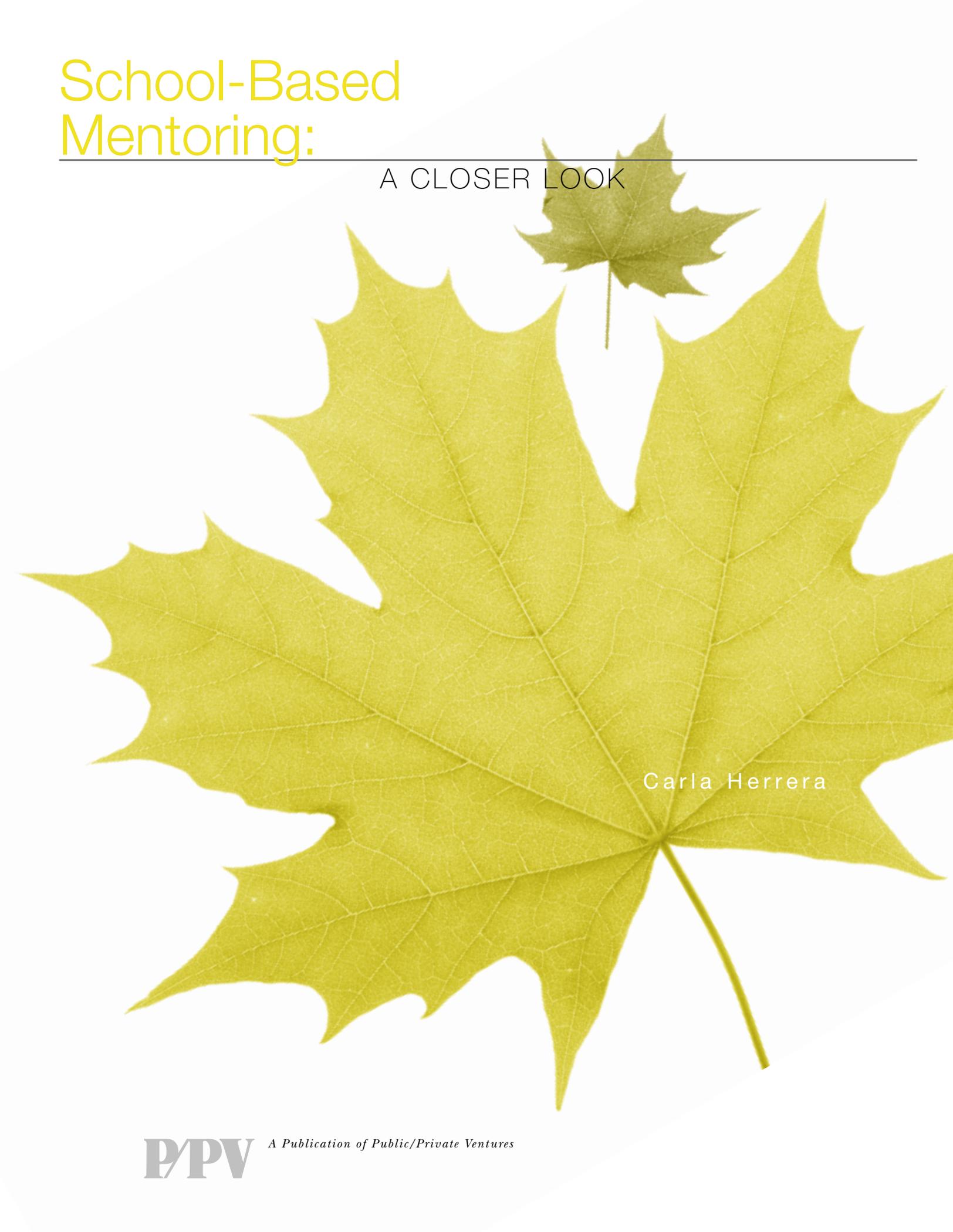
A large, vibrant yellow maple leaf with a detailed vein structure is the central focus. Above it, a smaller, bright red maple leaf is positioned. The background is a light, neutral color with a subtle white diagonal line running from the top left to the bottom right.

Carla Herrera

# School-Based Mentoring:

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A CLOSER LOOK



Carla Herrera

Public/Private Ventures is a national nonprofit organization that seeks to improve the effectiveness of social policies and programs. P/PV designs, tests and studies initiatives that increase supports, skills and opportunities of residents of low-income communities; works with policymakers to see that the lessons and evidence produced are reflected in policy; and provides training, technical assistance and learning opportunities to practitioners based on documented effective practices.

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The efforts of several individuals were crucial to completing the report. Jean Grossman provided guidance throughout the project. She helped develop the research questions and design the approach to answering them. Zoua Vang and Brian Kantorek helped oversee survey administration and data collection. Both Jun Zhang and Sarah Pepper conducted the statistical analyses that addressed several of our research questions. Jean Grossman, Laurie Kotloff and Gary Walker reviewed drafts of the report and provided comments that helped structure the final text. Joyce Corlett and Keoki Hansen from Big Brothers Big Sisters of America (BBBSA) also reviewed the report and contributed to the study's design. Karen Walker, as always, did an amazing job of guiding the study through to its final form, including reviewing the report and providing helpful guidance and feedback throughout its development.

Two individuals deserve special mention for their role in this project. Amanda Bayer provided the rigor behind the analyses testing the benefits of school-based mentoring and gave patient guidance and statistical expertise through many months of data analysis. She helped develop and refine our strategy for testing benefits, developed and conducted all analyses to test our questions more rigorously and address concerns of bias, sifted through thousands of pages of output to interpret these analyses, and wrote Appendix D, which describes these tests. Linda Jucovy was more than an excellent editor for this project; she managed to translate pages and pages of research findings into a coherent story. She developed the final structure and organization of the report. She also helped think through and synthesize reviewers' feedback and served as an invaluable partner during the last phases of the project.

Tina Johnson and Edward Moran provided final copyediting. Malish & Pagonis designed the report and Chelsea Farley coordinated its publication.



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# Introduction

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**M**entoring has seen remarkable publicity and popularity in recent years. This can be attributed both to its common-sense appeal—young people need supportive relationships with adults to foster their development—and to recent evidence supporting the social and academic benefits of mentoring (Tierney and Grossman, 1995). Yet, on the ground, traditional, community-based programs have difficulty finding volunteers to meet with the many youth who could benefit from their guidance and friendship.

Many potential volunteers do not want to make a long-term commitment, while others dislike the logistical burden of meeting a child at different places in the community or prefer more structured interactions for which they do not have to plan a set of activities. Still others are uncomfortable with the “pure friendship” focus of community-based mentoring relationships.

At the same time, increasing pressure on schools to improve academic performance and meet academic standards has compelled these institutions to look for ways to help students succeed. Mentoring could help fill this need. It provides youth with one-on-one attention—attention that can easily be tailored to a child’s specific needs—and has a proven track record of bolstering youth’s academic performance.

This combination of obstacle and need has contributed to the development and rapid growth of school-based approaches to mentoring. Such approaches offer volunteers the option of developing shorter-term relationships with youth in a relatively structured, supervised environment. They also allow volunteers to meet with youth in a set place without having to coordinate transportation and activities. And, they offer schools a low-cost way to help youth succeed.

Many mentoring agencies are thus forging relationships with schools in their communities to develop programs in which children are mentored during the school day, engaging with their mentor in both academic and social activities for about one hour

a week. This approach is growing rapidly nationwide, particularly in Big Brothers Big Sisters of America (BBBSA), the largest and longest-operating mentoring program in the country. The number of BBBS school-based matches grew from 27,000 in 1999 to 90,000 in 2002, an increase of 233 percent. This compares with an 8.7 percent increase in community-based matches—from 92,000 to 100,000—during the same period.

P/PV has published two recent reports on the school-based mentoring (SBM) model. In the first (Herrera, 1999), we visited two BBBS SBM programs and described the approach, the mentors and youth involved, and some of the implications for the match of meeting in the school setting. In the second, we surveyed mentors from school-based and community-based programs nationwide to learn more about mentors’ views on relationship development in both contexts (Herrera et al., 2000).

These studies yielded some promising findings about SBM. First, similar to recent findings by BBBSA (Curtis and Hansen, 1999), we found that school-based programs are reaching many volunteers who might not have been reached by community-based programs. School-based mentors are more likely to be ethnic minorities than mentors in community-based programs, and are more likely to fall into older (50 or over) and younger (21 or under) age groups, due, in part, to fewer transportation requirements for mentors in site-based programs. Involving new groups of volunteers means that school-based programs are reaching people who otherwise might not have become mentors and that these programs are complementing, rather than competing with, community-based programs for this scarce resource.

Second, because school staff instead of parents usually refer youth to SBM programs—referring their most needy students who often lack parental support—the studies suggest that these programs may be reaching underserved groups of youth who often have academic, social or behavioral problems (Curtis and Hansen, 1999; Herrera, 1999).

BBBSA recently reported that these youth may also differ demographically: school-based programs in their study served younger youth, more boys, more minority youth and more youth from two-parent families than community-based programs (Curtis and Hansen, 1999).

Third, we found that strong relationships can be formed in this context. Although the relationships developed in school-based programs are, on average, less close than those developed in community-based programs, a sizable number (about a third) of school-based mentors (compared to 45 percent of community-based mentors) feel very close to their mentees (Herrera et al., 2000). School-based relationships are also comparable to those in community-based programs in mentors' reports of efforts to provide youth with support.

Finally, and most importantly, we found some preliminary indications that youth may benefit both academically and socially from SBM programs. Other studies also support the potential effectiveness of this approach. For example, a recent study by BBBSA shows decreases in grade retention and tardiness, as well as improvements in attendance, grades and classroom participation (Hansen, 2001).

But studies also suggest that benefits only accrue after relationships have had a chance to develop. Lee and Cramond (1999), for example, found that only youth matched for more than one year increased in their levels of aspiration. And in a study by Slicker and Palmer (1993), youth who met with their school-based mentors at least three times a week had lower dropout rates than youth who were never matched with a mentor, while youth whose matches terminated prematurely had lower self-concept scores than youth in the control group. These findings on the length of relationships and frequency of meetings have important implications for the potential benefits of SBM programs, because school-based matches are generally restricted to meetings during the school year and, in most cases, those meetings occur just once a week.

This study follows up on some of the issues raised in these recent evaluations. By surveying youth, mentors, teachers and case managers from three BBBS school-based programs, including the two programs involved in P/PV's 1999 study, we hoped to delve more deeply into some of the areas addressed in our earlier report as well as issues examined in other recent studies. Our goal was to provide greater insight into SBM before a more definitive impact study is conducted.

In particular, we were able to more fully address several questions hinted at in our initial studies, including:

**1. What are the characteristics of mentor-youth matches in school-based programs?**

School-based matches are generally considered to differ from those in community-based programs in several ways, including how mentors and youth are matched, how long matches last and what activities the mentors and youth engage in together. This report describes those characteristics for the matches in our sample.

