3 Mentoring and Standardized Achievement of African American Males in the Elementary and Middle Grades

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ABSTRACT

This study examined the effects of mentoring on standardized achievement for African American males in the elementary and middle grades. Mentoring has been deemed effective regarding social development and various academic indicators, but scant empirical data is available regarding the effects of mentoring on standardized testing. Thus, standardized test data of African American males participating in a district-wide mentoring program in grades 3-8 were examined over a three-year period. Results show that mentoring can influence standardized test results, while other factors continue to influence these results as well. In addition, alternative insight regarding special education and socioeconomic status is presented based on the results of this study. Recommendations for improving the academic success of African American males through mentoring and other strategies are provided.

INTRODUCTION

As social conditions evolve and educational policies change, many educational leaders are presented with seemingly impenetrable mandates to improve student achievement among disparate groups. To address these needs, intervention strategies are often proposed promising significant gains but are often unrealized. These shortcomings may be associated with unrealistic expectations due to the lack of empirical evidence to support these claims. Thus, many educational officials are forced to make decisions regarding intervention strategies with little or weak evidence and this lack of empirical guidance may contribute to these improbable expectations (*U.S. Department of Education*, 2003).

Although more empirical support is necessary, much discourse has surfaced in areas such as youth development programs and mentoring regarding their effects on student achievement. In fact, many of these studies offer conclusions that suggest youth development programs enhance academic achievement (Brown & Jones, 2004; Davis, 2003; Valencia & Villarreal, 2003). However, the methods used in some of those studies are often highly subjective or lack conclusive evidence. Likewise, there is a push from the federal government to evaluate programs using more conclusive empirical designs (*U.S. Department of Education*, 2003).

Due to the issues presented above, the intent of this study was threefold: 1) mentoring was assessed to evaluate its effects on standardized achievement of African American males 2) techniques using archival data were employed to provide the research literature with an empirically rich body of work regarding the effects of mentoring on standardized achievement of African American males and 3) the results of this study were used to provide guidance to program and curriculum developers when planning interventions for African American males. Before presenting the fundaments of this study, the next section provides an overview of some key issues regarding mentoring and African American males. In addition, inconsistencies and gaps in the literature will be presented and these inconsistencies will be used as a foundation for this study.

REVIEW OF THE LITERATURE

Efforts to improve achievement of African American males can occur through mentoring, but the results of these types of interventions are often difficult to capture. Furthermore, evaluation of such programs is usually limited, due to the need to place funds in direct services (Flaxman, 1992). However, evaluative efforts, both summative and formative could prove beneficial to the body of knowledge on mentoring.

African Americans are often placed in schooling environments that are very different from their home environments and how these students negotiate within these environments is central to the student's success. Furthermore, having the ability to achieve in spite of risk factors is known as resilience (Sanchez, 2003). Likewise, a major youth development strategy for handling ambiguity, managing difference, building resilience, and improving academic achievement for African Americans can occur through mentoring.

Mentoring and African American Males

Mentoring can be defined as one to one relationships between individuals of different ages [or status], who interact regularly and share a common commitment or bond (Townsel, 1997). However, universal agreement for what qualifies as mentoring does not exist. This lack of clarity usually rests with whether or not the intervention is in a group setting or one-to-one relationships (Struchen and Porta, 1997). Rather than define mentoring as one-to-one relationships, Struchen and Porta (1997) place mentoring on a continuum, with endpoints ranging from one-to-one relationships among mentors and mentees to a large group of mentees paired with one mentor. Although there is no universally accepted definition, Grantham (2004) suggests that "love, commitment, and responsibility" (p. 242) are key attributes for successful mentoring.

Mentoring is quite beneficial when there is one mentor for one child, but there also advantages of group mentoring (Parker, 1995). Some of these advantages include opportunities for mentees to share similar problems and learn how others cope. Group mentoring also fosters a sense of belonging and can relieve pressure from the mentor. Establishing bonds can often be difficult and are sometimes unrealized in one-to-one situations, but group dynamics can alleviate this issue. Further, group mentoring can encourage the importance of belonging to a group (Grantham, 2004), while fostering self-regulatory practices between the mentees. Self-regulatory practices often include behavior correction between mentees, with or without the presence of the mentor (Parker, 1995).

