

HHS/ED COMMITTEE #3
March 3, 2016
Discussion

MEMORANDUM

March 1, 2016

TO: Health and Human Services Committee
Education Committee

FROM: Essie McGuire, Senior Legislative Analyst 
Vivian Yao, Legislative Analyst 

SUBJECT: **Discussion – Coordinated Collection of Data by DHHS and MCPS**

The Health and Human Services (HHS) and Education Committees will discuss the coordinated collection of data by the Department of Health and Human Services (DHHS) and Montgomery County Public Schools (MCPS). The following individuals are expected to participate in the discussion:

- Uma Ahluwalia, Director, Department of Health and Human Services
- Dr. Maria Navarro, Chief Academic Officer, Montgomery County Public Schools

In several recent discussions on the delivery of County support services for vulnerable students and their families, including the most recent discussion of the Building Educated Leaders for Life (BELL) initiative, Committee members have raised the need to improve data sharing policies and practices between DHHS/County Government and MCPS, particularly in the context of program evaluation to measure the effectiveness of services.

The purpose of today's discussion is to inform the Committees' understanding of current efforts to measure the effectiveness of services as the Council begins its operating budget deliberations.

As background to this discussion, Council staff highlights below some examples of program evaluations that involved collaboration between County Government and MCPS. These evaluations vary widely in methodology and level of analysis. However, they illustrate the range of efforts over many years to quantify the effectiveness of specific County-funded programs.

Name of Program	Methodology of Evaluation	Key Findings	Year	©
Linkages to Learning	Longitudinal, quasi-experimental, control school design	Improvements math achievement scores, decrease in students' negative behaviors and emotional stress levels, an increased sense of family cohesion, and greater consistency in parenting practices.	1999	12-28
George B. Thomas Learning Academy	Quasi-experimental, randomly matched pair design	Higher performance in school attendance, reading and mathematics performance, and GPA.	2014	29-34
Excel Beyond the Bell	Outcome analysis using comparison groups	Higher mean MPA and daily attendance in high-participation groups.	2016	35-39

In preparation for today's discussion, Council staff asked DHHS and MCPS to provide an update of program evaluation and research efforts completed to date; a report of data collection efforts underway currently; and a discussion of how to address any remaining gaps in program evaluation.

The presentation materials for today (attached at circles 1-11) identify a model and structure for developing data sharing practices and policies going forward. It will be important to understand how DHHS and MCPS plan to operationalize this approach with specific programs.

Highlights of the presentation materials include the following:

- **DHHS and MPCS partner in many ways to deliver services that address the needs of children and their families.** Identified partnerships include: Child Welfare Services, Linkages to Learning and School-Based Health Centers, High School Wellness Centers, Behavioral Health and Crisis Services, transition age youth services, early care and education efforts, school health partnerships, Kennedy and Watkins Mill Cluster Project and Neighborhood Opportunity Center initiatives, and Positive Youth Development services.
- **The agencies are transitioning to an evaluative approach of evidence-based outcomes,** particularly showing educational growth with an expansion on data gathering, disaggregation, and reporting.
- **The agencies are working through legal and data system challenges to sharing data.** They will be developing an approach to share data from three different levels: Student and Family, Program, and Population/Community. The agencies have agreed to test the approach to look at educational outcomes of school-age children involved in child welfare and Linkages to Learning, with the goal of gradually expanding the model to other shared program areas.

Council staff appreciates this framework as a positive starting point for this transition. The Committees may want to hear more specifically what the next steps are in program evaluation.

- How will the agencies integrate this approach into program evaluation plans currently in place?
- How will the agencies prioritize what programs to evaluate in the future? Is there an identified timeframe for completion of the initial efforts outlined in the presentation?
- How will the agencies identify capacity in either DHHS, MCPS, or another entity to support or conduct the identified program evaluations?
- What is the expected end result of the evaluation process? How can the agencies ensure that the results are reliable and demonstrate outcomes that can be used in decision making?



PARTNERSHIPS

Current and Future State Discussion on Data Sharing

**Montgomery County Department of Health and Human Services
Montgomery County Public Schools**

A Presentation to Montgomery County Council
Uma S. Ahluwalia, Director | DHHS
Dr. Maria V. Navarro | MCPS

Thursday | March 3, 2016



A Shared History of Partnership

- Montgomery County Health and Human Services (HHS) and Montgomery County Public Schools (MCPS) have a rich history of partnerships designed to improve the social, emotional, and educational outcomes of families and children for whom services are designed
- Long Standing Partnerships
 - Child Welfare
 - Linkages to Learning



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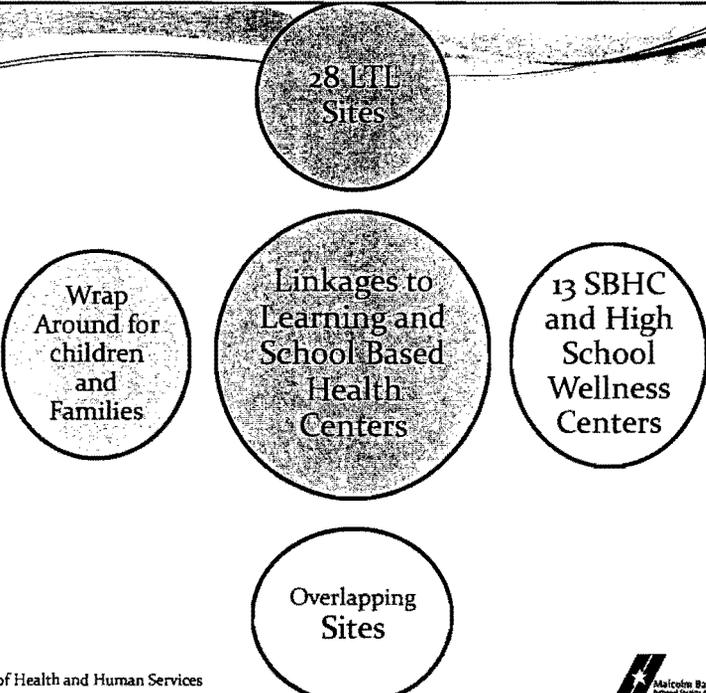




Child Welfare
Impacting the future of a child

- Pertinent information regarding any Child abuse and neglect investigation will be shared as appropriate to ensure safety of children
- Partnerships around transportation for homeless youth
- Endless Dreams Training and data sharing around Early Warning Indicators for at risk youth including foster youth
- Best Interest Collaboration Meetings

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28 LTL Sites

Wrap Around for children and Families

Linkages to Learning and School Based Health Centers

13 SBHC and High School Wellness Centers

Overlapping Sites

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OTHER PARTNERSHIPS

- **Behavioral Health** – Use of Crisis Center for homicidal, suicidal students and kids in crisis – connectivity with child and adolescent mental health, our domestic violence programming and with Collaboration Council

- **Transition Age Youth** – Mental Health, DD, Foster Care, Homeless, Substance Abusing and Dually diagnosed, Pregnant Teens, Disconnected Youth



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Other Partnerships (continued)

- **Early Care and Education:**
 - Children entering kindergarten ready to learn
 - Early Childhood Council
 - Child Care in Public Space
 - Infants and Toddlers
 - Head Start
 - Child Care Subsidies



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School Health Partnerships

- **International Admissions and Immunization** – forefront because of the Children Fleeing Violence impact on our community
- **School Health Services** over 300 staff in Schools
- **Public health disease surveillance**
- **School Based Health Centers and High School Wellness centers**



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Newer Initiatives over the Last Five Years

- **Kennedy Cluster with Neighborhood Opportunity Network tied to it** – expansion to Watkins Mill – focused on addressing kids and families experiencing challenges at school; wrap around service referrals, improving family functioning, summer meals, school breakfast, after school time activities; healthy foods market, etc.
- **Positive Youth Development** – Street Outreach Network, Youth Opportunity Centers, HSWC, etc



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A New Context

- Earlier partnerships focused on the who / what / and when
 - How many families and children
 - What services
 - When were the services provided
- A transition to an evaluative approach of evidence based outcomes, particularly those showing educational growth, with an expansion on data gathering, disaggregation, and reporting

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 Malcolm Baldrige
National Quality Award
2014 Award Recipient

Examples of our Shared Transition

Linkages to Learning	Excel Beyond the Bell
Kennedy Cluster and Watkins Mill Cluster	George B. Thomas

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2014 Award Recipient

Linkages to Learning

<p>Then</p> <ul style="list-style-type: none">• Focused on engagement and social emotional learning attributes of students• Analysis of number of students impacted and comparison not participating in the program	<p>Now</p> <ul style="list-style-type: none">• Analysis on improvement in measures of well-being over time, including attendance, behavior, and achievement, as well as family strength and resiliency
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Excel Beyond The Bell

<p>Then</p> <ul style="list-style-type: none">• Presentation of Results for One Year• Examined Program Attendance and Achievement Data	<p>Now</p> <ul style="list-style-type: none">• Will focus on FY '16 8th grade students in the program and determine prior participation during middle school years• Analysis will focus on those who participated throughout middle school (grades 6, 7, and 8)• Examination of Program Attendance and Achievement Data
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Kennedy Cluster and Watkins Mill Cluster

<p>Then</p> <ul style="list-style-type: none">• Good example of tracking number of students impacted and the services provided	<p>Now</p> <ul style="list-style-type: none">• Looking at achievement data of individual students to determine the academic effect of the social services provided
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 Department of Health and Human Services Alacorn Baldrige
National Quality Award
2014 Award President

George B. Thomas

<p>Then</p> <ul style="list-style-type: none">• Also known as “Saturday School”• Out-of-School Time (OST) program designed to provide some services students need to overcome barriers to their academic achievement	<p>Now</p> <ul style="list-style-type: none">• MCPS is currently reviewing the program• An eye to transition / rethink / restructure this program• Increasing the number of programs that support acceleration and enrichment of students
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 Department of Health and Human Services Alacorn Baldrige
National Quality Award
2014 Award President

MCPS Program Evaluation Approval Process Changes

-  In response to the changing landscape, MCPS reviewed and enhanced its Program Evaluation Approval Process in FY'15
-  Provides more time for stakeholders to review program evaluation requests
-  Added a cycle of periodic updates to key stakeholders to receive updates on the approved Action Plan

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National Quality Award
2015 Award Recipient

New Initiatives

- New Initiatives
 - Early Warning Indicators
 - Childhood Obesity – Healthy Montgomery
 - Social/emotional learning
 - Office of community engagement
 - Closing the achievement gap – disparate learning outcomes by race and ethnicity
 - Development of the Children’s Opportunity Fund
- We are actively seeking grants to enhance existing programs

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National Quality Award
2015 Award Recipient

Emerging Theme – the need for more and timely data

- Montgomery County and MCPS each store and track a rich set of data that, while focused on the same set of customers, is different depending on the particular purpose
- While there is agreement on the need to share the data amongst the various programs, a variety of challenges exist:
 - Legal
 - Data system requirements



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Data Issues

- Bumping HIPAA with FERPA – what are the data use agreements; how do we refine the MOU we executed for Kennedy Cluster Initiative to share and jointly manage with data
- FARMS/SNAP and Holiday Giving – can we bump data to help families in need
- School health records – ownership by MCPS but access by our staff – how to get to data sharing
- Predictive Analytics – can we get there for these multiple populations?