**2. What is the quality of the relationships?**

Although Herrera et al. (2000) described relationships in SBM programs, they measured relationship quality from only the mentor's perspective. This report also describes the youth's perspective and discusses factors—including the mentor's approach, support from the agency and the school, and matching criteria—that may affect the quality of the mentor-youth relationship.

**3. What kinds of benefits may be gained from involvement?**

Although a few studies have provided some preliminary evidence of the effectiveness of SBM, most have focused on fairly limited outcomes, including attendance, grades and self-esteem. This study looks at a range of potential benefits—including youth's attitude toward school, classroom behavior, school effort, parent involvement and peer relationships—in order to discern what outcomes SBM seems likely to affect. Because studies suggest that match duration is an important

factor in youth benefits, we examine associations between the length of the match and changes in the youth.

To address these questions, we surveyed youth and teachers at the beginning and end of the 1999-2000 school year in three BBBS school-based programs. Additionally, mentors and case managers were surveyed at the end of the school year. Youth and teacher surveys were administered by on-site researchers;<sup>1</sup> all other surveys were administered by mail. The surveys were brief, asking about topics that included youth's academic and social behavior and attitudes, qualities of the mentor-youth relationship and activities the pair engaged in, as well as the provision of support by the BBBS agency and school staff. (For more information on our methodology, response rates and the content of these surveys, please see Appendix A and Appendix B.)

The three BBBS agencies involved in the study were BBBS of Delaware, Inc.; BBBS of Green Country in Tulsa, Oklahoma; and BBBS of North Florida, Inc., in Jacksonville, Florida. All three had both community-based and school-based components, with their school-based programs starting five years before our study. During the year of our study, one of these sites was experiencing a substantial number of staffing changes, which became a factor in our findings.

The programs ranged in size from 115 youth in 10 schools in Tulsa to 429 youth in 20 schools in Delaware. The programs generally served disadvantaged schools, either by design—by selecting only schools meeting specific thresholds for economic need—or simply because the program was located in a disadvantaged community. All three had a corporate component in which volunteers were recruited through their employer, and all relied to some extent on either high-school or college-age volunteers. At the time of our study, none of the programs allowed summer contact between mentors and youth, except through either writing or phone calls, although one program held agency-sponsored group activities at the beginning and end of the summer.

The following chapter (Chapter II) discusses the social, behavioral and academic needs of the youth who participated in these three programs. Chapters III and IV then describe characteristics of the mentor-youth matches and the quality of the mentoring relationships. Chapter V examines the areas in which youth seem to be benefiting from these relationships and the associations between those benefits and the length of the matches. A final chapter (Chapter VI) provides some preliminary conclusions about the promise and possible limitations of SBM.

# Who Are the Youth Involved in These Programs?

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Chapter II



**P**revious studies have indicated that, because school staff instead of parents usually refer youth to SBM programs, these programs seem to be reaching underserved groups of youth who differ demographically from youth served in community-based programs and who often have academic, social or behavioral problems (Curtis and Hansen, 1999; Herrera, 1999). Characteristics of the youth involved in this study support these findings.

The study focused on 212 youth who participated in the three programs and attended grades three through five.<sup>2</sup> Almost half (46%) were in the fifth grade, 32 percent were in the fourth grade and 23 percent were in the third grade.

Just under two thirds of the youth (61%) were African American, while a third were white. A little over half (54%) were male. BBBS a national statistics for community-based programs show that there are more matched females than males in their programs, although the difference is very small—about 51 percent are females and 49 percent are males (BBBSA, 1999). This is not because female youth are more likely to need a mentor; in fact, more boys than girls are on program wait lists. Rather, it reflects the fact that women are more likely to volunteer than men. And because the vast majority of community-based matches are same-gender, girls are more likely to be matched than boys.

Although most of the youth in the three SBM programs were from single-parent homes (73%), over a quarter (27%) were not. Youth served in community-based BBBS programs are predominantly from single-parent homes: less than 7 percent are from two-parent homes (BBBSA, 1999).<sup>3</sup> In this regard, school-based programs may be reaching youth from dual-parent homes who need a mentor but are not eligible for some community-based programs.

The findings in P/PV's 1999 study suggested that the youth served in these programs are needy both socially and academically, perhaps because teachers often select youth specifically because they could

benefit from help in these areas. The youth in this more recent study were also needy in these areas: at the beginning of the school year, they presented a range of difficulties in both their social skills and relationships and their academic attitudes, behavior and performance.

Social difficulties included the following:

- **Forty-five percent had difficulties in their peer relationships.** For example, teachers reported that close to half (48%) did not “have a lot of friends” and 32 percent of youth found it hard to make friends.
- **Thirty-nine percent had poor social skills.** Teachers rated 39 percent of the youth as below average in their ability to trust and build relationships with others; 45 percent as below average in their ability to express feelings appropriately; and 34 percent as below average in their confidence in communicating with others.
- **Twenty-eight percent reported difficulties in relationships with adults, including parents and teachers.** Problems with adults may have been more common than this relatively low percentage suggests. For example, open-ended comments from teachers and mentors suggest that family problems were fairly common in this sample. Unprompted, 7 teachers and 17 mentors noted that family experiences were playing a large role in the behavioral problems of 24 of the youth. While many of those respondents did not elaborate on the specific problems the youth faced at home, most of those who did mentioned inadequate attention or appreciation from family members, absence of a role model or instability in both family and school life as a result of frequent moves or parental separations.

Over two thirds (70%) of the youth experienced difficulties in at least one of the above areas, and 37 percent had difficulties in two or more areas. Very few of the youth (7%) had problems in all three areas.

Academic difficulties included the following:

- **Forty-four percent exhibited disruptive behaviors in school.** Close to a quarter (22%) had been involved in a fight with another child during the four weeks prior to our fall survey. Forty-one percent were rated as below average in working without disturbing others; 37 percent in following school and class rules; and 24 percent in both respecting school personnel and respecting others' rights and property. Overall, about a quarter (27%) of the youth had been sent to the principal's office for misbehavior in the four weeks prior to the fall survey.
- **Half had poor academic performance.** The youth's academic performance was generally average or below average. Teachers reported grades of C or lower for the overall academic performance of 60 percent of the mentored youth; 20 percent were assigned Ds or lower. Grades for study skills were even lower: teachers reported grades of C or below for 68 percent of the youth, and almost a third (31%) were given grades of D or below in the fall survey. Overall, half (50%) of the youth received a grade of C-/D+ or lower in language, social studies, math or science.
- **Academic attitudes were fairly mixed: some measures showed a need for improvement, whereas others suggest the youth were doing fairly well.** Sixty-eight percent had negative academic attitudes in at least one of four areas: school liking, engagement, effort or emotional disposition in the classroom. In the fall, close to half (44%) of the youth were rated as below average by their teachers in constructive class participation and a third as below average in being "open and receptive to learning." However, teachers also reported that most of the youth (79%) "worked hard in their class" at least sometimes. And most of them said they liked school: only 24 percent reported that they did not "like school a lot." In addition, in the four weeks prior to the fall survey, only about a quarter (26%) of the youth had two or more absences.

At the beginning of the school year, 82 percent of the youth were experiencing difficulties in at least one of the above academic areas; 55 percent experienced problems in two or more areas; and 22 percent in three or more areas. Thus, although developing social skills and improving their social relationships were important areas of growth for these youth, their academic behavior, attitudes and performance needed even more improvement.

Additionally, close to two thirds (62%) of these youth experienced difficulties in at least one social and one academic area at the beginning of the school year. Only 12 percent did not exhibit problems in any of the discussed social and academic areas.



# What Are the Characteristics of the Mentor-Youth Matches?

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Chapter III



**A**lthough the underlying goal of SBM is the same as that in the traditional community-based model—to provide youth with an adult friend who can give guidance and support—community-based and school-based approaches differ in several ways, including how mentors and youth are matched, the length of their meetings, the kinds of activities they engage in together and the duration of their relationships. These differences may have implications for both the quality of the relationships that develop and, ultimately, the benefits for youth. This chapter discusses match characteristics we examined in the three BBBS school-based programs.

### How Do Agencies Match Youth with School-Based Volunteers?

Case managers reported a range of criteria for matching youth with mentors. About half (52%) of the matches were based on the social needs of the youth and the corresponding skills of the mentor; 23 percent were based on the youth's academic needs; and 18 percent were based on the interests of the youth and mentor.<sup>4</sup>

Half of these matches were cross-race, most often (36 percent of cases) a white mentor matched with an African American youth. Eleven percent were cross-gender—all were female mentors matched with male youth.<sup>5</sup> This percentage is larger than in community-based BBBS programs, where only 3.3 percent of matches nationwide are cross-gender (BBBSA, 1999). With added supervision in school-based programs, cross-gender matches are more easily made. This is an important strength of SBM. Because there are more female than male volunteers, boys are more often on waiting lists for mentors in community-based programs. Cross-gender matching can enable school-based programs to serve boys who might have to wait to be matched through a community-based program.

### How Often and For How Long Have Mentors and Youth Met?

About half (54%) of the youth in this study began meeting with their mentor during the school year of data collection; 39 percent were matched with their mentor during the previous school year; and another 7 percent were matched prior to the previous school year. By the time of the follow-up survey in the spring, 45 percent had met for more than nine months, about a third (34%) had met for between six-and-a-half and nine months and about a fifth (22%) had met for less than six-and-a-half months.

About 70 percent of mentors reported spending half an hour to an hour with their mentees every week, and 20 percent reported spending between one and two hours with their mentees weekly. About a fifth (19%) also reported having phone contact with their mentees. For some youth, however, their face-to-face meetings were not regular. In their open-ended comments, nine teachers mentioned a lack of consistency in the mentors' visits and the youth's disappointment when mentors did not show up. In fact, according to reports from case managers and mentors, at least 33 (16%) of the matches stopped meeting regularly or formally closed prior to the end of the school year.<sup>6</sup>

### How Do Mentors and Youth Spend Their Time Together?

One concern about SBM programs is that school-based matches may focus most of their time together on academics at the expense of developing a close social relationship—the heart of mentoring and the basis for impacts seen in community-based mentoring. However, this did not seem to be the case in the programs we studied. Mentors reported engaging in a number of different types of activities with their mentees (see Table 1). While about half spent at least “some” time on homework, most mentors (85%) reported spending time in social activities, and about a third reported attending school activities, such as sporting events or assemblies.

**Table 1: Match Activities**

| Activity                                  | Percentage of Mentors Never Engaging in Activity | Percentage of Mentors Engaging in Activity “A Little” | Percentage of Mentors Engaging in Activity “Some” or “A Lot” |
|---|--|---|--|
| Working on academics                      | 13%  | 35%   | 53%  |
| Engaging in social activities             | 15%  | 21%   | 64%  |
| Attending school events                   | 67%  | 21%   | 12%  |
| Going to BBBS events                      | 57%  | 27%   | 16%  |
| Playing sports or games                   | 12%  | 19%   | 70%  |
| Talking about personal issues or problems | 5%   | 30%   | 65%  |
| Hanging out                               | 9%   | 16%   | 74%  |
| Talking or playing with other youth       | 27%  | 33%   | 40%  |

Note: The percentages in three rows do not add up to 100 due to rounding.