Utsey, Howard, and Williams (2003) also suggest that group mentoring reduces burnout for mentors and is more culturally congruent with the life experiences of African American males. Despite these varied definitions and approaches, mentoring programs can be used as interventions and those with strong conceptual goals have shown to be effective regarding student development (Burrell, Wood, Pikes, & Holliday, 2001). In fact, mentoring programs have proven valuable to African American males at various educational levels (Burrell et al., 2001; Lee, 1999). Mentors have been effective in improving the behavior and self-esteem of African American males,

while also increasing the number of African American males pursuing doctorates and other higher education degrees (Morgan, 1996; Struchen & Porta, 1997; Townsel, 1997). On the contrary, mentoring programs often fail because they lack focus and are expected to produce drastic results in short periods of time (Struchen & Porta, 1997).

Although mentoring has been successful in some cases, results have been mixed. For example, the Office of Minority Advancement at Auburn University implemented a mentoring program targeting adolescents in junior high school in order to retain African American male students who may be at risk for dropping out later in high school (Jackson & Matthews, 1999). This program sought to improve social skills, study habits, and career opportunities by pairing students in junior high school with low reading proficiency with undergraduate mentors from the University. Other components included workshops and summer programs, facilitated by employees of the University, which also addressed areas such as social and study skills.

Evaluative techniques for this program included questionnaires to mentors, mentees, and workshop facilitators involved to assess perception of the program, perceived benefit of the program, compatibility between mentors and mentees, and likelihood of future participation. Responses from mentors, mentees, and facilitators were compared to assess whether or not there were statistical differences between responses among the group. There were no statistical differences in responses except that adults perceived the benefit of the program to be higher than what the mentees thought (Jackson & Matthews, 1999). Measuring effectiveness using constructs like perception bring to fore a number of issues, thereby supporting Flaxman's (1992) claim that more empirical data should be collected to examine effectiveness of such interventions.

Another mentoring program that was deemed successful in reducing destructive behaviors in African American males is the therapeutic group mentoring approach. This therapeutic group mentoring approach was employed with a group of adolescents in foster care (Utsey et al., 2003). Mentors included members of a social fellowship of African Americans who met with mentees for about 2 hours each week. Mentors were trained to be sensitive to adolescent developmental needs and a licensed mental health provider also participated in the weekly sessions. Case study results from this mentoring project, citing anecdotal data, suggested that efforts were effective in changing attitudes and behaviors of the participants. However, the authors suggested that more empirical research designs were necessary (Utsey et al., 2003).

The studies presented above demonstrated the benefits of mentoring for African American males, but also highlight the need for more empirically-designed evaluations that can yield more conclusive evidence about mentoring. In addition, general school-based

achievement measures are often addressed when assessing the effects of mentoring, but standardized testing is not a common variable of interest. Considering the elusive and sometimes delayed effects of mentoring, empirically designed studies may in fact produce mixed or unfavorable results. No matter what the outcome, empirical studies can be used to provide valuable guidance in the planning process for these types of interventions and also establish a better sense of what to expect.

METHODOLOGY

In this study, the primary group of interest was African American males participating in a district wide mentoring program known as Helping Hands. Variables of interest included End-of-Grade test scores, socioeconomic levels, and special education status. Specific research questions that were addressed in this study included:

1) Is there a significant difference in the overall achievement of African American males participating in the Helping Hands program compared to African American males who were not?
2) Is there significant interaction between socioeconomic status or exceptionality and Helping Hands as it pertains to academic achievement for African American males?
3) Is there a significant difference in the overall achievement of African American males participating in the Helping Hands program compared to African American males who are not, controlling for length of time in the mentoring program?
4) Is there significant interaction between socioeconomic status or exceptionality and Helping Hands as it pertains to academic achievement for African American males, controlling for length of time in the mentoring program?

Participants

This study was conducted using data from 26 elementary and middle schools using archival data from a three-year period in a large metropolitan school district in the southeastern region of the United States. The district serves more than 108,000 students in the metropolis and surrounding areas. In order to complete this study, Helping Hands (HH), a mentoring program for African American males in grades 3-8 was evaluated to assess its effects on student achievement. The purpose of Helping Hands was to provide after-school mentoring activities for African American males in the district using three overarching goals as the guiding framework:

1) To increase the African American male student's tendency to access educational opportunities more freely.
2) To boost the self image of the African American male student.
3) To foster school success of African American male students.