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Framework For Data Sharing (aka "The SandBox")

- Student and Family Specific tier – the most difficult and must be done through a very structured consent process
- Program Tier – program level data is more aggregate and depending on the size of the program could make data sharing less identifiable and more feasible
- Population/Community Tier – Easiest to share data at the aggregate level



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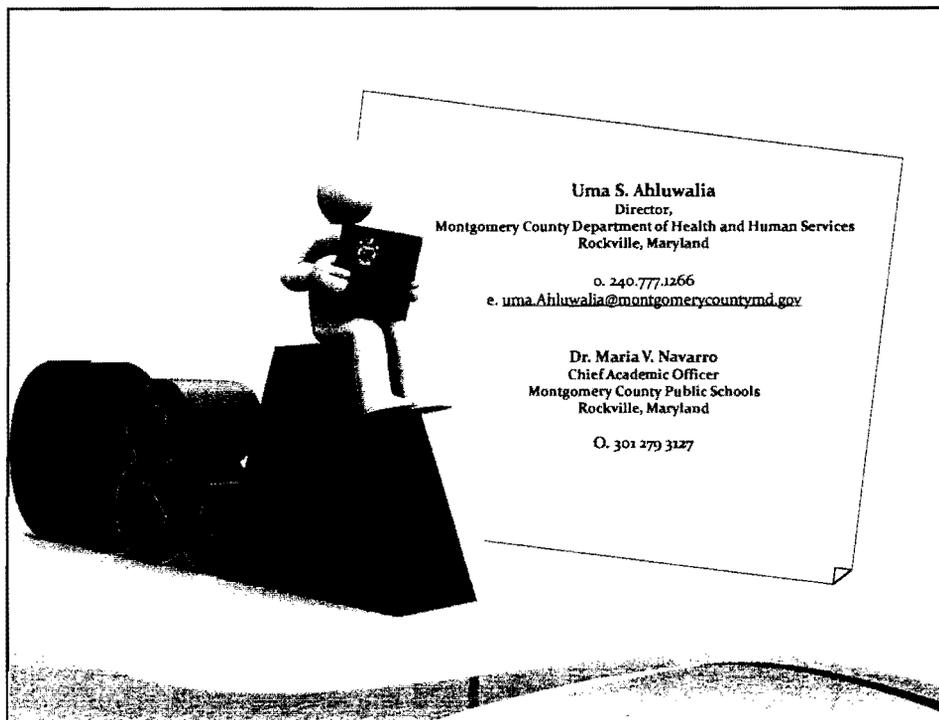
Agreement to Test in Two Areas:

- Considerable work underway with help of Casey Family Programs, ABA Center for Children and the Law, Maryland State Department Of Human Resources, MCPS and MCDHHS – *to look at the educational outcomes of school age children involved in child welfare*
- Test data sharing in one non custody program namely Linkages to Learning
- With these learnings develop an MOU and a sandbox approach to share data for all three tiers for start of the new school year and then gradually expand the model to other shared program areas



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**Final Report on the Linkages to Learning
Program and Evaluation at Broad Acres Elementary School**

December 2, 1999

University of Maryland, College Park

Nathan Fox, Principal Investigator
Peter Leone, Co-Principal Investigator
Ken Rubin, Co-Principal Investigator
Jennifer Oppenheim, Project Director
Michelle Miller, Research Coordinator
Karen Friedman, Data Analyst

This project was funded by a U.S. Department of Education grant (Award #H237F0014). The authors of this report gratefully acknowledge the support and assistance of the following people: the staff of the Linkages to Learning program at Broad Acres Elementary School; the staff at the experimental and control schools, particularly the principals; the Linkages Resource Team; the Linkages partner agencies, including Montgomery County Department of Health and Human Services, MCPS, CPC Health, Inc., and the Amigo Program; Kim Nguyen; Ruth Friedman; Judy Card; the research assistants; Sheri Meisel; John & Margot Richters; and the staff of the MCPS Department of Educational Accountability. A special thanks to the parents, children and teachers at both schools for the time they spent helping us understand their needs and the impact of Linkages to Learning.

Results/ Discussion

Child Outcomes

A series of repeated measures analyses of variance were completed on data collected from three different sources: primary caregivers, teachers, and children. Analyses compared longitudinal changes in child behaviors at the experimental and control schools from baseline 1996 to August 1999. Scores were obtained from parents on the Child Behavior Checklist (CBCL, Achenbach, 1991), teachers on the Teacher-Child Rating Scale (T-CRS, Hightower, et al., 1986), and from the children themselves on the Levonn Scale of Children's Emotional Distress (Richters, Martinez, & Valla, 1990). Analyses compared differences in the average scores between children in the two schools, and differences among children in the experimental school who did or did not receive services through the Linkages to Learning program.

Each of the following sections begins with a concise summary of the major findings. This is followed by a more detailed explanation of the data analyses. In addition, graphs are included to clarify the results pictorially.

A. Emotional and Behavioral Outcomes: Parent Report

Findings:

Parents in the school with the Linkages to Learning program reported a significant decrease of children's negative behaviors over three years. Decreases were reported on both the externalizing and internalizing subscales. At baseline, children in the experimental school exhibited more negative behaviors than children in the control school. However, by the end of the third year of the Linkages to Learning program, children at the experimental school had fewer negative behaviors than those at the control school. This suggests that Linkages may have had a positive, school-wide impact on the prevalence of parent-reported behavior problems.

The CBCL assessed parent perceptions of children's emotional and behavioral difficulties. The overall ANOVA results and simple effects at baseline and again at the end of the third year indicated no significant differences between the two schools on either of the two major subscales: externalizing and internalizing problem behaviors. There was an overall decrease in the mean problem behaviors on both subscales over time and this main effect was significant. In addition, there were similar significant Time x School interactions for both the externalizing ($F(2,66) = 13.43, p < .001$) and internalizing ($F(1,67) = 6.38, p < .014$) subscales. Figures 7 and 8 graphically illustrate these interactions. As can be noted for both internalizing and externalizing behaviors, there was a sharp reduction in problem behaviors among children at the experimental school. While there was some reduction in behavior problems reported by parents at the control school, this change was considerably smaller.