Source: *Mentor survey.*

**Who Are the Mentors?**

Overall, 140 mentors completed our survey, about three quarters of the total sample. Their ages ranged from 16 to 65, with an average age of 36. In addition:

- Almost two thirds (64%) were female;
- About two fifths (41%) were married;
- About half had children; and
- About three quarters were white, with a sizable minority (18 percent) being African American.

Over half (58%) of the mentors became involved through their business. Five percent were recruited through their church.

For about two thirds (65%) of the volunteers, this was their first mentoring experience.

One big concern about school-based programs is that they may pull mentors away from community-based mentoring—an approach that research shows has positive effects on youth. Yet, school-based advocates argue that involving volunteers in a more structured environment as part of their first mentoring experience may actually interest them in getting involved in less structured community-based programs later on. We found some evidence to support this argument:

- About half (49%) of the mentors reported that they would like to meet with their mentee outside of school.
- Fifty-two percent said they would not have considered participating in a community-based mentoring program at the time they were recruited for the school-based program; close to half (44%) of this group now say they would consider it.
- More than four fifths (84%) of those who would have gotten involved in community-based mentoring prior to their involvement in a SBM program are still willing to consider it.

Almost all mentors (95%) reported talking with their mentee about personal issues or problems; about two thirds did this fairly frequently. Close to two thirds (62%) reported that their mentee confided in them “sometimes,” while 18 percent reported that their mentee confided in them a lot, and only 4 percent reported that their mentee never confided in them. Youth also reported talking about friends, family and school fairly often with their mentors. In fact, about half reported talking about these topics “most of the time.”

About three quarters of mentors reported that other youth were also present during some of the meetings with their mentee. Involving other youth in match meetings has several potential benefits, including helping the child to be more comfortable during interactions with the mentor; providing the mentor with a different perspective on the social skills and needs of the child, and providing the youth with a setting for peer interactions—a particularly important benefit, given the lack of positive peer relationships evident in this sample (Herrera, Vang and Gale, 2001). At the same time, having other youth present during their meetings could prevent the mentor and mentee from engaging in more in-depth conversations and developing the kind of close, trusting relationship that is essential for positive outcomes. We were unable to test these ideas in the current study because, in their open-ended comments, very few mentors discussed their attitude toward the presence of other youth. However, because this situation is so prevalent, these dynamics should be considered when exploring the processes underlying relationship development and the potential benefits of SBM.



# What Is the Quality of the Mentor-Youth Relationships?

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Chapter IV



**R**esearch suggests that closer, more supportive mentoring relationships are more likely to make positive changes in youth's lives (Grossman and Johnson, 1999). One concern about SBM is that its shorter meetings and the briefer duration of matches may not foster the kind of relationships that can yield the powerful impacts documented for community-based programs.

We found some evidence to support previous findings that relationships in school-based programs may be less intensive than those typically fostered in community-based programs. In the three SBM programs we studied, two thirds of mentors felt "somewhat" close to their mentees and about 20 percent felt "very" close to them. Only 11 percent felt "not very" or "not at all" close to their mentee. National data from an earlier study reveal a somewhat higher proportion of school-based mentors who report feeling "very close" to the youth with whom they meet (32%). Even this percentage, however, is significantly lower than that reported (45%) by mentors in community-based programs (Herrera et al., 2000).

On the other hand, over three quarters of the youth (77%) in the three SBM programs felt "very close" to their mentors, and only 6 percent felt "not very" or "not at all" close to them. Mentors' reports of closeness to the youth were not correlated with the youth's reports of closeness: mentors who felt close to their mentees did not necessarily have mentees who felt close to them.

These differences in youth and mentor reports are, in some ways, not surprising; adults and youth may place importance on very different aspects of their relationship. Youth also generally tend to rate things more positively than adults. However, the fact that case managers' and teachers' reports of a match's closeness were associated with the youth's reports suggests that youth do show distinctions in these ratings and that others outside of the relationship can see and report on these distinctions. (See Appendix C for further discussion of these reporting differences.)

## What Factors Seem to Affect the Quality of SBM Relationships?

Research on community-based programs has shown that several factors are important for developing the kind of close mentor-youth relationship that leads to positive outcomes for youth. These include the approach the mentor takes in building the relationship and the kinds of supervision and support that mentors receive (Sipe, 1996). Our study of these school-based matches supports those findings.

### The Mentor's Approach

Youth who feel that their mentor takes their preferences and interests into account are more likely to show improvement in their behaviors and attitudes than are youth who feel their mentor is less interested in them (Grossman and Johnson, 1999). Thus, to help assess the quality of these school-based relationships, we asked case managers eight questions about the mentor's approach to interactions with the mentee—questions that would indicate the extent to which the mentor took this kind of "youth-centered" approach. For example, we asked whether the mentor made efforts to find out about the youth's interests, followed through in activities and put effort into the relationship. Youth whose mentors scored higher on this measure felt closer to them and rated their match as more fun. Teachers also rated these matches as closer and rated the youth in these matches as more apt to look forward to seeing their mentor.

For the mentors, discussions of personal issues with the youth seemed to be important. Mentors who reported that they talked more with youth about personal issues also reported stronger feelings of closeness to their mentees.<sup>7</sup> However, the youth in these relationships reported feeling less close to their mentor and their teachers reported that these youth looked forward to seeing their mentor less than youth involved in relationships in which such discussions were not as frequent.

Although confiding may help the mentor feel the relationship is "working," these conversations may

be uncomfortable for some youth, many of whom may simply prefer having fun (Morrow and Styles, 1995). This may be particularly true with young elementary-age youth and those for whom the relationship has only recently begun; mentors who expect these kinds of discussions with young children may be setting up unreasonable expectations. It is also possible that youth with whom mentors spent a lot of time discussing personal issues are those who were experiencing difficulty in many relationships, including that with the mentor. In fact, youth whose mentors reported talking with them a lot about personal issues had lower overall scores for academic performance and more negative perceptions of their teacher's attitude toward them, and they were more likely to have been referred to the principal's office in the four weeks prior to the follow-up survey.

### Support for the Mentors

Evaluations of community-based mentoring programs have consistently shown the importance of providing support for mentors to help the relationships develop and, ultimately, lead to positive outcomes for the youth (Sipe, 1996). Our findings similarly suggest that mentors' experiences of support received from school and BBBS agency staff are related to the quality of the relationship they develop with their mentee and the length of their match.

Mentor-reported BBBS support was positively associated with two aspects of mentors' reports of their relationship with youth: closeness and positive emotional engagement (including, for example, feeling comfortable and happy) when with the youth. Mentor reports of teacher support were also associated with their reports of positive emotional engagement when with the youth, as well as youth's reports of having a good time with the mentor.

Generally, mentors felt that agency staff were more helpful than teachers: over half (57%) rated BBBS staff as extremely helpful, but only a third rated teachers in this way. Yet, these types of support were seen as equally important: 32 percent of mentors reported

that receiving help from school staff was "somewhat" important and 59 percent felt it was "extremely" important, while responses for receiving BBBS help were 33 percent and 56 percent respectively.

In their open-ended comments, only eight of the 140 mentors who responded to the survey mentioned problems with support, but those who did felt that a lack of support dampened their experience. Half of those comments were specific to the one agency in this study that was undergoing extensive staff turnover and that also received relatively low ratings of agency helpfulness,<sup>8</sup> suggesting that these difficulties are not necessarily endemic to SBM programs but may result from programs that are not as well developed or are experiencing staffing difficulties.

To determine whether there were similar agency effects on length of match or regularity of meeting, we examined those 68 matches that case managers reported had stopped meeting regularly and/or were closing by or before the end of the school year. Thirty-nine of these matches (57%) were in the agency in which mentors reported relatively low levels of agency support. Over half (54%) of matches from this program ended or stopped meeting regularly by or before the end of the school year, compared to 17 percent and 38 percent of matches from the other two agencies. In fact, matches in this program were significantly less likely than matches in the other two programs to continue meeting the following school year.

Mentors' comments highlight the following practices as key to creating the kinds of structures and support that can contribute to a positive experience for school-based volunteers and potentially help forge longer and stronger mentor-youth relationships:

- Providing structure for match interactions by setting clear guidelines on what matches can do together and offering some supervision by school staff.
- Ensuring that matches are given a convenient and consistent place to meet. Moving from one

location to another can use a substantial amount of the match's limited time together.

- Ensuring that mentors have access to school resources such as the library and a computer.
- Providing structured communication with the teacher both before the match meets and during the school year to give the mentor a better understanding of the child's strengths, weaknesses and progress. (In our study, over half of the mentors talked to teachers about the youth once a month or more often.)
- Providing mentors with feedback and advice from parents. Very few of the mentors communicated directly with parents.
- Outlining clear roles for the school, the mentoring agency and the mentors.
- Setting clear guidelines for communication between the school and mentoring agency, as well as between the agency and the mentors.
- Encouraging the mentor in his or her work.

Beyond the school and the BBBS agency, the mentors in our study also had an additional form of support: two thirds reported some contact with other mentors. This high percentage probably results from the fact that many of these mentors were recruited through their business and were thus in contact with one another at work.

### Matching Criteria

Past research suggests that the extent to which mentors "match" their mentees in race or gender does not play a significant role in the match's frequency of meeting, the length of the match or its effectiveness (Sipe, 1996). However, the extent to which mentors and youth share interests is associated with relationship quality (Herrera et al., 2000).

Findings from this study concur. Mentors who met with youth who did not share their gender or race reported feeling just as close to their mentee as those who were of the same gender or race; but mentors reported feeling closer to youth who shared their interests (they also reported more positive emotional engagement by both themselves and the youth in these matches).<sup>9</sup> However, while more than three quarters (77%) of the mentors reported that they

shared common interests with their mentees, only 18 percent of matches had been made based on the interests of the youth and mentors.

Youth reports of closeness did not differ depending on whether the mentor matched them in gender, race or interests. For example, youth who had a mentor of a different gender reported feeling as close to him or her as those who had a mentor of the same gender. But differences were seen in teachers' and case managers' reports. Teachers reported closer relationships for matches that shared race, while case managers reported closer relationships for pairs who shared gender, race or interests.

These patterns suggest different perspectives on the importance of gender and race matching. The responses of mentors and youth suggest that these criteria are not important factors in their experiences of relationship quality, while they do seem to be important to teachers' and case managers' views of the relationship. It may be that case managers' and teachers' responses reflect preconceived notions of what should work rather than youth's or mentors' expressed feelings about what does work.

### Does the Quality of the Relationship Affect the Length of the Match?

In total, 81 percent of mentors in this study indicated that they would continue volunteering in the program the following year, but not all planned to remain with the same youth: 65 percent said they would meet with the same youth; 16 percent planned to meet with a different youth; and 19 percent reported that they would not continue with the program.<sup>10</sup>

An important factor in whether the match would continue to meet was how the mentor felt about the match: those mentors who felt less close to their mentee were less likely to commit to an additional year of meetings. Youth-reported closeness was not associated with whether the match would continue. Thus, assessing the mentor's feelings toward the match may offer important insights into its strength and longevity that the youth's responses alone cannot provide.