The Helping Hands program was created in the late 1980s by a former superintendent of the district. As a result, African American males working as teachers, counselors, and administrators were summoned to serve as positive role models for African American males in grades 3-8. Mentors selected for the program were paid a small stipend and required to attend an initial 2-hour mentor training and given a resource guide to address four major areas throughout the school year. The two hour training was led by the director of the program who provided mentors with a resource guide and explained the expectations through lecture and question-answer format. The resource guide included suggestions and guidance for positive role modeling, improving school success, understanding and improving peer relations, and developing leadership potential. After receiving training, mentors were assigned 5-10 mentees from a particular middle or elementary school and were contracted to spend 2 hours per week with the mentees, usually at a weekly after-school session. Weekly contact with mentees was required for the full academic year and meetings were subject to random visits by the director of the program.

Mentees were recommended for the program by teachers, counselors, and other school staff. Other mentees were selected by the mentors, likely based on personal interactions with students at school, while others requested to join based on word of mouth. While there was an application process for parents, there were no rigid guidelines for determining who qualified for the program.

The major aim of the program was to identify African American males who were likely performing below their academic and/or leadership potential. Throughout the year, mentees participating in the program were required to learn poems that promoted positive self esteem, along with practicing organizational techniques, study skills, and public speaking. Furthermore, mentees participated in coordinated activities throughout the school year with mentees from other schools. These activities included oratorical contests, trivia pursuit, athletic competitions, and various fieldtrips. Some of the fieldtrips included visits to colleges, camping, and other enriching activities depending on availability of funding.

Procedures

All students participating in the Helping Hands program, with complete records were used to evaluate the intervention. Complete records included having statewide End-of-Grade (EOG) test scores in reading and math during the years in which they participated in Helping Hands. Thus, depending on the number of mentees at each grade level with complete records, a stratified random sample of an equal number of African American males with corresponding grade levels was selected as the comparison group. Since EOG scoring scales were

progressive scales according to grade level, grade level was used in the selection criteria to ensure fidelity in comparisons.

Access to this data was gained through an application process completed with the district under investigation. Upon gaining access to student records, three cohorts of students were compared. The first cohort included those participating in Helping Hands (*N*=160), along with a comparison group (*N*=160), for the school year 2001-02. A second cohort included those students participating in Helping Hands (*N*=224) with a comparison group (*N*=224) for the school year 2002-03. Finally, the third cohort included those students participating in Helping Hands (*N*=338), with a comparison group (*N*=338) for the school year 2003-04. The sampling frame for the comparison group was a database of African American males not in Helping Hands who attended the same schools as participants in Helping Hands.

Research suggests that socioeconomic levels (SES) and exceptional status influence achievement (see Ma, 2000; Okpala, Okpala, & Smith, 2001; Yell, Rogers, & Rogers, 1998); therefore these two variables were included as independent variables in this study. SES was determined by student lunch status and therefore coded using two levels: free or reduced and not free or reduced. Exceptional status for participants was gathered using records provided by the school district. This category is referred to as "exceptionality" and was coded using three categories: not identified with a disability, identified with a disability, and academically gifted (AG).

Data Analysis

In order to address the four research questions guiding this study, several analyses were conducted. Before conducting these analyses, frequencies and percents were examined to ensure conformity to statistical assumptions for subsequent statistical analysis. As will be shown later, frequencies and percents within groups (see results) were rather consistent. Further, histograms were constructed as recommended by Agresti and Finley (1999) to visually inspect means and standard deviations for the intervention group and the comparison group to assess the equality of standard deviations assumption.

After examining conformity to assumptions, the multivariate analysis of variance (MANOVA) procedure using the General Linear Models (GLM) function in the SPSS 12 software was used to assess differences in EOG test scores in reading and math. Univariate analyses of variance of EOG scores were conducted after the MANOVA procedures to assess differences on specific tests for reading and math. Post-hoc analyses, using Tukey's studentized range, were also conducted to unpack omnibus results of the MANOVA and univariate analytic procedures.

The primary categorical variable of interest was whether or not students participated in the mentoring program. Exceptionality and SES was also used as independent variables to account for the variance associated with these variables. In particular, exceptionality and SES were used as independent variables to examine any interaction effects between these factors and the intervention. However, main effects of these two variables were examined as well.

RESULTS

This section presents results of this study in three phases. Since the study was conducted using data from a three year period, results are presented by year. For each year, frequency tables and descriptions are provided first. Descriptive statistics, specifying means and standard deviations for EOG test scores are presented next. Thereafter, the multivariate statistics for the analysis of mean EOG scores in reading and math are provided, followed by univariate results. Post-hoc test results are also provided for significant *F* statistics. Thus each year contains results for overall performance in reading and math. After results for each year are presented, discussion is provided.