Figure 7. Parent Reported Child Externalizing Behaviors by School

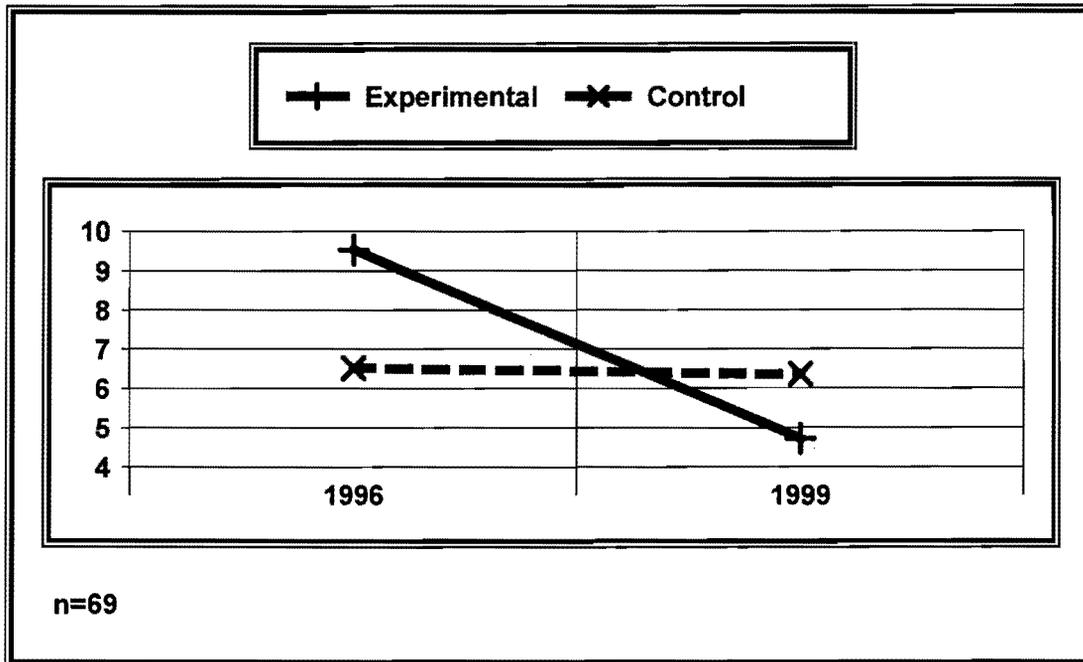
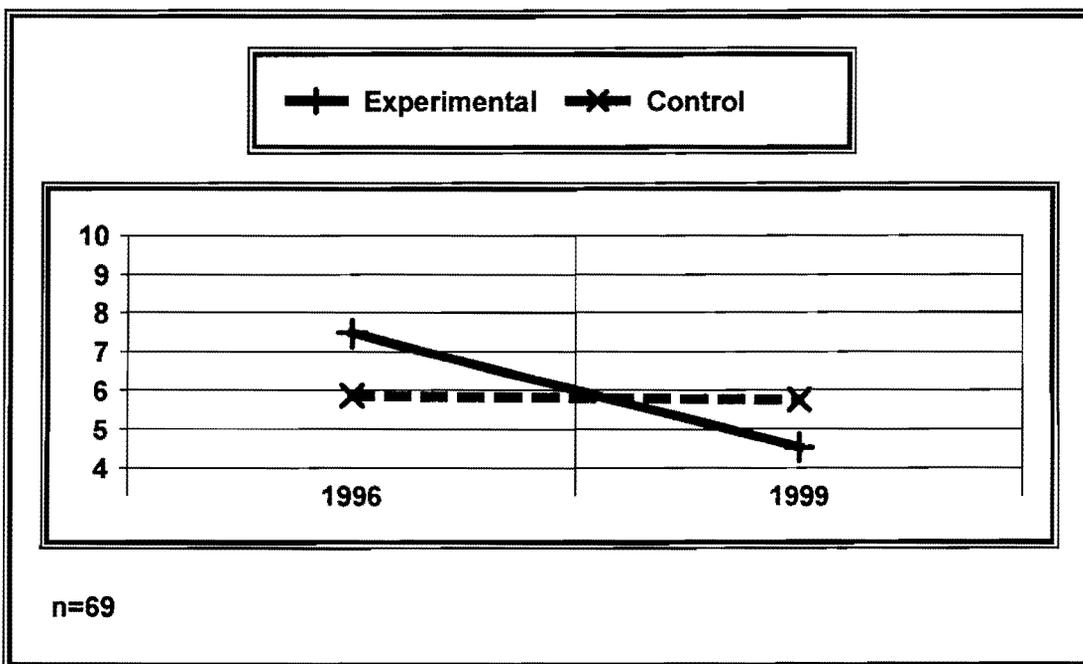


Figure 8. Parent Reported Child Internalizing Behaviors by School



Post hoc comparisons explained this interaction further. Longitudinally, children from the control school showed no significant change on either the externalizing scale ($t(36) = .22, p = .823$) or the internalizing scale ($t(36) = .14, p = .893$). In contrast, the scores for the children from the experimental school showed a significant decrease in both types of problem behaviors (externalizing, $t(31) = 4.45, p < .001$; and internalizing, $t(31) = 3.78, p < .001$).

The fact that children at the experimental school started out with more problem behaviors than those at the control school indicates that these findings should be interpreted with some degree of caution. Some improvement in students' behaviors may be associated with a regression to the mean statistical artifact. On the other hand, there is some evidence to suggest that children showing severe problem behaviors in early primary school years tend to regress further by grade level. This trend is not evidenced among children at the experimental school. It is hypothesized that the presence of the Linkages to Learning program at that school may be a factor serving to mitigate against such an increase in behavior problems over time.

Differences in CBCL Scores by Services

Findings:

The second way that changes in the CBCL were examined was to evaluate differences between children in three groups: children at the control school, children at the experimental school who had received direct services through the Linkages to Learning program, and children at the experimental school who had not received services. Over time, there were significant differences between the three groups on both the externalizing and internalizing subscales. Children who had the highest scores on the CBCL were those who were receiving Linkages services. This suggests that the children who needed services most were the ones who received them.

The reported externalizing problem scores for children receiving services were, on average, more than 2 points higher than those of children not receiving services in the same school, and 4 points higher than scores of children in the control school. While the baseline differences were not as dramatic for the internalizing subscale, the differences were in the same direction.

By the end of the study, parent-reported problems for children receiving services had dropped to the level of children at the control school. The most apparent drop was on the externalizing subscale, where the average 4-point difference had disappeared. It appears that the program had a positive effect, at least in terms of parents' perceptions of their children's emotional and behavioral problems.

In addition, an interesting result was shown for children in the experimental school who were not receiving services. Similar to the children who were receiving

services, this group also showed a dramatic decline in parent-reported problem behaviors on both subscales. In fact, the decline for this group was even greater than for those receiving services, particularly on the internalizing subscale. This finding suggests that the Linkages to Learning program may be having a general effect on the emotional climate of the school. Even parents of those children not directly receiving services were reporting significant improvements in the behaviors of their children. It is possible that these children, whose behavioral problems were likely to be less severe and entrenched than those of children receiving services, were more likely to make behavioral gains with even a minimal level of intervention (e.g., program presence in the school, program impact on teacher or parent attitudes, etc.) Figures 9 and 10 illustrate the changes in CBCL scores for children in the three groups from baseline to 1999.

Figure 9. Parent Reported Child Externalizing Behaviors for Three Groups

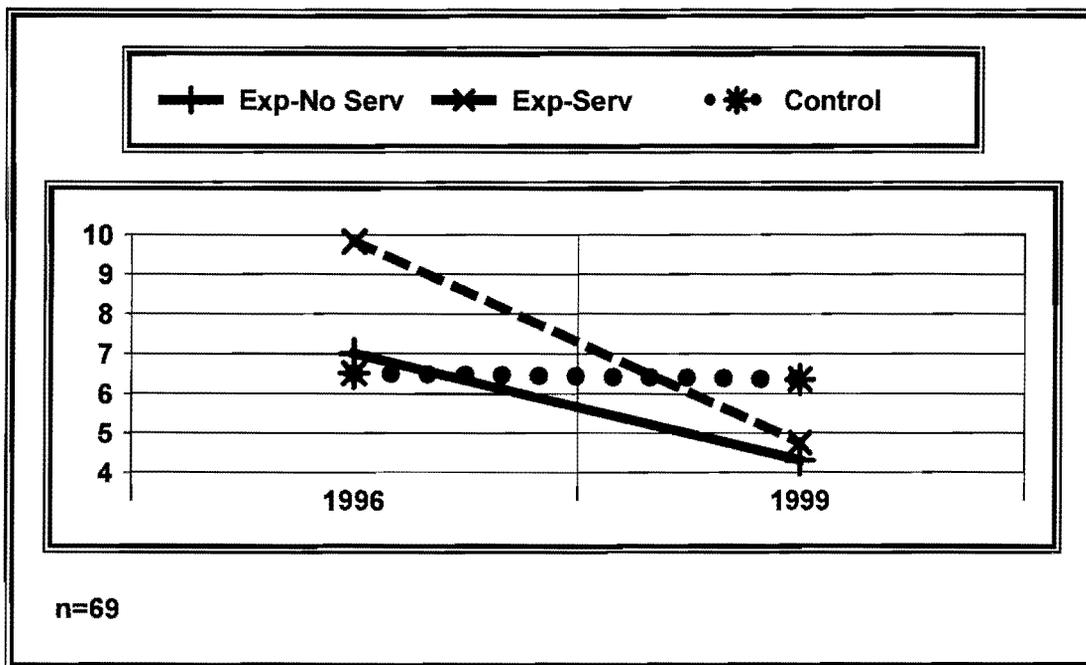
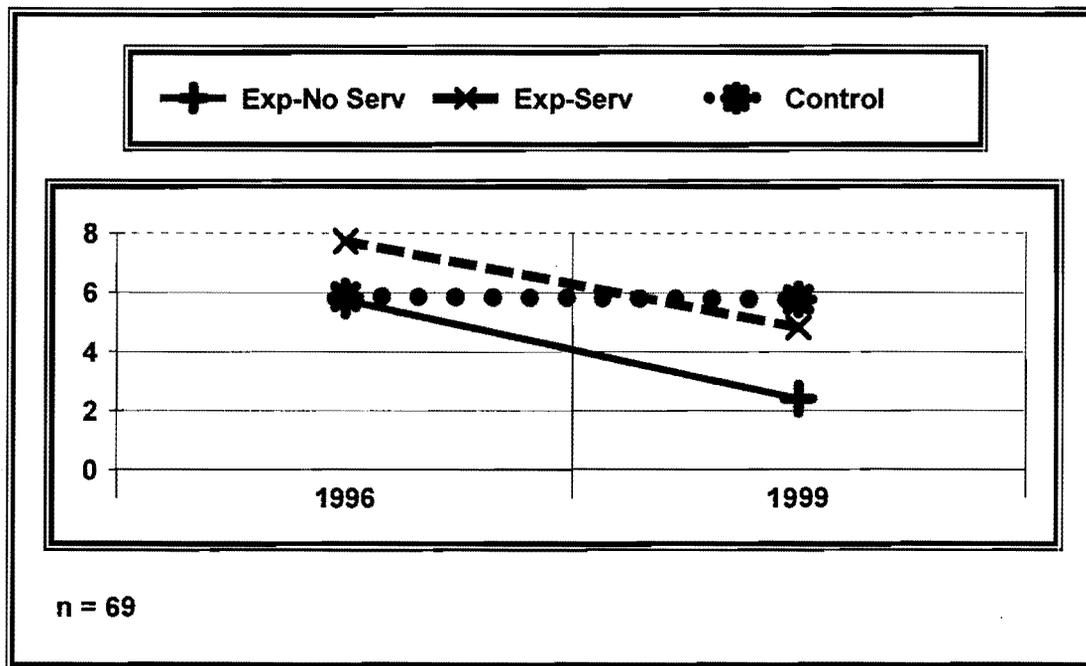


Figure 10. Parent Reported Child Internalizing Behaviors for Three Groups



B. Emotional and Behavioral Outcomes: Teacher Report

Data on children's behavior in the classroom were collected from teachers using the Teacher-Child Rating Scale (T-CRS). Teachers completed checklists each year to document the behavioral strengths and weaknesses they observed among their students. The T-CRS groups items into positive and negative behaviors. Negative behaviors include things like being disruptive in class, poor motivation, and defiant behavior. Examples of positive behaviors include coping well with failure, being sensitive to other children's feelings, and tolerating frustration well.