# What Kinds of Benefits May Youth Gain from Involvement?

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Chapter V



**W**e measured youth benefits in two ways. First, we quantitatively assessed change over time in youth's and teachers' reports of youth's behavior and attitudes over the course of the school year. Second, our follow-up survey asked mentors and teachers an open-ended question about the changes they saw in youth over this period.

### Comparing Reports to Assess Change Over Time

We examined changes in youth's behavior over the course of a school year by comparing reports by teachers and youth in the fall to their reports in the spring. This study, however, is not an impact study—that is, we did not compare the changes experienced by youth who received a mentor to those experienced by youth who did not have a mentor. Thus, we cannot be sure that the changes we measured in youth occurred *as a result* of their mentoring relationship.

However, some youth in the program met with their mentor longer than others. By comparing the benefits these youth received to the benefits obtained by those in matches of shorter duration, we can assess whether “more mentoring” makes a bigger difference than “less mentoring.” If all else is equal, we would expect a child who has been meeting with a mentor for a longer period of time to experience greater relative improvements over the course of a school year. Thus, our analyses examine associations between the duration of the match and changes in youth behavior.<sup>11</sup> By using this approach and looking at change over time, we can develop some early indications of the behavioral areas that are more or less likely to show effects when true impact studies are done in the future. (Please see Appendix D for a detailed discussion of our approach, including its drawbacks.)<sup>12</sup>

It is also important to note that our longest group of matches—those lasting more than one school year—began meeting *before* the test period. This study tests whether matches of different lengths show different amounts of improvement *over the course of a given school year* (about nine months), not whether matches of different lengths show different amounts of improvement *over the course of their match*. Studies finding that most of the benefits of mentoring are not seen until after one year of meeting (e.g., Grossman and Johnson, 1999; Lee and Cramond, 1999) suggest that we should see very little or no change in those matches starting and ending during the school-year test window, but that we may see change in matches that had already begun meeting before the test window (i.e., those matches that were more than nine months in total duration).

We divided the youth into three groups, according to whether they had met with a mentor for zero to six months, six to nine months or nine or more months. At the beginning of the school year, the three groups did not differ in any of the outcome measures we were testing, except that youth in the longest matches had higher parent involvement in the school and were less likely to have been tardy in the four weeks prior to administration of the survey than youth in the shortest matches.<sup>13</sup> By the end of the school year, relative to shorter matches, matches lasting longer than one school year showed significantly larger gains in seven measures tested in the areas of peer social network, social skills and classroom behavior and attitude (see Figures 1 through 7). All but one measure, school liking, were reported by teachers. Improvements were seen in the following areas:

**1. Peer social network, including the ability to make friends and social status with peers**

Peer social network was measured on a four-point scale, with higher scores indicating better adjustment. Youth in matches meeting nine or more months experienced a small gain (.06 on the four-point scale) in their ability to make friends and in popularity with their peers. This gain was significantly larger than that experienced by youth in the shortest matches, who worsened in this area an average of .15 points over the course of the school year.

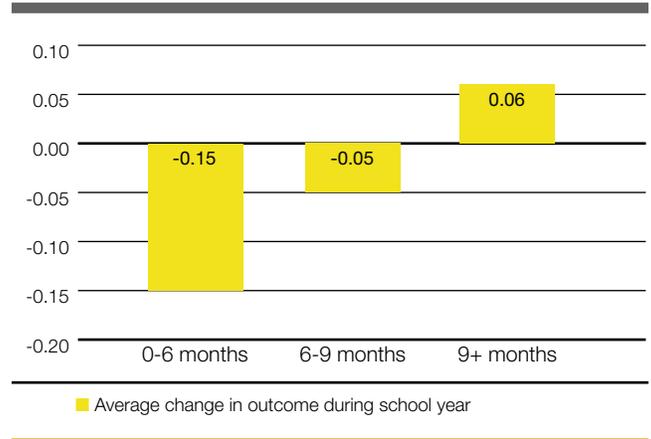
**2. Social skills, including confidence in communicating with others, ability to trust and build relationships with others and ability to express feelings appropriately**

“Social skills” was measured on a five-point scale, with higher scores indicating better adjustment. Youth in matches meeting nine or more months improved in social skills an average of .10 on the five-point scale. This gain was significantly larger than that experienced by youth in zero-to-six-month matches, who worsened, on average, by .21 points.

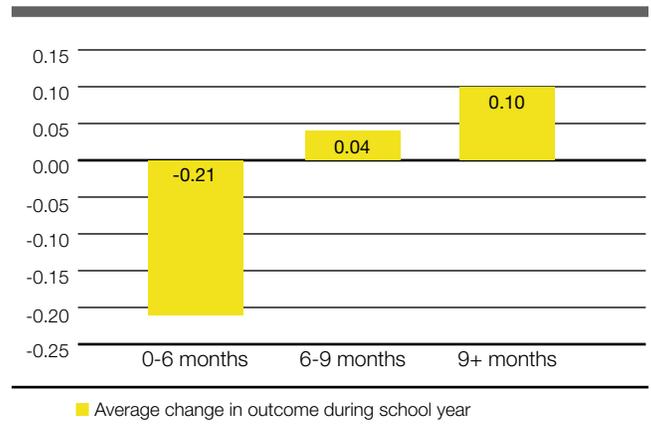
**3. Principal’s office referrals in the four weeks prior to the survey**

We examined whether the youth had any referrals to the principal’s office during the four weeks prior to each survey. Over the course of the school year, youth in the longest-meeting matches were less likely than youth in both of the shorter-meeting groups to either start having principal’s office referrals or continue having referrals (if they had had any at baseline). Only 14 percent of youth in the nine-or-more-month matches continued or started having office referrals over the course of the school year, compared to 36 percent and 38 percent in the shorter-meeting matches. In addition, about 14 percent of youth in the nine-or-more-month matches had office referrals at baseline but no longer had any at follow-up.

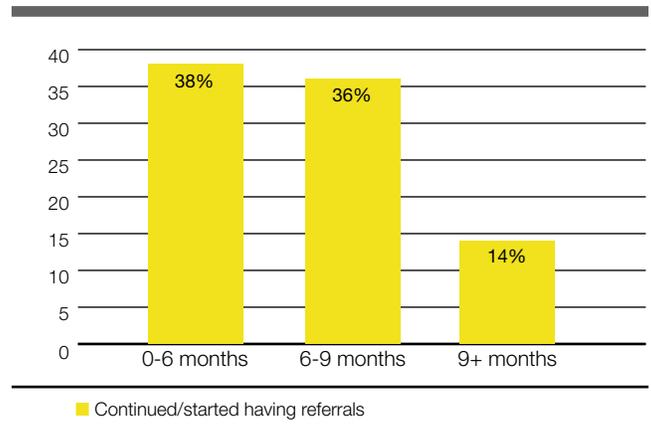
**Figure 1  
Peer Social Network**



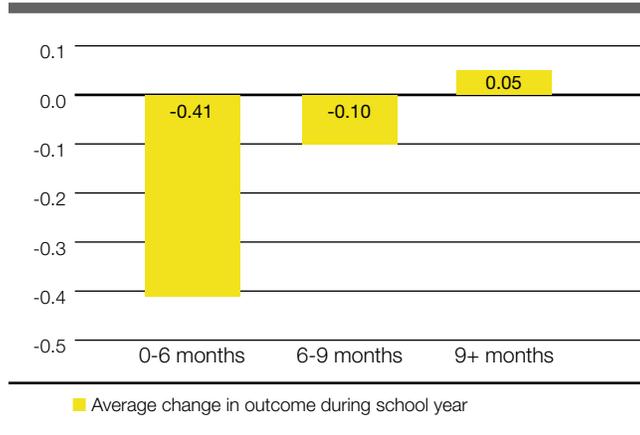
**Figure 2  
Social Skills**



**Figure 3  
Principal’s Office Referrals**



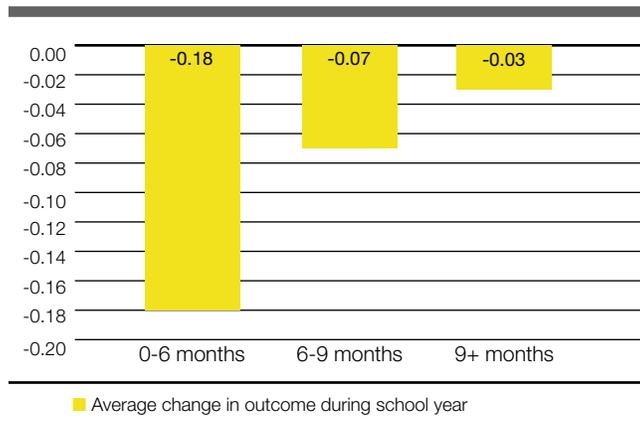
**Figure 4**  
**Positive Classroom Behavior**



**4. Positive classroom behavior, including following class rules, respecting school personnel and working without disturbing others**

Positive classroom behavior was measured on a five-point scale, with higher scores indicating better adjustment. Youth in the longest-meeting matches experienced, on average, very small improvements (.05 on the five-point scale) in positive classroom behavior. However, these improvements were larger than those experienced by youth in the zero-to-six- and six-to-nine-month groups—both of which experienced declines in this area.

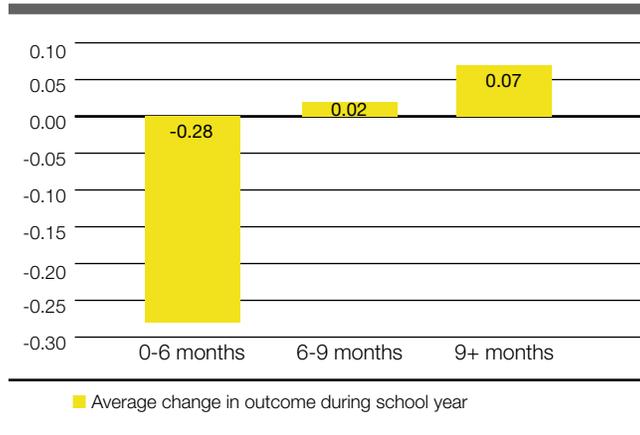
**Figure 5**  
**Academic Engagement**



**5. Academic engagement, including constructive classroom participation and being “open and receptive to learning”**

Academic engagement was measured on a five-point scale, with higher scores indicating better adjustment. Youth in all three groups experienced declines in academic engagement over the course of the school year (ranging from .03 to .18 on the five-point scale). Others have also noted these declines in engagement over time, either as youth age or over the course of a given school year (Fredericks et al., 2003; Sage and Kindermann, 1999; Kindermann, 1993; Eccles, Midgley and Adler, 1984). However, those declines experienced by youth in the longest-meeting matches were significantly smaller than those experienced by youth in the shortest matches.