Year 1 Results

Table 1 shows that the frequencies between the Helping Hands group and the comparison group were somewhat similar throughout. The number of academically gifted students in the complete data set was rather small, and those in the comparison group outnumbered those in the Helping Hands group. The Helping Hands group was also assigned more free/reduced lunch students and fewer students who paid full price for their lunch. Although these frequencies in different cells are unequal, the overall sample size in each group (N/2=160) is large. The overall mean score in reading for Year 1 (N=320) was 152.38, SD = 12.03. In addition, the overall mean score in math for Year 1 (N=320) was 257.28, SD = 9.17.

Table 1
Frequency Table for Exceptionality and SES (Year 1), (N=320)

	HH Group	Comparison Group
Exceptionality		
Not Identified with Disability	113	115
Identified with Disability	46	34
Academically Gifted	1	11
SES		
Not Free/Reduced	55	89
Free/Reduced	105	71

Table 2 shows the mean scores in reading and math by HH group and comparison group. Table 2 also shows that although the HH group did not perform better overall in reading or math, they did grow more than the comparison group in math. The standard deviations for the comparison group were slightly higher for the HH group in reading and math.

Table 2
Mean Reading and Math Scores for HH Group and Comparison Group (N=32)

Year 1 Numeric Scores						
	HH Group			Comparison Group		
Subject	M	SD	n	M	SD	n
Reading	151.27	11.39	160	153.48	12.71	160
Math	256.54	8.72	160	258.03	9.58	160
Reading Growth	4.80	10.50	160	5.24	12.30	160
Math Growth	6.09	5.93	160	5.36	6.77	160

In order to determine if the Helping Hands group differed in achievement from the comparison group, a MANOVA with GLM using Wilk's Lambda was conducted. As shown in Table 3, no significant interactions were found. However, there were significant main effects found for exceptionality and SES. Table 4 shows the unique variance for each content level test at the univariate level. For exceptionality, Tukey's post-hoc analysis shows that there was a significant difference in reading between all three groups of exceptional students, with the academically gifted group having a mean difference of +10.29 (*SE* = 3.33) and +16.84 (*SE* = 3.48) over the non-

identified group and identified (with disability) group, respectively. For math, Tukey's post-hoc analysis shows that the academically gifted group performed 14.30 (*SE* = 2.43) points better than the group not identified with a disability, while also performing 19.10 (*SE* = 2.54) points better than the group having a disability.

Table 3
Multivariate Analysis of Variance of Mean Scores in Reading and Math (N=320)

	Year 1			
Source	*df*	*F*	$?^2$	*p*
Helping Hands 2002 (H)	2	1.86	.01	.16
Exceptionality (E)	4	3.13**	.08	.01**
SES (S)	2	5.14**	.03	.01**
H x E	4	1.83	.01	.12
H x S	2	.58	.00	.56
E x S	4	.67	.00	.61
H x E x S	2	.46	.00	.63

Note. $**p \leq .01$

Table 4
Univariate Analysis of Variance of Mean Scores in Reading and Math (N=320)

	Year 1				
Source	Dependent Variable	*df*	*SS*	*F*	*p*
Helping Hands (H)	Reading	1	86.17	.68	.41
	Math	1	250.95	3.72	.06
Exceptionality (E)	Reading	2	3247.41	12.88	.00**
	Math	2	3056.94	22.64	.00**
SES (S)	Reading	1	510.98	4.05	.05*
	Math	1	629.33	9.32	.00**
H x E	Reading	2	511.02	2.03	.13
	Math	2	369.06	2.73	.07
H x S	Reading	1	122.03	.97	.33
	Math	1	40.12	.60	.44
E x S	Reading	2	14.25	.06	.95
	Math	2	133.16	.99	.37
H x E x S	Reading	1	103.52	.82	.37
	Math	1	.09	.00	.97

Note. $*p \leq .05$; $**p \leq .01$

Year 2 Results

Table 5 shows that the frequencies between the Helping Hands group and the comparison group are somewhat similar throughout. Again, as in the first year, the number of academically gifted students in the complete data set was rather small. Likewise, academically gifted students in the comparison group outnumbered those in the Helping Hands group. Similar to Year 1, the Helping Hands group also contained more free/reduced lunch students and fewer students who paid full price for their lunch. Overall, frequencies in the different cells are unequal, but the sample size in each group (N/2=224) is large.