Negative Behaviors

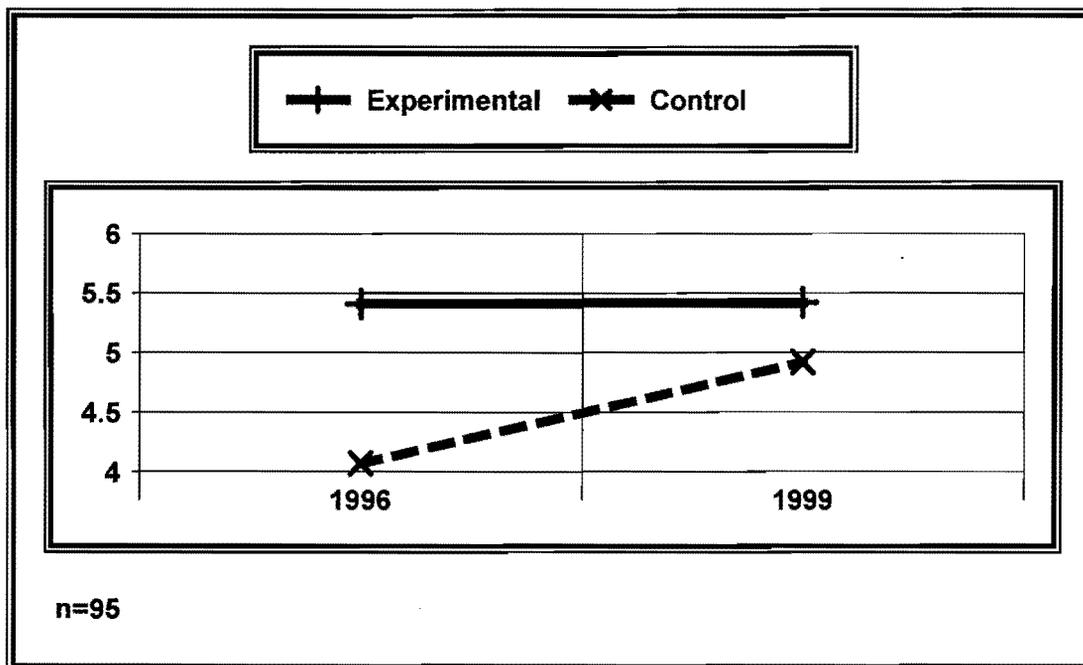
Findings:

The trend in children's negative behaviors over time as reported by classroom teachers indicated a positive effect for the Linkages to Learning program. While children at the control school showed an increase in negative behaviors as they got older, the children at the experimental school did not show a similar trend.

Analysis of teacher ratings on the T-CRS indicated a positive effect for the Linkages to Learning program, although the interaction for school over time was not statistically significant ($F(1,93) = 3.58, p = .062$). Scores for children at the control school increased almost a full point on the negative subscale, while scores for children at the experimental school remained virtually unchanged over three years. At baseline,

teachers at the experimental school reported children as having significantly more negative behaviors ($t(98) = 3.85, p. < .001$) and significantly fewer positive behaviors ($t(98) = -2.10, p. = .038$) than teachers at the control school. At the end of the third year, however, the schools were no longer statistically significantly different from each other on the negative subscale ($t(111) = 1.62, p. = .108$). That is, children at the control school demonstrated an increase in negative behaviors as they got older, while children at the experimental school did not show a similar trend, even though they had more risk factors. Figure 11 provides a graphical depiction of this finding.

Figure 11. Teacher Reported Child Negative Behaviors by School



As Figure 11 illustrates, children in the control school went up almost a full point on the negative subscale over the course of the study. One possible explanation is that as children get into the higher elementary grades, the classroom becomes a more structured environment. Negative, acting-out behaviors become more apparent, particularly among children at-risk for academic and behavioral problems. It is also possible that as children get older, teachers' expectations for conforming behaviors get higher. When children fall behind in the academic domain, they may be more likely to respond by acting-out. Such behaviors can be attempts to distract from their academic difficulties, or may be expressions of frustration, anger or poor self-image.

Since children in the experimental school represent an equally, if not more, high-risk population than children in the control school, it was reasonable to expect a similar increase in teacher-reported negative behaviors as these children got older. In fact, at baseline, teachers at the experimental school reported children as having significantly more negative behaviors and significantly fewer positive behaviors children at the control school. However, at the end of the third year, the schools were no longer statistically

different from each other on the negative subscale. While children at the control school showed an increase in negative behaviors as they got older, the children at the experimental school did not show a similar pattern. This was true both for children in the experimental school receiving Linkages to Learning services, and those not receiving services. It is possible to speculate that the Linkages to Learning program was one important factor in preventing this increase in negative behaviors over time.

Positive Behaviors

Findings:

No significant differences were found among the three groups in terms of change in positive behaviors.

B. Emotional Outcomes: Child Report

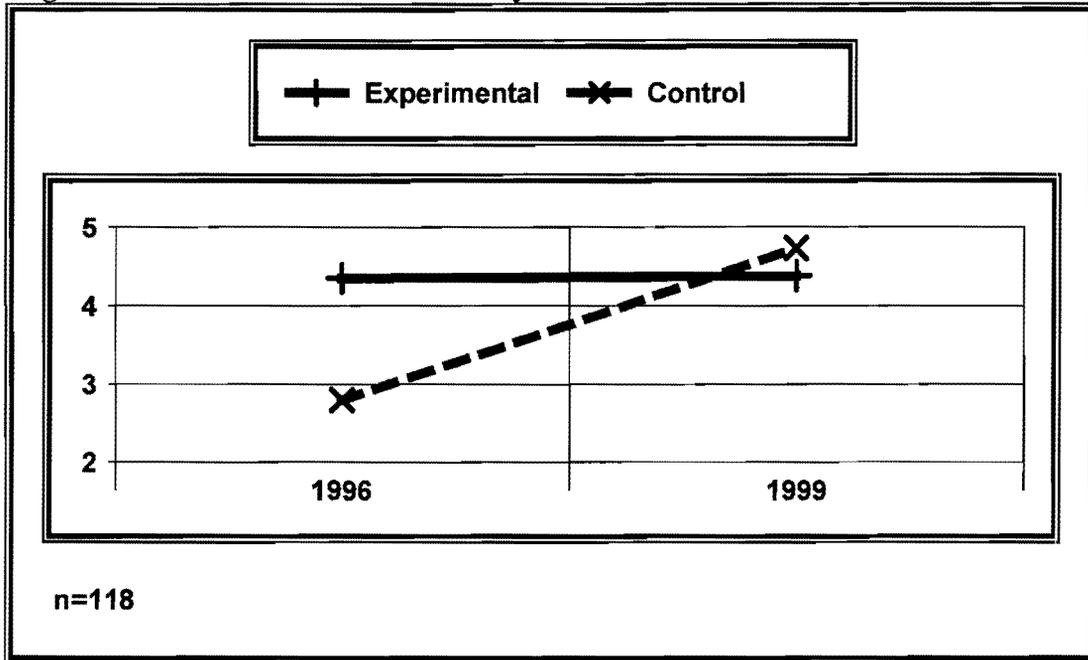
Findings:

As expected, children in the experimental school reported significantly higher emotional distress levels at baseline than children in the control school. Three years later, however, distress scores for children in the experimental school were lower than those of children in the control school.

Just as parents and teachers reported on children's behavioral functioning at home and in the classroom, children reported on their own perceptions and experiences of emotional well-being. The Levonn Scale was used to assess a child's perception of his/her own level of emotional distress. For this measure, children reported on the extent to which they experienced symptoms of anxiety, depression, distractibility, and poor self-esteem.

Analyses by ANOVA indicated a significant School x Time interaction ($F(2,116) = 6.80, p = .010$). At baseline, the two schools were significantly different ($t(116) = 2.56, p = .012$) from each other, with children at the control school reporting significantly lower distress levels. The levels of distress among children at the experimental school remained stable over the three year period. However, the scores for the children the control school increased significantly ($t(43) = 3.41, p = .001$) and surpassed scores for children at the experimental school. Figure 12 illustrates this finding.

Figure 12. Child Emotional Distress by School



At this point, we can only speculate about the reasons for an increase in distress symptoms among children at the control school. It is possible, for instance, that as children get older and have greater self-awareness, they are more able and more likely to report on their internal experiences of sadness, anxiety or low self-concept. It is also possible that as children get older and parents, teachers, and even peers place greater expectations upon them, they are more likely to experience stress. Common stresses experienced by school aged-children include those related to academic success, social acceptability, and family factors such as divorce. Again however, what is most notable here is that while we would speculate that children at both schools would be similarly vulnerable to the effects of such stresses, only those at the control school show increases in distress levels over time. This finding suggests that the presence of the Linkages to Learning program at the experimental school may be serving as a protective factor against such increases in emotional distress.