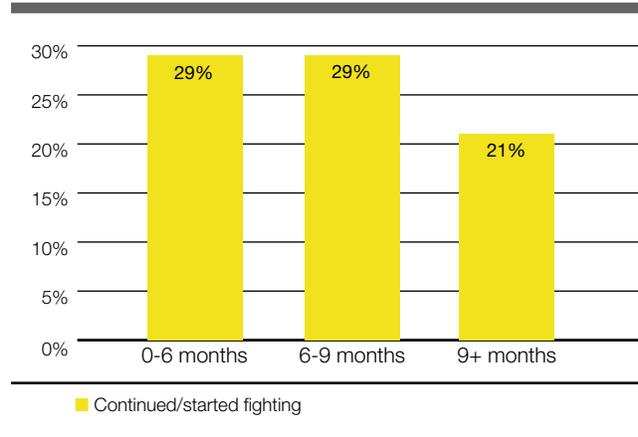
**Figure 6**  
**School Liking**



**6. School liking (as assessed by youth)**

School liking was measured on a four-point scale, with higher scores indicating better adjustment. Statistically significant differences were found between the two longer and the shortest group of matches. Youth in the two longer-meeting groups of matches experienced small gains in school liking over the course of the school year (.07 and .02 on the four-point scale). These gains were significantly larger than those experienced by youth in the zero-to-six-month group, who experienced an average decline of .28. This is the only area in which matches lasting between six and nine months showed significantly more improvement than matches lasting six months or less.

**Figure 7**  
**Fighting**



### 7. Fighting with peers

We asked teachers in each survey whether the youth had engaged in any fights during the previous four weeks. Over the course of the school year, youth in the longest-meeting matches were less likely than youth in the six-to-nine-month matches to either start fighting or continue fighting if they had fought at baseline (21 percent in the nine-or-more-month group compared to 29 percent in the six-to-nine-month group).<sup>14</sup> In addition, about 11 percent of youth in the nine-or-more-month matches fought in the four weeks prior to baseline and had not fought again at follow-up.

We found no effect of match length for the following measures: quality of relationships with parents and parent involvement in school; adult social support (the number of adults who provide different types of support and help to the child); youth's perceptions of the teacher's attitude toward them; academic performance, including percentage of in-class and homework assignments turned in and grades in five areas (language, social studies, math, science and study skills); attendance and tardiness; academic effort and emotional disposition in the classroom as rated by teachers; and hygiene and personal appearance.

### Open-Ended Reports of Change

We also asked teachers and mentors to describe, in their own words, the changes they saw in youth. Of the 140 mentors who completed the survey, 127 responded to this question, while teachers for 87 of the youth also responded. In some cases, respondents' reports reinforced our survey findings of "objective" changes in youth. For example, five respondents reported youth "getting in trouble" or visiting the principal's office less frequently.

However, many of the benefits discussed by respondents were not those typically asked about in surveys, or were so subtle or subjective that an outside observer (or assessment instrument) might have been unable to discern the change as occurring. This suggests that assessing the "true" impact of school-based mentoring may be difficult for programs and researchers, and stresses the need for continued development of more refined tools for these evaluations. For example, several mentors and teachers discussed subtle changes in youth's social skills or in their confidence in communicating with others: 36 reported improvements in youth's self-esteem or confidence; 10 reported youth becoming more friendly with peers or more outspoken or assertive; and 11 reported that youth seemed to "open up."

Although these behaviors may contribute to improvements in some of the broader areas we assessed in this study, such as social skills and the child's peer network, the behaviors themselves are difficult to quantify. In at least four cases, for example, the youth began to show that they could "let an adult in" and trust him or her. For some youth, simply bonding with an adult is an achievement. As stated by one mentor:

*I have been a grown-up friend to Manuel—something he really needs some days.... I believe I have helped him understand and trust adults. Sure, I have helped him with schoolwork, but that has been the teacher's world. I am there for him to ask those questions you only ask a friend.*

Nineteen respondents reported changes in the youth's disposition, such as appearing to be happier, smiling and laughing more, being more relaxed and patient, having a positive attitude or learning how to control their anger. Seven youth

began to show more maturity or respect for others, improved their decision-making skills or demonstrated a greater ability to take responsibility for their actions.<sup>15</sup>

Other reported changes are also difficult to quantify but may be precursors to future academic success. These include the ability to finish tasks, an improved work attitude, “doing his best,” showing more interest in schoolwork, “taking his time” doing schoolwork and taking school more seriously. While they were discussed only rarely in respondents’ open-ended comments, these changes may be important steps toward more major improvements.

### What Do the Findings Suggest?

These findings about potential benefits have several important implications for our understanding of the value of SBM:

- **They suggest that youth may benefit in ways that reflect the context of their match and in areas of most concern to teachers and case managers.** SBM may be most conducive to improving youth’s behavior and relationships in school. Effects on peer relationships, social skills and classroom behavior were particularly striking, and youth were consistently rated as improving in these areas in both types of assessments we used. As discussed in Chapter II, these are areas in which youth’s early assessments indicated a great need for improvement.

Importantly, these behaviors and relationships play a central role in youth’s school and social success. For example, positive classroom behavior, such as following class rules, respecting school personnel and working without disturbing others, may be a first step toward grade changes. We also found improvements in academic engagement and school liking, which may also be early precursors to academic improvement (Finn, Pannozzo and Voelkl, 1995; Connell, Spencer and Aber, 1994; Alexander, Entwisle and Dauber, 1993). In addition, studies show that youth with peer difficulties (including low peer acceptance) are at risk for both dropping out and later criminality (Parker and Asher, 1987). Almost half the youth involved in this study started the school year without “a lot of friends,” and 42 percent of youth mentored

for nine months or more improved at least somewhat in this crucial area.

At the same time, SBM may be less effective at improving youth’s relationships with parents and other adults outside of the school context. Unlike community-based mentoring, parents are not very involved in school-based matches: in most cases, school-based mentors never meet the youth’s parents. This may contribute to our lack of findings in this area.

In addition, we found very little evidence that school-based mentoring improves attendance. This might, at first, seem surprising, given hypotheses about how SBM may affect school outcomes—for example, the mentor’s presence at school is thought to be an incentive for youth to attend school more often, and improved attendance may then improve other school outcomes. Our lack of findings could be explained, in part, by the fact that attendance was not a pressing issue for most of the youth in our sample at the time they were matched with a mentor: only a quarter had more than one absence in the month prior to our baseline survey. In cases in which youth had poor attendance before being matched with a mentor, we might be more likely to see effects of SBM on attendance.

However, there is another possible reason for our lack of findings in this area. While community-based mentoring has been shown to have positive effects on attendance, those findings were for youth who were older than the youth in our school-based sample (Tierney and Grossman, 1995). Changes in factors contributing to attendance may help explain this difference. Attendance in elementary school is primarily dependent on factors that are not controllable by the child—most importantly, on the child’s parents. It is only in middle school that attendance becomes dependent on the youth’s attitude and thus becomes a factor that is likely to be changed by a youth-focused intervention.

We also did not see measurable gains in academic performance through our two-time-point assessments of change, but this was not surprising. Even small improvements in grades are very rarely seen in programs for youth, particularly programs that are not targeted specifically at grade improvement and that only provide youth with a one-hour-per-

week intervention. Perhaps with longer matches we may have been able to detect improvements. However, as discussed earlier, some of the outcomes for which we did see changes, and for which mentors and teachers reported changes in their open-ended comments, may be important early precursors to academic success.

It is also possible that matches with different focuses yield different outcomes. In BBBS programs, case managers define specific goals for each match. Improving academic attitude or behavior was the primary goal for fewer than a third of the matches in our sample, despite the fact that about half of involved youth showed below-average academic performance in at least one subject area. Assessing academic effects in only those matches may have revealed academic benefits; unfortunately, our sample size is too small to permit such analysis.

- **Most of the changes we measured were only evident for youth in matches lasting longer than one school year.** The only area in which we found positive changes for youth in the six-to-nine-month group was in school liking. One possible explanation reflects our sample size. The group of matches meeting for six to nine months is smaller than the longest-meeting group of matches (with only 28 versus 50 matches in the teacher-rated outcome analyses, and 58 versus 80 matches in the youth-rated outcome analyses). The small size of the six-to-nine-month group makes it relatively difficult to discern statistically significant differences between this group and the zero-to-six-month group (as compared to seeing differences between the nine-or-more-and zero-to-six-month groups). However, it could also be the case that the benefits of SBM simply are not obtained until after at least one school year of meeting. This is an important finding given that, currently, most school-based matches only last for one school year.
- **The absolute size of the gains measured in this study is quite modest, but the differences between gains for youth in the longest and shortest matches are fairly large.** For example, over the course of the school year, youth in the longest matches gained only .07 on a four-point scale of school liking. However, this was .35 more than youth in the shortest matches.

- **It appears that involvement in SBM prevented declines in behavior over the course of the school year.** Our findings indicate that involvement in these programs may prevent developmental slipping that is seen in most youth either over the school year—in, for example, academic engagement—or as youth get older (Fredericks et al., 2003; Sage and Kindermann, 1999; Kindermann, 1993; Eccles, Midgley and Adler, 1984).

Finally, because we followed the youth's matches as they naturally occurred instead of assigning youth to matches of different lengths, it must be noted that the positive changes measured in youth in longer matches may have been a result of some unmeasured youth characteristic rather than the mentoring itself. Youth who choose to, or who are able to, sustain a mentoring relationship for more than one year may be more motivated to improve or may have some other characteristic that helped them improve and, at the same time, helped them to sustain their mentoring relationship longer than youth in shorter matches. Although we tried to address this issue statistically (see Appendix D), it remains an important caveat to these findings.

Until we have evidence from random assignment impact studies, these findings should be used as suggestions for *potential* areas of effects to guide further study. Methodological limitations in the current study do not allow us to conclude that SBM is effective—only that, if it does have effects, they may be most likely seen in the areas outlined above.



# Conclusions

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The purpose of this study was to draw on multiple sources of information—including mentors, youth, teachers and case managers—to follow up on some of the themes and issues raised in earlier studies of SBM, particularly those concerning the quality of the mentor-youth relationships and the potential benefits for youth. Youth who became involved in the three school-based programs we studied had a range of academic and behavioral difficulties, including involvement in fights, visits to the principal’s office, low social skills and below-average grades. Our findings highlight several key conclusions that support the strength of this mentoring model for reaching such youth but, at the same time, provide caution about some of the model’s potential limitations:

**1. The matches in these programs reported fairly close relationships.** Past research has shown that stronger relationships are more likely to make positive changes in youth’s lives (Grossman and Johnson, 1999). Close relationships often occur in SBM programs. But “very close” relationships are not as frequent as others have reported for the typical community-based program. In our study of three SBM programs, two thirds of mentors felt “somewhat” close to their mentees and about 20 percent felt “very” close to them.

Match characteristics, such as whether or not the pair shared the same gender or race, do not seem to affect closeness. That is, those characteristics were not associated with youth’s and mentors’ assessments of closeness, although they were associated with teachers’ and case managers’ assessments. These findings support past research noting that gender and race matching is not a critical factor in determining mentors’ or youth’s experience of the relationship and, ultimately, match length and outcomes (Sipe, 1996). The findings also suggest that case managers’ and teachers’ responses may reflect preconceived notions of what should work rather than youth’s or mentors’ expressed feelings about what is working for them.

**2. Agency support for school-based mentors is essential in creating strong, long-lasting mentoring relationships that can make a difference in youth’s lives.** Without this support, matches are more likely to flounder. We found that mentors who perceived more agency helpfulness reported closer, more positive relationships with their mentees. We also found that characteristics of the agency operating the program seemed to affect the length of matches and the extent of change in youth. Specifically, among the three programs we studied, we found fewer improvements in youth and more closed matches in the program experiencing extensive staff turnover and in which mentors reported relatively low levels of agency support.

These findings support recent work by Hansen (2002) underscoring the importance of strong agency relationships with the schools. In Hansen’s study, SBM programs with closer ties to their schools reported fewer premature match closings and longer average match lengths than programs that had less interaction with affiliated schools. DuBois and his colleagues (DuBois et al., 2002), in their recent meta-analysis of 55 evaluations of both community-based and site-based mentoring programs, further reported that programs utilizing practices such as ongoing training and structured activities for mentors and youth also yield larger effects for involved youth.

**3. Youth involved in school-based mentoring appear to receive some benefits from their involvement, but these benefits may be limited.** We found evidence to support benefits in several social and behavioral indicators of interpersonal and school success, including improvements in classroom behavior, social skills and peer relationships, fewer visits to the principal’s office and less fighting—all behaviors that have positive implications not only for the child, but also for classmates and teachers. We also found evidence of benefits in some early precursors of academic improvements, such as school engagement and school liking.

However, we did not find improvements in any of our indices of academic performance, suggesting that SBM may be most effective at improving attitudinal precursors of academic changes rather than improving grades themselves. We also did not find improvements in youth's perceptions of the teacher's attitude toward him or her, the emotional disposition of youth in the classroom or effort. In addition, we did not see changes in either relationships with parents and other adults or in parental involvement in the child's education.

Those changes that we were able to measure over the course of the school year were, in most cases, very small. While some youth made significant improvements in behavior and attitude, the average youth in the longest-meeting matches experienced more modest gains. These improvements, however, were significantly larger than those experienced by youth in the shortest matches, who actually showed declines in these areas. One strength of the school-based approach may thus lie in its ability to prevent behavioral and academic declines that are seen in most youth either over the school year or as they get older.

- 4. School-based mentoring may have different effects from those found in community-based programs.** SBM may be most effective at improving (or preventing declines in) behaviors and relationships close to the classroom and the school context in which it occurs, as opposed to relationships outside of this context, including those with parents and other adults. Community-based programs have been shown to have wider effects on drug and alcohol initiation (not tested in this study), school attendance and performance, and family relationships (Tierney and Grossman, 1995). These differences are perhaps not surprising given that there are also differences in the context, focus and intensity of these matches.

In addition, the mechanisms through which SBM works may be very different from those responsible for the effects of community-based mentoring. For example, the academic effects of community-based mentoring come about, in part, through

improvements in the parent-child relationship (Rhodes, Grossman and Resch, 2000). It is likely that if SBM programs ultimately improve youth's grades, these changes will come about through different processes, such as improvements in school liking and engagement, as well as the mentor's direct help with school work.

This study and others also suggest that school-based mentored youth differ in some ways from youth involved in community-based mentoring, including their age and their school-related needs. These differences may affect the outcomes we would expect to see. For example, we might not expect to see changes in alcohol and drug initiation in youth in SBM programs because very few youth initiate drug and alcohol use in elementary school, and the majority of youth involved in school-based programs are in this age group. Similarly, elementary school students' attendance is mostly controlled by parents, not by choices made by the child. It is only in middle school that attendance becomes dependent on the youth's attitude and is thus more likely to be changed by an intervention targeting youth. Distinctions between effects of community-based mentoring and those reported here also serve as an important reminder that not all mentoring programs can be expected to yield the same kind of outcomes.

- 5. Match length may have important implications for the benefits youth receive from mentoring.** Most of the changes we measured were only evident for those youth in matches lasting longer than one school year. The importance of length of match was also hinted at in the open-ended comments of teachers and mentors: some felt that, with a longer relationship, the youth might have been able to make more progress.

Because we did not have a control group of youth who were not matched with a mentor, we measured changes in attitude, behavior and performance by comparing youth in matches lasting nine months or longer (the length of a school year) with youth in matches lasting zero to six and six to nine months. As discussed, youth

in the shortest matches actually experienced declines in most of the areas we measured. If these declines are not a normal function of age that would occur in a “true” control group that does not receive mentoring, and instead are a result of the shortness of the match<sup>16</sup> or some other unmeasured aspect of youth’s experience in this group, then true impact studies may not yield similar findings. However, as suggested in other studies, it could also be the case that the benefits of SBM simply aren’t obtained until after a certain minimum length of meeting time. In this study, that length is at least one school year.

These are important issues to explore because school-based programs currently provide an average of less than a year of mentoring for participants. In fact, nationwide, only 36 percent of BBBS agencies report average SBM match lengths of longer than one school year (Hansen, 2002).

In our study, about two thirds of the mentors reported that they would continue meeting with their mentee during the next school year. Most mentors who ended their match did so because the school year was ending (32 percent of matches that ended) or because either the mentor or the youth was moving (41 percent). This kind of transience may be problematic for school-based programs; even if the pair wants to continue meeting and the mentor is willing to make the investment of changing locations, it may not be the case that the new school has a mentoring program or that the school and agency are willing to start one there. In addition, 16 percent of the mentors in our sample said they would continue to volunteer but would meet with another youth. This strategy—helping more than one youth for a relatively brief period of time each, rather than developing a more intense, long-term relationship with one youth—may be a good way to spread out limited volunteer resources, but only if the impacts of having a mentor for one school year are similar to those yielded in longer matches. If this is not the case, mentors’ meeting with a different youth each year may mean fewer benefits for involved youth.

Only an impact study will be able to determine with certainty the extent of effects in SBM and the different levels of benefits for matches meeting over different lengths of time. However, this study suggests that stronger effects may only be seen when relationships have had a chance to “gel” for longer than a single school year.

When impact studies are conducted with SBM programs, it will be important to consider the relative benefits of these programs when factoring in cost. SBM programs are less expensive than community-based programs. But dollar-for-dollar, can they provide the same level of benefits provided by community-based programs? Answering this question through an impact study will be critical as funders try to determine how to get the biggest effects from their funding dollar.

## Endnotes

- 1 Surveys were read aloud to youth participants and were given to teachers to complete at their convenience.
- 2 The data discussed in this chapter describe only those 201 youth who participated in the fall survey. The programs we studied took place in K-5 schools and generally served all ages within the schools. However, we focused on third through fifth grades because our measures were not suitable for younger children.
- 3 Overall, 81.4 percent of youth in the BBBS community-based sample are from single-parent homes; 7.3 percent are from homes in which another relative cares for the child; 6.6 percent are from two-parent homes; 1.6 percent are from foster or group homes; and 3 percent are from “other” or “unknown” living situations.
- 4 It is difficult to compare these statistics to community-based mentoring programs because matching practices in these programs vary widely from agency to agency, even within national programs like BBBSA (Furano et al., 1993).
- 5 These percentages only include matches for which a mentor responded to the gender question in our mentor survey.
- 6 This estimation assumes that the end of the school year or the SBM program was on May 1 (i.e., matches that stopped meeting prior to May were counted as ending early). These findings appear somewhat higher than data collected by BBBSA in 2002 from 260 BBBS school-based programs nationwide: agencies reported an average of about 11 percent of SBM matches closing prematurely—that is, before the end of the school year. However, of the 33 matches that stopped meeting regularly or formally closed before the end of the school year, 17 had begun meeting during the previous school year and, at least in that regard, did not necessarily close prematurely.
- 7 This was true for both male and female mentors.
- 8 This program contributed about a third (34%) of the mentors in this study.
- 9 “Common interests” was only measured through mentor report.
- 10 Combining both case manager and mentor reports similarly shows that about 38 percent of the matches involved in the study would not continue to meet in the following school year.
- 11 In performing these analyses, we held constant other potentially important variables, including the child’s gender and ethnicity and the agency that was operating the mentoring program. We also controlled for grade level in an initial set of regressions, but this variable was not associated with the outcomes of interest and so was omitted from all subsequent analyses except those for which it was a significant predictor (i.e., analyses assessing academic performance). Controlling for youth age yielded similar results to those yielded when controlling for grade. See Appendix D for a more detailed discussion of these analyses.
- 12 There are several drawbacks to this approach that make it inferior to designs using a control group. For example, many factors could influence whether a child received a mentor (such as behavior at the beginning of the school year) and could, at the same time, make us more or less likely to see benefits than we would if we could account for these factors by comparing the children to a control group. Youth in longer matches may also have characteristics that lead to both a longer match and the receipt of more benefits (e.g., they may be more highly motivated). We attempted to counter some of these drawbacks in additional analyses detailed in Appendix D. However, we cannot be sure that our analyses completely counter these forms of bias.
- 13 One of the three agencies contributed proportionally fewer matches to the nine-or-more-month group (and more matches to the zero-to-six-month group) than the other two programs. This program was not the program undergoing major staff changes during the study year. Because of these differences, we held “program” constant in all analyses assessing benefits.
- 14 Despite similarities in improvements for the zero-to-six-month and six-to-nine-month groups (see Figure 7), we found no significant differences between youth in the longest and shortest matches on this variable, perhaps in part due to the relatively small size of the zero-to-six-month comparison group (i.e., this was the smallest group in our analyses; thus, all else being equal, it would be easier to detect differences between the two longer meeting groups than the longest- and shortest-meeting groups).
- 15 Some of these changes, particularly those reported by the mentors, could reflect changes in the child’s behavior toward the mentor as a result of the child becoming more comfortable with him or her, rather than more fundamental and widespread changes in the child. However, many of these changes were reported by the child’s teacher and did seem to extend beyond this relationship to the child’s peers or other adults in the child’s life.
- 16 See Grossman and Rhodes (2002), which discusses negative effects that premature closure of matches may have on youth. It is important to note in this context, however, that only five of the 22 short matches in our analyses for teacher-rated outcomes were placed in that group because they ended early (the others were in the group because they started late); and two of those five cases ended early because the youth moved or changed schools. The nine-or-more-month group had about the same proportion of early ending matches as the zero-to-six-month group (22 percent in the teacher-reported analyses). And, in fact, omitting all early ending matches from our analyses yields somewhat bigger average improvements for the nine-or-more-month group relative to the zero-to-six-month group (see Appendix D).



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# Appendices

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## Appendix A: Methodology

Data collection for this study was conducted in the 1999/2000 school year. All the youth in the third, fourth or fifth grades who became involved in the program by fall 1999 and whose parents consented to their participation were included in the study: 212 youth fit this description.