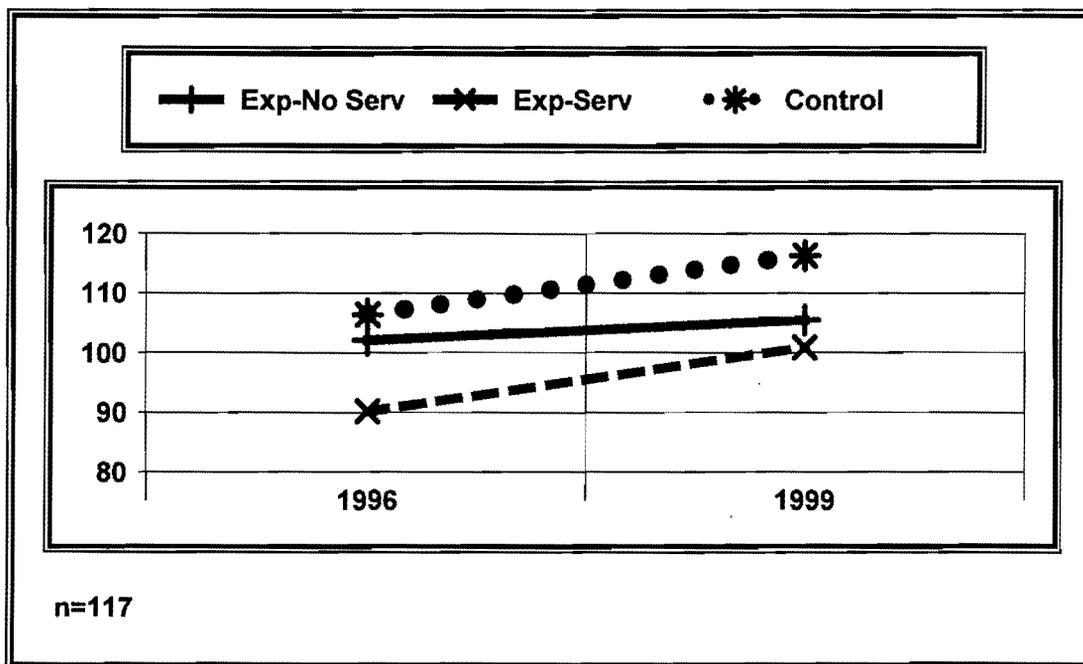
C. Academic Outcomes

Findings:

Results from the math subscale of the academic achievement screener indicated some positive effects of educational services provided to children through the Linkages to Learning program. Children at both schools had significantly higher math achievement scores at the end of the three-year study than at baseline. However, children receiving educational services through the Linkages to Learning program improved significantly more than those at the experimental school who did not receive services.

To determine if the Linkages to Learning program had an impact on academic achievement, children were assessed with the Woodcock-McGrew-Werder Mini-Battery of Achievement (1994). Data were collected by trained research assistants, normed to standardized scores by age, and analyzed by repeated measures analyses of variance. Results from the math subscale indicated some positive effects of direct educational services to children. Children at both the experimental and control schools had significantly higher math achievement scores at the end of the three-year study. However, when children at the experimental school were divided into two groups, those receiving direct educational services and those not receiving services, the group receiving services improved significantly more. The two groups at the experimental school were different at baseline ($t(71) = .32, p = .001$), but by the end of the study those receiving services had made considerably greater gains, and the difference between the groups was no longer significant ($t(73) = 1.05, p = .297$). These changes are depicted graphically in Figure 13.

Figure 13. Math Achievement by 3 Groups



As Figure 13 illustrates, the performances of children within the two groups at the experimental school were different. While the children not receiving direct educational services started out with higher math achievement scores, by the end of the study the children receiving services had made such gains that they were now approaching the achievement scores of their peers in the no-service group. Again, as in earlier examples, children in the service group had the lowest achievement levels of all children. This indicates that the children who received help were in fact those with the greatest need. By the end of the study, children who received services scored closer to their same-school peers than they did at baseline. Thus, when children at the experimental school

not receiving services were viewed as a control group, the Linkages intervention seemed to have a positive effect on this aspect of academic functioning. That is, the children receiving services showed significantly greater improvements than their no-service peers. In fact, their gains more closely mirrored those of the children in the control school.

This positive impact of the Linkages to Learning program on math achievement was not found for either the reading subscale or the writing subscale of the achievement measure. One important consideration is the fact that a significant number of the children at the experimental school had limited English proficiency, which could have confounded reading and writing scores. Math scores, because they are less language-dependent, may be less influenced by this factor.

Parent Outcomes

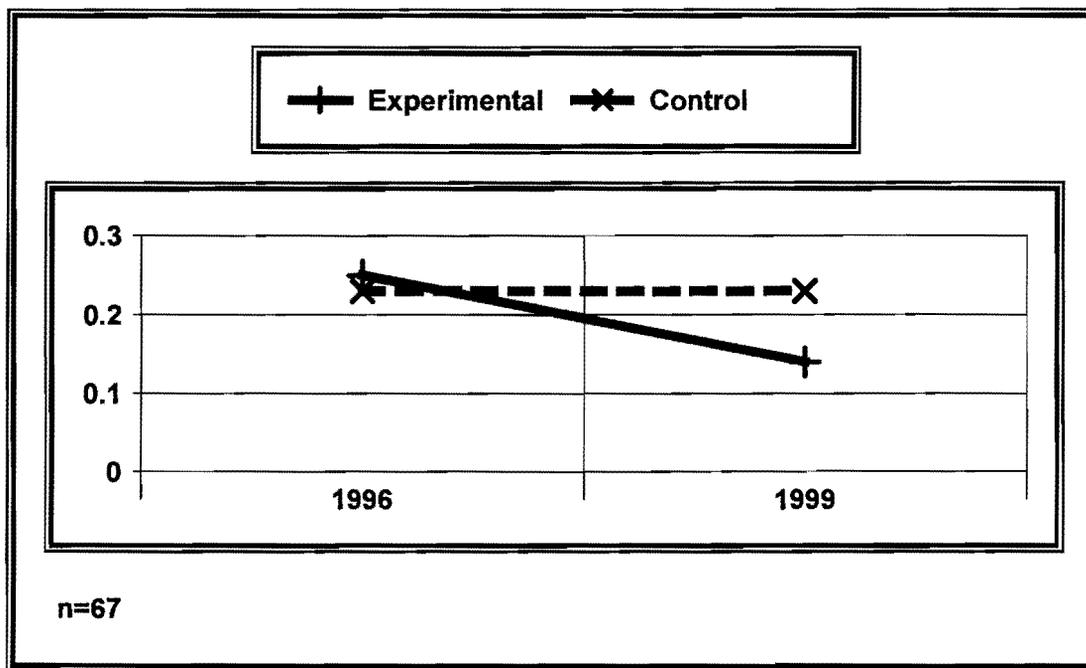
A. Depression

Findings:

Since Linkages to Learning services were available to parents at the experimental school, it was anticipated that parents would show improvement in some areas of emotional functioning and parenting skills. While levels of depression did not differ significantly between the two schools, the trends were interesting. Parents at the school with the Linkages to Learning program reported being less depressed over time, while those at the control school remained unchanged.

Data were collected from children's primary caregivers to assess their level of emotional functioning (Brief Symptom Inventory, BSI, Derogatis & Melisaratos, 1983). On this inventory, parents indicated on a 5-point Likert scale whether they had experienced a number of physical and emotional "symptoms" during the past 7 days. Of particular interest to this study was the subscale which assessed depression, since a high correlation between maternal depression and child behavior problems has been demonstrated in previous research. At baseline, parents at the experimental school reported slightly higher depression ratings than parents at the control school. By the end of the study, while depression scores of the control school parents had not changed, there was a decrease in comparable scores for parents of children in the experimental school. Figure 14 presents these findings graphically.

Figure 14. Primary Caregiver Level of Depression by School



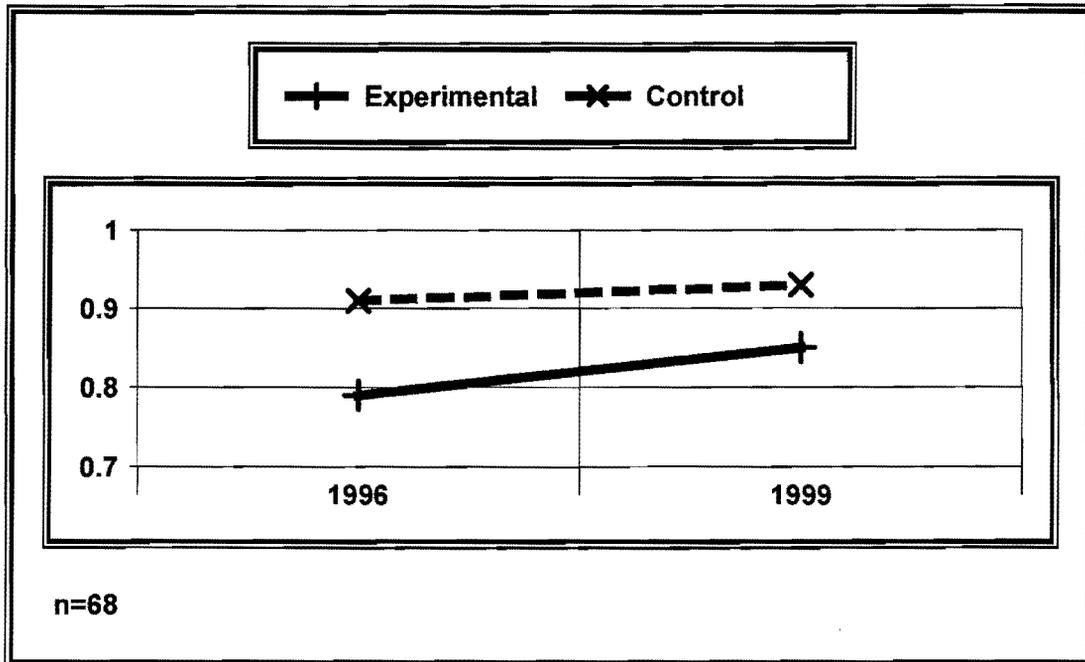
B. Family Cohesion

Findings:

A significant positive change for parents in the experimental school was evident in the amount of family cohesion reported by the primary caregiver. Parents at the experimental school reported a significant increase in family cohesion over time that was not evident among parents at the control school.