To assist with data collection, on-site researchers were hired at each of the three sites. Four different sources of survey data were used (see Appendix B for survey items and scales discussed in this report):

**Youth.** The on-site researchers administered surveys to youth in small groups in the fall and early winter for the baseline survey and in the spring for the follow-up survey. Survey questions were read out loud to youth. Overall, 201 youth (95%) completed the survey in the fall, 204 (96%) completed it in the spring and 195 youth (92%) completed both baseline and follow-up surveys.

**Teacher.** The on-site researchers administered surveys to teachers of all involved youth in the first and last quarters of the 1999/2000 school year. Teachers received \$7 gift certificates for their participation and sent their surveys directly to P/PV when they were completed. Case managers followed up with those who had not completed their surveys by our deadline. Teachers completed surveys for 157 youth (74%) in the fall and 140 (66%) in the spring. Surveys for 115 youth (54%) were completed at both time points.<sup>1</sup>

**Mentor.** Mentors of involved youth were mailed surveys by on-site researchers at the end of the school year. Participants received \$7 gift certificates and returned their surveys directly to P/PV. Case managers followed up with those who had not mailed in their surveys by our deadline. P/PV also sent out reminder letters to encourage unresponsive mentors to participate. Overall, 140 mentors participated (a 66 percent response rate).<sup>2</sup>

**Case manager.** Case managers for each involved youth also completed surveys at the end of the school year and were given \$5 for each completed survey. Case managers returned their surveys directly to P/PV, completing surveys for 203 matches (a 96 percent response rate).

## Appendix B: Survey Scales and Constructs

### Teacher Survey

#### Classroom Emotional Disposition

(Four-point scale ranging from “hardly ever” to “most of the time”; Cronbach’s Alphas<sup>3</sup> for baseline and follow-up: .76, .73 respectively)

- In my class, this child appears depressed (reverse coded so that higher scores were considered lower in the final scale).
- In my class, this child appears angry (reversed).
- In my class, this child appears happy.

#### Classroom Effort

(From RAPS-T (IRRE, 1998); Four-point scale ranging from “hardly ever” to “most of the time”; Alphas: .91, .88)

- This student works hard in my class.
- This student does the best s/he can in school.
- In my class, this student fights me at every turn (reversed).
- This student works only as hard as necessary to get by (reversed).
- This student does more than is required of him/her.
- This student doesn’t try very hard (reversed).

#### Academic Engagement

(Five-point scale ranging from “well below average” to “well above average”; Alphas: .77, .79)

- Student participates constructively in class.
- Student is open and receptive to learning.

#### Positive Classroom Behavior

(Five-point scale ranging from “well below average” to “well above average”; Alphas: .93, .94)

- Student works without disturbing others.
- Student respects school personnel.
- Student follows school and class rules.
- Student respects others’ rights and property.

#### Peer Social Network

(Adapted from Harter (1985); Four-point scale ranging from “strongly disagree” to “strongly agree”; Alphas: .83, .90)

- This child finds it hard to make friends (reversed).
- This child has a lot of friends.
- This child is popular with others his/her age.

#### Social Skills

(Five-point scale ranging from “well below average” to “well above average”; Alphas: .82, .83)

- Youth’s confidence in communicating with others.
- Youth’s ability to trust and build relationships with others.
- Youth’s ability to express feelings appropriately.

#### Youth’s personal hygiene, appearance

(Single item; Five response options ranging from “well below average” to “well above average”)

#### Parent Involvement

(Four-point scale ranging from “hardly ever” to “most of the time”; Alphas: .92, .93)

How often have the child’s parents or guardians...

- Come to formal events at school?
- Supported you in your efforts to work with the child?
- Helped the child with homework or school projects?
- Taken an interest in the child’s school behavior and success?

### Youth Survey

#### Perception of Teacher’s Attitude toward Youth

(From RAPS-S (IRRE, 1998); Four-point scale ranging from “not true at all” to “very true”; Alphas: .71, .77)

- My teacher doesn’t seem to have enough time for me (reversed).
- My teacher cares about how I do in school.
- My teacher has plenty of time for me.
- My teacher likes to be with me.
- My teacher likes the other kids in my class better than me (reversed).

### School Liking

(Adapted from a scale tested with middle-school youth in a project conducted by Jacque Eccles; Four-point scale ranging from “not true at all” to “very true”; Alphas: .76, .71)

- In general, I like school a lot.
- I often feel excited at school.
- I look forward to going to school every day.

### Adult Social Support

(Adapted from Gambone and Arbreton (1997); Six-point scale ranging from “0 adults” to “5+ adults”; Alphas: .83, .85)

- How many non-relative adults pay attention to what’s going on in your life?
- How many non-relative adults say something nice to you if you do something good?
- How many non-relative adults could you talk to about personal problems?
- How many non-relative adults could you go to if you are really upset about something?
- How many non-relative adults care about what happens to you?
- How many non-relative adults make you feel better when you think you are not doing very well in school, sports or something else?

### Relationship with Parents

(Single item; Nine response options ranging from “really terrible” to “really great”)

- How are you getting along with your parents or guardians?

### Parent School Involvement

(Single item; Four response options ranging from “not true at all” to “very true”)

- My parents or guardians tell me school is important.

### Youth Positive Emotional Engagement with Mentor

(Four-point scale ranging from “hardly ever” to “most of the time”; Alphas: .75, .67)

When I’m with my mentor, I feel...

- Happy
- Bored (reversed)
- Disappointed (reversed)
- Important
- Mad (reversed)
- Excited
- Comfortable

### Case Manager Survey

#### Mentor Youth-Centered Approach

(Adapted from Tierney and Grossman (1995); Four-point scale ranging from “not at all true” to “very true”; Alpha: .91)

- This volunteer tries to find out about his/her mentee’s interests.
- This volunteer doesn’t follow through in activities with his/her mentee (reversed).
- This volunteer shows little interest in his/her mentee (reversed).
- This volunteer talks about his/her mentee’s accomplishments.
- This volunteer doesn’t put out a lot of effort for his/her mentee (reversed).
- This volunteer always lets his/her mentee know what’s expected of him/her.
- This volunteer does not appear to know very much about his/her mentee (reversed).
- This volunteer puts in more time and effort than is required.

### Mentor Survey

#### Mentor Positive Emotional Engagement with Youth

(Four-point scale ranging from “hardly ever” to “most of the time”; Alpha: .86)

When you’re with your mentee, how often do you feel...

- Appreciated
- Frustrated (reversed)
- Comfortable
- Discouraged (reversed)
- Respected
- Trusted
- Interested
- Bored (reversed)
- Disappointed (reversed)
- Enthusiastic

#### Youth Positive Emotional Engagement with Mentor

(Four-point scale ranging from “hardly ever” to “most of the time”; Alpha: .86)

When you're with your mentee, how often does your mentee appear...

- Interested
- Like he/she is having a good time
- Talkative
- Appreciative
- Excited
- Happy
- Comfortable

## Appendix C: What Can This Study Tell Us About Self-Assessment and Evaluation?

By asking similar questions to different respondents and assessing youth benefits in more than one way, this study was designed to help programs improve their evaluation efforts. Several findings speak to these efforts:

**Reports from both mentor and youth may be needed to fully understand the mentoring relationship.** Agreement across respondents is important because many studies characterize the mentoring relationship based on reports from only one source. Our findings suggest this strategy may provide an incomplete picture of the relationship. For example, mentors' and youth's reports of working on schoolwork were moderately correlated ( $r = .41$ ). But their reports of other activities, such as talking about personal issues, were not significantly correlated. Similarly, youth's reports of how they felt (e.g., "happy," "bored," "comfortable") when with the mentor were not significantly associated with mentors' reports of youth's feelings. It is possible that these mentors were not very good at "reading" the emotions of youth. Mentors may also have answered this question using a different time frame than that used by youth: adults may be better at answering questions averaging across a number of encounters, while youth may be more inclined to answer questions based on their most recent visits. Nevertheless, using reports from only one respondent would have provided a different picture than presenting the relationship from both perspectives.

**Respondents may have difficulty assessing change in behavior over time at one point in time.** In addition to assessing youth benefits in the ways reported in Chapter V, we also asked teachers at the end of the school year whether each student had improved or worsened in six areas over the course of the school year. About half of the teachers saw improvement in at least one of the following five areas: academic attitude and performance, social behavior toward peers and adults and classroom effort. The one area in which fewer teachers (24%) reported improvement was attendance.

These assessments were not significantly higher or lower than their two-time-point evaluations (the difference between their assessment of behavior at the beginning and end of the school year); that is, teachers did not systematically inflate or deflate their estimates of change when asked at only one time point. However, although teachers' assessments of change in the spring were generally associated with the amount of change we estimated from considering

their responses in the fall and spring (that is, teachers who rated youth as improving on a given measure at the end of the school year generally completed baseline and follow-up measures that also suggested some improvement), these associations were not very strong, suggesting that teachers may have had difficulty estimating change over time. Teachers were fairly good at estimating change in academic attitude and behavior—that is, their one-time-point estimates were significantly correlated with their two-time-point estimates (ranging from  $r = .28$  to  $.43$ ). Similarly, teachers' one-time-point estimates of change in social behavior toward adults and youth were positively correlated with their two-time-point assessments of changes in social skills ( $r$ 's =  $.39$ ). Correlations between estimates of improvements in attendance, a more "objective" measure of youth behavior, were slightly higher ( $r = .47$ ). However, teachers were not very good at estimating changes in overall academic performance: their two-time-point reports of change in overall performance were only marginally correlated with their one-time-point estimates. Asking about discreet subject areas improved accuracy only slightly.

One reason for these modest associations may be that our baseline assessment was given after the beginning of the school year—after some change may have already occurred. The one-time-point question asked about how much the youth's behavior had changed over the course of the entire school year—encompassing more time than our two-time-point analyses. Nevertheless, our findings highlight some potential problems with one-time-point measures.

**It is critical to design evaluation instruments to reflect the kind of changes a program, as it is designed, can make—not only those that the evaluator *would like to see*.** When we designed our survey, talking with program directors and teachers helped us develop several questions that picked up more subtle types of benefits—for example, "the ability to express feelings appropriately," "the ability to trust and build relationships with others" and "confidence in communicating with others." The benefits we found in this study were often in these more subtle areas. Had we only asked about more drastic changes, we would have missed the small changes that can eventually contribute to "bigger" academic and social improvements.

## Appendix D: The Econometric Analysis of the Benefits of School-Based Mentoring By Amanda Bayer

### Basic Regression Analyses

The results presented in Chapter V on the effects of match length on youth outcomes are based on regression analyses. This statistical technique allows us to isolate the effect of match length on individual outcomes by controlling for the effects of other variables, such as race and gender. In cases where the dependent variable is continuous (e.g., school liking, positive classroom behavior), ordinary least squares (OLS) regression was used as follows:

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_KX_K + e$$

where:  $Y$  = value of the dependent variable (i.e., the follow-up value for the outcome measure of interest);  
 $X_k$  = value of  $k$ th explanatory variable,  $k=1$  to  $K$ ;  
 $a, b_k$  = coefficients; and  
 $e$  = a stochastic disturbance term with a mean of zero and a constant variance.

In cases where the dependent variable is dichotomous (e.g., fighting in the month prior to the survey, principal's office visits, absences, tardies) logistic regression analysis was used, using maximum likelihood estimation by specifying a linear function for the logit (the logarithm of the odds) of having a positive response on the dependent variable as follows:

$$\log(p/[1-p]) = a + b_1X_1 + b_2X_2 + \dots + b_KX_K + e$$

where:  $p$  = the probability of having a positive response on the dependent variable (i.e., the follow-up value for the outcome measure of interest);  
 $1-p$  = the probability of having a negative response on the dependent variable; and  
 $a, b, X$  and  $e$  are defined as in the OLS equation above.

All regressions include explanatory variables for ethnicity, gender, program, length of time between administration of the two surveys, the baseline level of the outcome measure (i.e., the value of the outcome measure at the beginning of the test period), and categorical variables indicating total duration of match (i.e., one indicating whether or not a match is at least nine months in duration, and a second indicating whether or not a match is six to nine months in duration). Regressions for the academic performance outcomes also include grade level.<sup>4</sup> Analyses using teacher-reported outcomes are based on approximately 80 youth. Analyses using youth-reported outcomes are based on approximately 150 youth.

Table 1 summarizes the results of the regression analyses for the 24 outcome measures. The first two columns of data report the estimated coefficients and statistical significance for the two match-length variables (i.e., the six-to-nine-month and nine-or-more-month groups as compared to the zero-to-six-month group), while the third column records whether matches of six to nine months experience the same effect on outcomes as do longer matches. The last two columns report differences between the three participating programs and the Adjusted  $R^2$  (pseudo  $R^2$  in the case of dichotomous outcome variables), or goodness of fit, of each regression. The coefficients on the match-length variables indicate the additional change in the follow-up value of the outcome measure that youth in each of the two longer-matched groups experience relative to youth who were mentored for less than six months. This change was statistically significant for seven outcome measures, as recorded in the table and discussed in Chapter V.

### Additional Analyses

In addition to these basic regression analyses, we also conducted analyses designed to test our hypotheses more rigorously and to compensate for limitations of the data. Specifically, we were concerned about two forms of bias:

**Selection Bias.** Youth with longer match lengths could differ from youth with shorter matches in ways that we could not account for but that could affect youth's receipt of benefits. For example, if teachers recommend their less motivated students earlier in the school year, these youth may have longer matches than better students. Alternatively, if the more motivated youth remain in the program for a longer period of time, it might appear that longer program participation leads to better outcomes, when in fact only the youth most able and motivated to improve over the school year decide to stay in the program and thus have longer matches. In either case, this type of bias could contribute to spurious associations between match length and benefits.

To help account for selection bias, we tried to use an additional statistical technique—two-stage least squares regression (Heckman, 1976)—that examines the extent to which results are affected by unobserved differences between participants. However, our results are inconclusive because the goodness of fit of the first-stage regressions was very poor; the data set did not have the information necessary to predict match length well enough for each child.

We also tested whether the effects of match length found in our basic results appear within our match-length subgroups (i.e., six to nine months, nine or more months). Our concern was that the positive behaviors demonstrated by youth with more than nine months of mentoring might not have been a result of that mentoring; rather, it could be that the youth who chose to remain in the program from one academic year to the next were more motivated to improve in some unmeasured way. If longer matches do directly lead to better youth outcomes, then we would expect our findings to replicate within the match-length subgroups. The effects of match length were only present for one of the six outcomes (i.e., school liking) in which we found effects using the entire sample, suggesting that selection bias may be affecting coefficient estimates in some of our basic regression analyses. However, these findings may be due, in part, to the small size of the subsamples: in four of the five remaining cases, regression coefficients for either or both of the subsamples were in the same direction and of a larger magnitude than statistically significant coefficients using the full sample.

We further investigated the possibility of selection bias by repeating our basic regression analyses, but eliminating those matches that ended before the follow-up survey for which we still have follow-up survey data. Youth who ended their match early may have traits that cause them to experience relatively poor gains over the test period, causing a spurious positive association between match length and changes in the outcome measures in the original analysis. On the contrary, removing these early-ending matches, about 20 percent of the original sample, actually yielded stronger positive correlations between overall match length and improvements in behavior, indicating that our initial estimates were relatively free of this particular form of selection bias.

**Truncation Bias.** Another potential limitation of the data stems from the numerical scales used to record teacher and youth reports of outcomes. The highest possible score for many of our outcome measures is “4” or “5.” Thus, a child who starts with a fairly high score at the beginning of the school year could not show a large increase by the end of the year. In this way, one might expect to see smaller positive changes for children who start with better behavior and bigger changes for youth starting out with lower scores. If teachers match their most needy students (i.e., youth scoring lower on our measures) earlier in the year, then we would see a spurious positive association between match length and improvements. If, on the other hand, youth scoring higher at baseline have longer match lengths, then we would see a spurious negative association between match length and improvements.

To explore the extent to which truncation bias exists in our results we took several approaches. First, we ran a series of regressions using only those observations for which the outcome measures were not at extreme values at baseline. Second, we conducted analyses using standard methods of working with limited dependent variables, namely tobit regression and ordered logit. These approaches reinforced our original results: for all of the outcome measures with statistically significant match-length effects in the basic analysis, the size and statistical significance of the effects were at least as large in these additional analyses. Moreover, these methods revealed that improvements in an additional outcome measure, emotional disposition in the classroom, were associated with longer mentoring matches.

### Conclusions

Our assessment of the effectiveness of SBM programs presented in Chapter V withstands more rigorous testing as reported in this Appendix. While selection bias remains a concern, we could produce no strong evidence that the basic results are biased; this lack of definitive evidence, however, is largely a result of data limitations. Truncation bias is likely muting our results, and the analyses suggest that the effects of mentoring are even stronger than portrayed by the basic analysis. In sum, we must use extreme caution in interpreting the results reported here, and we recommend that future projects utilize a random-assignment design to determine the impacts of school-based mentoring.

**Appendix D: Table 1**  
**Coefficient Estimates for Match Length Variables for 24 Outcome Measures**

| Outcome  | Effect Of Match Length |           |                          | Program Effects                             | Adjusted R <sup>2</sup> |
|--|------------------------|-----------|--------------------------|---|-------------------------|
|  | 6-9 months             | 9+ months | 6-9 months vs. 9+ months |   |                         |
| <b>Social Skills and Networks</b>                |                        |           |                          |   |                         |
| Peer social network                              | 0.082                  | 0.314**   |                          |   | .48                     |
| Social skills                                    | 0.284                  | 0.482**   |                          |   | .29                     |
| <b>Relationships with Adults</b>                 |                        |           |                          |   |                         |
| Adult social support                             | 0.162                  | -0.100    |                          |   | .14                     |
| Relationship with parent                         | 0.179                  | 0.383     |                          |   | .14                     |
| Parent tells youth school is important           | 0.325                  | 1.480     |                          |   | .12                     |
| Parent involvement in school                     | 0.171                  | 0.079     |                          |   | .55                     |
| Perception of teacher's attitude toward child    | -0.226                 | -0.169    |                          | Prog. 1 > Prog. 3**                         | .23                     |
| <b>Academic Performance</b>                      |                        |           |                          |   |                         |
| Study skills                                     | 0.156                  | 0.274     |                          | Prog. 3 > Prog. 1*                          | .59                     |
| Language   | -0.145                 | -0.048    |                          | Prog. 3 > Prog. 1***<br>Prog. 3 > Prog. 2** | .45                     |
| Social Studies                                   | 0.373                  | 0.362     |                          |   | .40                     |
| Math   | 0.598                  | 0.524     |                          |   | .36                     |
| Science  | 0.811                  | 0.510     |                          | Prog. 3 > Prog. 2*                          | .26                     |
| Percentage of in-class assignments not completed | 0.117                  | 0.103     |                          |   | .21                     |
| Percentage of homework assignments not completed | 0.111                  | 0.066     |                          |   | .12                     |
| <b>Classroom Behavior and Attitude</b>           |                        |           |                          |   |                         |
| Fought in last 4 weeks                           | 0.692                  | -0.728    | 9+<6-9*                  |   | .21                     |
| Positive classroom behavior                      | 0.235                  | 0.592***  | 9+>6-9*                  | Prog. 3 > Prog. 2*                          | .55                     |
| Principal's office visit in last 4 weeks         | -0.373                 | -2.318**  | 9+<6-9**                 | Prog. 3 < Prog. 2*                          | .24                     |
| Classroom effort                                 | 0.115                  | 0.182     |                          | Prog. 3 > Prog. 2*                          | .43                     |
| Academic engagement                              | 0.199                  | 0.350*    |                          | Prog. 3 > Prog. 2**                         | .49                     |
| Classroom emotional disposition                  | 0.042                  | 0.214     |                          | Prog. 3 > Prog. 1**                         | .44                     |
| School liking                                    | 0.350**                | 0.386**   |                          |   | .39                     |
| <b>Attendance</b>                                |                        |           |                          |   |                         |
| Absence in last 4 weeks                          | -0.553                 | -1.024    |                          |   | .10                     |
| Tardy in last 4 weeks                            | -0.021                 | -0.426    |                          |   | .13                     |
| <b>Hygiene</b>                                   |                        |           |                          |   |                         |
| Hygiene/Appearance                               | -0.078                 | 0.225     |                          | Prog. 3 > Prog. 2*                          | .42                     |

## Notes:

\* Estimated coefficient is statistically different from zero at  $p < .10$  significance level.

\*\* Estimated coefficient is statistically different from zero at  $p < .05$  significance level.

\*\*\* Estimated coefficient is statistically different from zero at  $p < .01$  significance level.

## Appendices Endnotes

- 1 Youth whose teachers completed surveys at the second time point differed from youth without a teacher survey in only three ways: they were less likely to have parents who helped them with their school work, they had case managers who spoke more often with their parent or guardian, and they felt slightly less close to their mentor at the second time point.
- 2 Youth whose mentors completed the survey differed from youth without a mentor survey in the following ways: they were more likely to be female, had met with their mentor longer during the test period and, at the second time point, reported lower levels of adult support and perceived that their teachers had a less positive attitude toward them. Case managers reported that, relative to youth without mentor surveys, these youth had closer relationships with their mentors. Their mentors enjoyed spending time with them more, engaged in more positive behaviors toward the youth and participated more often in agency events. Case managers also reported that these youth had less direct supervision from the agency but benefited from more communication between the case manager and their parents. These youth did not differ in age, grade, ethnicity, single-parent status or any other outcome of interest in the study.
- 3 This is a measure (ranging from 0 to 1.00) of how well a set of variables reflects a single unidimensional construct. In this case, these alphas (or “reliability coefficients”) reflect how well the three items listed intercorrelate to measure “classroom emotional disposition.”
- 4 In an initial set of regressions, we included grade level in all analyses. These analyses revealed significant effects for this variable only when predicting academic performance. Thus, it was only retained in this subset of analyses.





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