The cohesion subscale of the Family Environment Scale (FES, Moos & Moos, 1981) was used to assess this area of family functioning. This subscale was of particular interest because it correlated significantly with children's CBCL scores. Analyses indicated that there were significant differences between the two schools and over time. That is, the two schools were significantly different at baseline, with parents at the experimental school reporting less family cohesion. By the end of the study, cohesion scores were no longer significantly different for parents at the two schools. Here again, it is possible that activities offered through the Linkages to Learning program (such as activities aimed at reducing social stressors, and improving emotional health, parenting and family functioning) may have resulted in some positive impact on families at the experimental school. Figure 15 illustrates these findings.

Figure 15. Family Cohesion by School



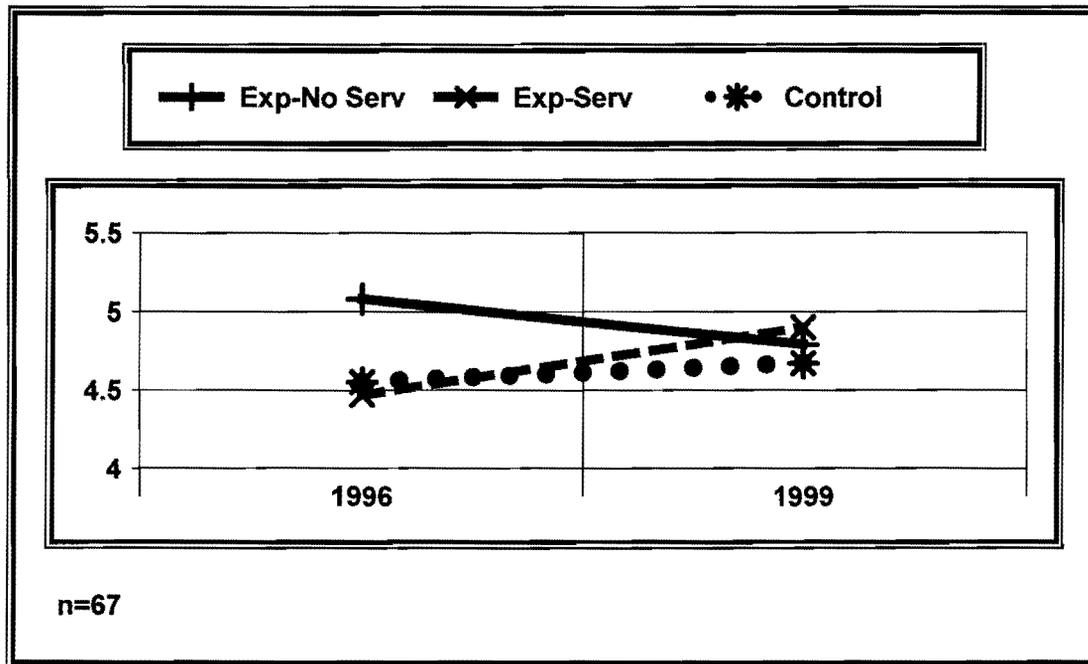
C. Consistency in Parenting Practices

Findings:

Several aspects of parenting style were assessed. Findings related to consistency in parenting were particularly encouraging. Parents receiving services through the Linkages to Learning program demonstrated greater gains in consistency than parents at the experimental school who did not receive services, and parents at the control school.

Subscales of the Parenting Dimensions Inventory (PDI, Slater & Power, 1987), a multidimensional assessment of parenting, were used to measure differences between the schools and over time on various aspects of parenting. When measuring consistency in following through on discipline, differences were found among all groups, although these were not statistically significant. The trends, however, were very encouraging. While parents at the control school showed slight increases in consistency over time, parents at the experimental school who did not receive Linkages services reported decreases in consistency. Parents at the experimental school who received Linkages services made the greatest gains. This finding, which is shown in Figure 16, suggests a positive effect of program services on this aspect of parenting practices.

Figure 16. Consistency in Childrearing Practices by Three Groups



D. Use of Physical Punishment

Findings:

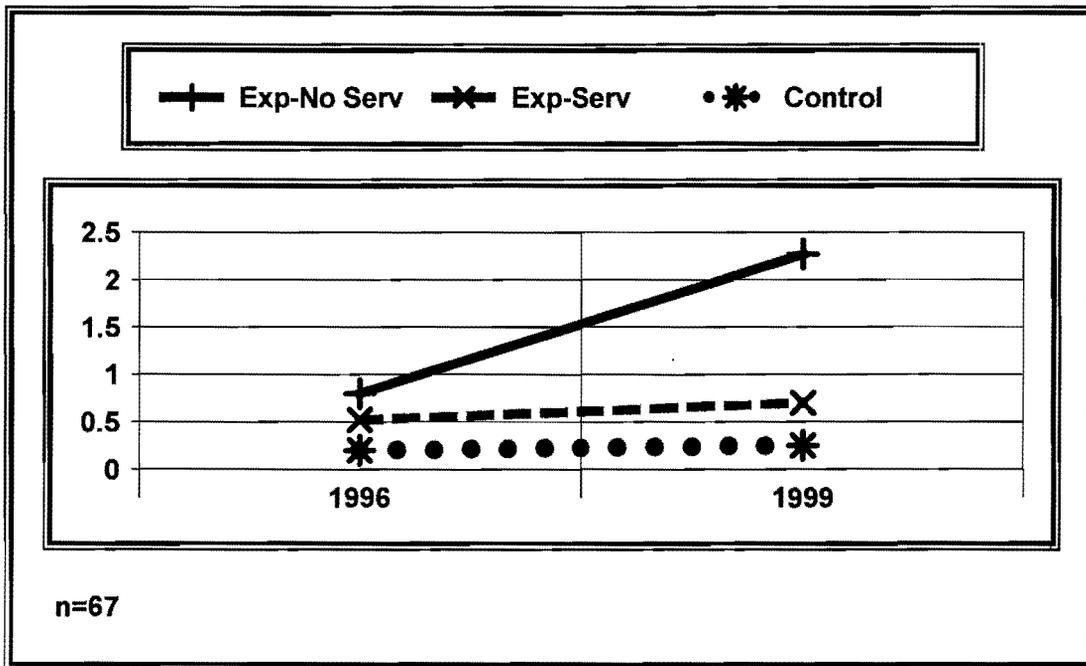
Use of physical punishment was another area of parenting that was assessed. While parents in all three groups increased reliance on physical punishment as their children got older, parents at the control school and parents who were receiving Linkages to Learning services increased only slightly. However, parents at the experimental school who were not receiving services increased significantly in their use of physical punishment.

There was a significant difference between the two schools at baseline ($t(64) = 3.2, p = .002$) and also at the end of the study ($t(67) = 3.32, p = .001$). At both points in time, parents at the experimental school reported greater use of physical punishment. When comparing parents at the experimental school who did not receive services, parents receiving Linkages services, and parents at the control school, there was a significant Group x Time interaction ($F(2,63) = 6.10, p = .004$). There were also significant differences found between the three groups ($F(2,63) = 12.00, p < .001$) and over time ($F(2, 63) = 11.94, p = .001$). That is, the three groups were significantly different from each other at baseline and were still significantly different at the end of the study.

While all three groups increased in their use of physical punishment, parents at the control school and parents who were receiving Linkages to Learning services increased only slightly. However, parents at the experimental school who were not

receiving services increased significantly in their use of physical punishment. Findings suggest that providing parenting support and education to families with high risk factors may lead to the development and use of discipline strategies other than physical punishment. When these services were not used by parents within this high-risk population, use of physical punishment increased significantly more. Differences in use of physical punishment among the groups, and changes over time, are depicted in Figure 17.

Figure 17. Use of Physical Punishment by Primary Caregiver by Three Groups



E. Consensus

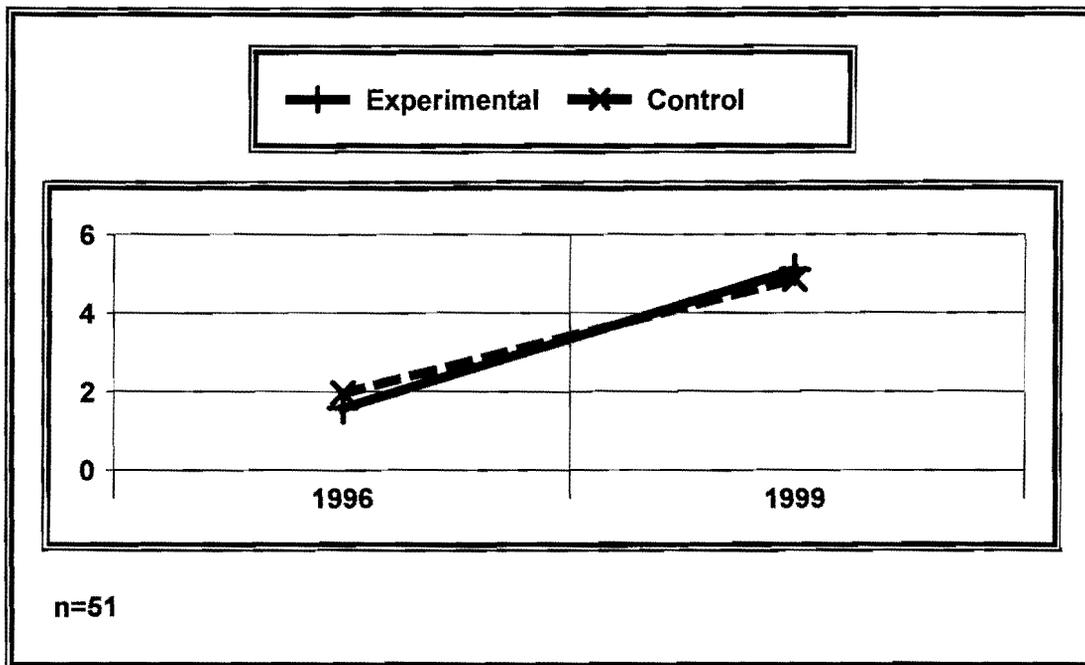
Findings:

While not all children in the study were from two-parent families, additional data assessing the quality of the relationship between parents in couples were collected from primary caregivers with partners. Findings indicate that ratings of consensus among partners at the experimental school increased more than, and even surpassed, scores among couples at the control school.

At baseline, partners at the experimental school had significantly lower consensus scores than partners at the control school ($t(19) = 12.63, p < .001$) on the consensus subscale of the Dyadic Adjustment Scale (Spanier, 1976). Parents at both schools showed a significant increase in their consensus scores. However, at the end of the study consensus among partners at the experimental school had increased more and even surpassed the consensus scores for parents at the control school. There was no longer a

significant difference in parental agreement scores between the schools after three years. Figure 18 depicts this outcome.

Figure 18. Consensus Between Partners by School



Teacher Outcomes

Findings:

There were no significant differences between teachers at the two schools in terms of job satisfaction.

To determine whether there were significant differences in teachers' perceptions of their job satisfaction between the two schools, data were collected on the Maslach Burnout Inventory (Maslach & Jackson, 1981). It was hypothesized that teachers at the experimental school would report higher levels of emotional exhaustion, more student depersonalization, and lower feelings of personal accomplishment due to the significant population of students with multiple and severe psychosocial stressors (e.g., poverty, abuse) at that school. However, a series of independent t-tests and analyses of variance did not support these hypotheses. No significant differences were found between teachers at the two schools at baseline or at the end of the study on any of the three Maslach subscales. There were also no differences over time or significant interactions.

Findings from the study of the Linkages to Learning program at Broad Acres Elementary School are quite encouraging. Data from multiple sources, assessing functioning across several domains (e.g. behavioral, emotional and academic), indicate

positive outcomes for children and families. In some areas, functioning of children and parents at Broad Acres improved over time, while functioning of children and families at the control school did not. For example, parents reported significantly decreased behavioral problems among their children at Broad Acres, while parent-reported problems at the control school remained stable over time. Similarly, parents at Broad Acres reported slightly lower ratings of depressive symptoms, and higher rates of family cohesion over the course of three years, while control school parents reported virtually no change.

Furthermore, while teacher-reported negative behaviors and children's self-reported emotional distress symptoms increased at the control school, functioning of children at Broad Acres remained stable in these areas. While it is not entirely clear why these problems increased among the control sample, it is reasonable to expect to see similar trends among children in both populations. This suggests that the presence of the Linkages to Learning program at Broad Acres may have been serving to prevent such behavioral and emotional problems from increasing.

Even more compelling are the findings that demonstrate particularly positive gains among children and families at Broad Acres who received direct services through the Linkages to Learning program. Children who received educational support from the Linkages program made the greatest improvements in math achievement of all groups of children, for example. Parents participating in the program also made the greatest gains in terms of consistency in parenting practices.

Future research on children and families like those at Broad Acres is needed to assess the sustainability of these outcomes. In particular, we need to understand whether or not children maintain positive gains as they move into middle and high school, and whether such changes make a difference in these children becoming self-sufficient, well-adjusted and productive members of society.

I BELIEVE IN ME!



AN EVALUATION OF THE GEORGE B. THOMAS, SR. LEARNING ACADEMY
SATURDAY SCHOOL PROGRAM

I BELIEVE IN ME!
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BY

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APRIL 2014

Acknowledgements:

The author would like to thank Ms. Suzanne Peang-Meth and Mr. Robert Anastasi for their valuable comments and editing assistance.

The cover page photograph was provided by The George B. Thomas, Sr. Learning Academy, Inc.

EXECUTIVE SUMMARY

The racial/ethnic gap in academic achievement is a long-standing concern in education. Some of the root causes of the gap are better understood by examining the issues and challenges that confront African American and Hispanic students from low-income families, many of whom also live in households where English is a second language. In these situations, solutions to closing the achievement gap must include access to a broader range of services than are available through a school system. Out-of-school time (OST) programs have the potential to provide some of the services that students need to overcome barriers to achieving their academic potential. This evaluation describes the results of one OST program, The George B. Thomas, Sr. Learning Academy Saturday School program.

The George B. Thomas, Sr. Learning Academy, Inc. (GBTLA) was established in 1986 by members of the Mu Nu Chapter of Omega Psi Phi Fraternity, Inc. The first learning academy, the Olney Saturday School, began in 1986 with 21 children and 19 volunteers at a day care center at the Housing Opportunities Commission in Olney, Maryland. The program has grown significantly since then. The current Saturday School program serves more than 3,000 students per year at 12 Montgomery County Public Schools (MCPS) high schools.

The GBTLA founders recognized that an increasing number of poor and minority children in the community needed additional academic support to be successful in school. They believed that self-confidence was key to academic success. Saturday School activities were structured to provide a nurturing environment that would enhance students' positive beliefs about themselves as well as build their knowledge and skills.

Over the past 28 years, GBTLA has provided services to tens of thousands of at-risk students. During that time, there has been abundant qualitative and anecdotal evidence that students benefit from program participation. This evaluation is the first to use a quasi-experimental design to describe quantitative academic outcomes for treatment and comparison groups.

The evaluation design ensured that any differences in performance at the end of the year could be attributed validly to program effects. To

accomplish that, the evaluation sampling procedure randomly selected matched pairs of students who were expected to have the same levels of performance at the end of the school year. The statistical controls and matching procedures accounted for differences in academic outcomes that might be explained by participants' grade levels, demographics, or prior achievement.

Between October 2012 and April 2013, Saturday School offered program participants more than 65 hours of focused academic instruction. Program participation of 35 hours or more was associated with positive academic outcomes among students in Grades 1 to 12. The effects are noteworthy for two reasons—the consistency in program effects across multiple measures and grade levels; and the relative magnitude compared with outcomes reported in the literature for other OST programs.

Among students in Grades 1 to 12, Saturday School participation was associated with higher levels of academic performance that were both statistically and practically significant. Participants in the treatment group had higher performance in these areas:

- Grades 1 and 2
 - School attendance
- Grade 3
 - Reading benchmark attainment
 - Mathematics benchmark attainment
- Grades 4 and 5
 - Semester 2 Reading GPA
 - Semester 2 Mathematics GPA
- Grades 6 and 7
 - Semester 2 English GPA
 - End-of-Year English Course Marks of B or Higher
 - Semester 2 Mathematics GPA
 - End-of-Year Mathematics Course Marks of B or Higher
- Grades 9 to 12
 - End-of-Year GPA

Program participation also was associated with small to moderate, mostly non-significant, practical differences in the academic attainment of elementary and middle school students who were performing below

grade level in fall 2012. Participants in the treatment group had higher performance in these areas:

- Grades 1 and 2
 - School Attendance (also statistically significant)
 - Reading Benchmark Attainment
- Grade 3
 - Reading Benchmark Attainment
 - Mathematics Benchmark Attainment
- Grade 4 and 5
 - Semester 2 Reading GPA
 - Semester 2 Mathematics GPA
 - End-of-Year Mathematics Course Marks of B or Higher
- Grades 6 to 8
 - Semester 2 English GPA
 - End-of-Year English Course Marks of B or Higher
 - Semester 2 Mathematics GPA
 - End-of-Year Mathematics Course Marks of B or Higher (also statistically significant)

There were small, non-significant, practical differences in the academic attainment of high school students who were performing above grade level in fall 2012. High school students in the treatment group were more likely to be academically eligible in spring 2013 and had higher end-of-year marking period averages.

Saturday School narrowed achievement gaps by helping students overcome barriers to achievement that are associated with race/ethnicity and poverty. The program provided rigorous instruction that was delivered by teachers who were familiar with students' academic and emotional needs. The combined program characteristics of academic rigor and a nurturing environment were associated with significant academic outcomes. Elementary, middle and high school students of all ability levels were able to use this resource to better achieve their academic potential.

The results of this program evaluation provide quantitative evidence of the importance of OST programs such as Saturday School for helping to narrow achievement gaps. In addition, the statistical analyses provide support for anecdotal evidence from students, teachers, and parents who served as key informants for this evaluation.

The evaluation design for this study included a program site visit to collect data from key informants about their reasons for participating in Saturday School and the impact that participation has had for them. Their remarks reinforced the GBTLA founders' beliefs that a program to build academic skills and personal self-confidence could help close achievement gaps.

"I came here because I wasn't that good in math. I wasn't always able to grasp the mathematical skills as quickly as some of my other classmates. . . . I also wanted to better my analytical skills and [reading comprehension] skills. And Saturday School has definitely helped me. . . . When I go back to school it feels kind of like I'm more advanced than the others now. My grades improved. I'm able to maintain a 3.5. I'm proud of myself. And I'm taking harder classes which means I push myself more."
—African American High School Student

"Students get to practice the skills that maybe they don't have the time to practice [at school] at their own pace. We are able to sort out or target and differentiate the needs they have as students."—Saturday School Teacher

"The sixth day of learning just gives students an extra boost. . . . A lot of times being in a classroom all week [the children] are not as relaxed as they are on Saturday and not as willing to take chances. I think Saturday School gives them the opportunity to take more chances and become risk takers in their education and it also builds their confidence. They do well in Saturday School and they bring that back to the classroom. And then they do a little better in the classroom."—Saturday School Teacher

"They teach . . . confidence here. When [teachers] call on them, they have to stand and give their answers. They are supposed to be really respectful too. My son really knows you have to take your hat off when you come in. They are ready to work. I see him being very confident as part of the program. For reading I was concerned . . . his marks were not as high as the math . . . and the writing was just atrocious. . . . When he came here, the [reading instruction] started with writing in a journal or on a topic. He'll write pages and then get up and read it in front of the whole class."—Parent of 2nd Grade Saturday School Student

Summary of Outcome Analysis on Academic and Behavioral Gains From the Excel Beyond the Bell Program During the 2014–2015 School Year

By Helen Wang, Ph.D. & Kecia Addison, Ph.D.

Background

The Office of Shared Accountability (OSA) conducted an outcome analysis to examine what benefits students gained from participating in the Excel Beyond the Bell (EBB) program. Through offering safe, quality, and accessible after-school activities, EBB is a collaborative effort aiming to inspire middle school students to realize their full potential, including academic and behavioral achievement, building positive relationships, and increasing involvement with their school and community. As a comprehensive enrichment opportunity, including an after-school nutrition program and expanded transportation services, EBB is offered at select middle schools at no cost to families.

Purpose

The purpose of this outcome analysis was to examine the potential academic and behavioral impact of EBB during the 2015 school year by comparing students who participated in EBB with their non-participating peers from similar demographic backgrounds.

Participants and comparison students

EBB 2015 participants included Grades 6 through 8 students from seven middle schools who were registered in the program for at least one of the three sessions offered during the school year. A comparison group was created to match the EBB participants by grade level, race/ethnicity, gender, receipt of Free and Reduced Price Meals System (FARMS), English for Speakers of Other Languages (ESOL), and special education services. Students in the comparison group were not enrolled in EBB during 2015 and were considered non-participants. The EBB participants were grouped according to the number of days they attended the after-school activities throughout the year: 1) high-participation group (registered and attended 11 days or more during the year) versus 2) low-participation group (registered and attended fewer than 11 days or had no attendance during the year). Participants were then divided into the two roughly equal groups.

Research questions

- 1) Did students in the high-participation group perform better than those in the low- and non-participation groups in terms of the Measures of Academic Progress–Reading (MAP-R) Raush Unit (RIT) score and the average Marking Period Average (MPA) in 2015, after adjusting for student prior performance and demographics? (The same question is asked to compare low- with non-participation groups.)

- 2) Did students in the high-participation group demonstrate better behaviors than those in the low- and non-participation groups in terms of daily attendance and chronic ineligibility in 2015, after adjusting for student prior behaviors and demographics? (The same question is asked to compare low- with non-participation groups.)

Outcome measures

The academic outcome measures included the 2015 spring MAP-R RIT score and the mean marking period average (MPA) (ranging from 0 to 4) for the same school year. The behavioral outcomes were measured on the rate of daily attendance (ranging from 0% to 100%) and whether or not a student was chronically ineligible (i.e., for at least three marking periods) in 2015.

Analyses

Advanced statistical procedures were used to examine differences between high-, low-, and non-participation groups, paired respectively, over their mean MAP-R RIT scores, mean MPAs, mean daily attendance rates, and probabilities of being chronically ineligible, while adjusting for student demographics and prior performance or behavior. Analyses were conducted for students from different grade levels and racial/ethnic groups as a whole and separately. Analyses on the mean MPA and the probability for chronic ineligibility did not include Grade 6 because no applicable information in the prior year could be used for statistical adjustment.

Results

The benefit from participating in EBB was not found to be statistically significant on measures related to MAP-R and chronic ineligibility. However, students in the high-participation group showed higher mean MPA and daily attendance rate than students in the low- and non-participation groups. Tables 1 to 4 present results on measures related to the mean MPA and daily attendance rate for all students and by racial/ethnic group and grade level, comparing the high- with the low-participation groups and the high- with the non-participation groups, respectively.

Table 1 shows that the adjusted mean difference between the high- and low-participation groups in the mean MPA (i.e., the between-group mean difference obtained after controlling for the mean MPA in prior year and demographics) is significant for Grades 7 and 8 students as a whole group and also significant for Black or African American and Hispanic/Latino students and Grade 7 in particular. Similarly, the adjusted mean difference in the mean MPA is significant between the high- and non-participation groups for all students and for Black or African American and Hispanic/Latino students and Grade 7, plus it is also significant for Grade 8 (Table 2). Specifically, students with higher EBB participation (attended 2015 EBB activities for 11 or more days) earned a significantly higher average MPA than those with lower (enrolled in EBB in 2015 but attended for fewer than 11 days or did not attend at all) or no EBB participation (not enrolled in EBB in 2015). This academic benefit is also noticeable for underserved students. Caution is needed for interpretation because the results are likely to be confounded by summer programs and/or other factors.

Table 1
Adjusted Means and Mean Difference Between the High- and Low-EBB Participation Groups
in the Mean MPA in 2015 (Grades 7 and 8)

	Average daily attendance rate				Effect of EBB		
	High participation		Low participation		Adjusted mean difference ^a	Standard error	p ^b
	N	Adjusted mean	N	Adjusted mean			
All students	362	3.00	366	2.91	.09	.029	.002
AS	36	3.54	42	3.59	-.05	.084	.524
BL	195	2.83	148	2.73	.10	.042	.017
WH	15	3.19	27	3.23	-.04	.108	.700
HI	103	2.95	133	2.78	.17	.058	.004
MU	13	3.22	16	3.25	-.03	.094	.766
Grade 7	197	2.98	190	2.85	.13	.043	.003
Grade 8	165	3.01	176	2.96	.05	.041	.180

^aAdjusted mean difference=adjusted mean for the high-participation group – adjusted mean for the low-participation group, adjusted for race/ethnicity, gender, receipt of ESOL, FARMS, and special education services, and the mean MPA in prior year.

^bThe adjusted mean difference is significant at the .05 level.

Table 2
Adjusted Means and Mean Difference Between the High- and Non-EBB Participation Groups
in the Mean MPA in 2015 (Grades 7 and 8)

	Average MPA				Effect of EBB		
	High participation		Non-participation		Adjusted mean difference ^a	Standard error	p ^b
	N	Adjusted mean	N	Adjusted mean			
All students	362	3.00	751	2.91	.09	.024	.000
AS	36	3.46	82	3.52	.06	.063	.353
BL	195	2.91	345	2.83	.07	.033	.033
WH	15	3.29	44	3.24	.05	.118	.665
HI	103	2.85	248	2.67	.18	.050	.000
MU	13	3.04	32	2.99	.06	.113	.625
Grade 7	197	3.01	398	2.94	.07	.032	.025
Grade 8	165	2.99	353	2.87	.12	.038	.002

^aAdjusted mean difference=adjusted mean for the high-participation group – adjusted mean for the non-participation group, adjusted for race/ethnicity, gender, receipt of ESOL, FARMS, and special education services, and the mean MPA in prior year.

^bThe adjusted mean difference is significant at the .05 level.

Table 3 shows that the adjusted mean difference between the high- and low-participation groups in the daily attendance rate (i.e., the between-group mean difference obtained after controlling for the daily attendance rate in prior year and demographics) is significant for Grades 6 through 8 students as a whole group and also significant for Black or African American and Hispanic/Latino students and Grades 6 and 8 in particular. Similarly, the adjusted mean difference in the daily attendance rate is also significant between the high- and non-participation groups for all students and the same racial/ethnic groups and grade levels (Table 4). Specifically, students with higher EBB participation (attended 2015 EBB activities for 11 or more days) had a significantly higher

Table 3
Adjusted Means and Mean Difference Between the High- and Low-EBB Participation Groups
in the Daily Attendance Rate in 2015 (Grades 6, 7, and 8)

	Average daily attendance rate				Effect of EBB		
	High participation		Low participation		Adjusted mean difference ^a	Standard error	p ^b
	N	Adjusted mean(%)	N	Adjusted mean(%)			
All students	702	96.16	649	95.12	1.04	.200	.000
AS	81	97.42	76	96.43	.98	.406	.017
BL	335	97.02	226	96.20	.82	.314	.009
WH	51	94.96	58	93.52	1.44	.775	.067
HI	202	95.85	263	94.84	1.01	.353	.004
MU	32	97.37	24	96.25	1.12	1.137	.329
Grade 6	339	96.21	284	95.15	1.06	.303	.001
Grade 7	197	95.65	189	95.08	.57	.367	.122
Grade 8	166	96.51	176	95.46	1.04	.346	.003

^aAdjusted mean difference=adjusted mean for the high-participation group – adjusted mean for the low-participation group, adjusted for race/ethnicity, gender, receipt of ESOL, FARMS, and special education services, and the daily attendance rate in prior year.

^bThe adjusted mean difference is significant at the .05 level.

Table 4
Adjusted Means and Mean Difference Between the High- and Non-EBB Participation Groups
in the Daily Attendance Rate in 2015 (Grades 6, 7, and 8)

	Average daily attendance rate				Effect of EBB		
	High participation		Non-participation		Adjusted mean difference ^a	Standard error	p ^b
	N	Adjusted mean(%)	N	Adjusted mean(%)			
All students	702	96.08	1357	94.99	1.09	.196	.000
AS	81	97.34	155	96.83	.51	.399	.201
BL	335	97.01	567	96.24	.77	.255	.003
WH	51	94.93	111	92.43	2.50	1.121	.027
HI	202	95.61	469	94.22	1.39	.360	.000
MU	32	95.49	54	94.72	.78	.920	.400
Grade 6	339	96.25	607	95.37	.88	.244	.000
Grade 7	197	95.65	397	95.14	.51	.324	.111
Grade 8	166	95.44	353	93.85	1.59	.479	.001

^aAdjusted mean difference=adjusted mean for the high-participation group – adjusted mean for the non-participation group, adjusted for race/ethnicity, gender, receipt of ESOL, FARMS, and special education services, and the daily attendance rate in prior year.

^bThe adjusted mean difference is significant at the .05 level.

daily attendance rate than those with lower (enrolled in 2015 EBB but attended for fewer than 11 days or no attendance) or no EBB participation (not enrolled in 2015 EBB). This behavioral benefit is also noticeable for underserved students.

In general, students who attended EBB for 11 days or more were found to have a higher average MPA and daily attendance rate than those who attended fewer than 11 days and those who were not enrolled in 2015 EBB. Insignificant results for some racial/ethnic groups may be explained by the small sample size. Meanwhile, low EBB participation (attending fewer than 11 days or no attendance though enrolled) is found indistinguishable from non-EBB participation in terms of the academic and behavioral outcome measures.