Table 5
Frequency Table for Exceptionality and SES (N=448)

	HH Group	Comparison Group
Exceptionality		
Not Identified	178	169
Identified w/ Disability	42	37
AG	4	18
SES		
Not Free/Reduced	83	116
Free/Reduced	141	108

The overall mean score in reading for Year 2 (N=448) was 255.80, SD = 8.77. In addition, the overall mean score in math for Year 2 (N=448) was 261.92, SD = 8.96. Table 6 shows that although the Helping Hands group did not perform better overall in reading or math, they grew more than the comparison group in math. Consistent with Year 1, the overall standard deviations for the comparison group were slightly higher. However, as histograms were inspected, only one extreme violation was found. Specifically, the growth in reading histogram demonstrated a violation in that the standard deviations were somewhat bimodal due to a change in the reading scale for year 2. Consequently, this set of "growth" means was excluded from the following descriptive table.

Table 6
Mean Reading and Math Scores for HH Group and Comparison Group (N=448)

Year 2 Numeric Scores						
	HH Group			Comparison Group		
Subject	M	SD	n	M	SD	n
Reading	254.46	8.47	224	257.14	8.87	224
Math	261.25	8.22	224	262.59	9.62	224
Reading Growth	n/a*	n/a	n/a	n/a	n/a	n/a
Math Growth	6.03	5.99	224	5.49	5.11	224

Note. * Reading Growth was not calculated because the reading scale was changed between the 2000-01 and 2001-02 school-years.

In order to determine if the Helping Hands group differed in achievement from the comparison group, a MANOVA with GLM using Wilk's Lambda was conducted. Results from this analysis show that no significant interactions were found, but there was a significant main effect for exceptionality (see Table 7). Table 8 shows the unique variance for each content level test at the univariate level. Further, Tukey's post-hoc analysis shows that there is a significant difference in reading between all three groups of exceptional students, with the AG group having a mean difference of +13.32 (*SE* = 1.72) and +18.15 (*SE* = 1.88) over the non-identified (with disability) group and identified group, respectively. Similarly, Tukey's post-hoc analysis shows that the AG group scored 15.54 (*SE* = 1.77) points higher in math than the group not identified with a disability, and 19.82 (*SE* = 1.94) points better than the group having a disability.

Table 7
Multivariate Analysis of Variance of Mean Scores in Reading and Math (N=448)

Year 2				
Source	*df*	*F*	$?^2$	*p*
HH03 (H)	2	.19	.00	.82
Exceptionality (E)	4	15.08**	.07	.00**
SES (S)	2	.52	.00	.60
H x E	4	1.90	.00	.11
H x S	2	.59	.00	.56
E x S	4	.67	.00	.61
H x E x S	2	.99	.00	.41

Note. $**p < .01$

Table 8
Univariate Analysis of Variance of Mean Scores in Reading and Math (N=448)

Year 2					
Source	Dependent Variable	*df*	*SS*	*F*	*p*
Helping Hands (H)	Reading	1	.60	.01	.92
	Math	1	9.14	.14	.71
SES (S)	Reading	1	25.33	.41	.52
	Math	1	66.42	1.03	.31
Exceptionality (E)	Reading	2	1511.47	24.64	.00**
	Math	2	1711.25	26.51	.00**
H x S	Reading	1	65.98	1.08	.30
	Math	1	57.42	.89	.35
H x E	Reading	2	214.29	3.49	.03*
	Math	2	46.12	.71	.49
S x E	Reading	2	65.86	1.07	.34
	Math	2	18.05	.28	.76
H x S x E	Reading	2	79.22	1.29	.28
	Math	2	93.31	1.45	.24

Note. **p<.01, *p<.05

Year 3 Results

Unlike the analyses conducted in years 1 and 2, year 3 contained a modified variable that included length of time in Helping Hands. This modified variable was designated as "Years in Helping Hands". Years in Helping Hands was calculated by adding the total number of times a student was in Helping Hands during the 2001-02, 2002-03, and 2003-04 school years. Frequencies for year 3 show that there were no academically gifted students in Helping Hands with complete records for the third year (see Table 9). Table 9 also shows that the total number of students in Helping Hands receiving free/reduced lunch exceeded the total number of students receiving free/reduced lunch in the comparison group. Additionally, fewer students in Helping Hands paid full price for their lunch than did the comparison group.

Table 9
Frequency Table for Exceptionality and SES (N = 676)

	1 Year in HH	2 Yrs in HH	3 Yrs in HH	Comparison Group
Exceptionality				
Not Identified	178	59	32	273
Identified w/ Disability	45	18	6	58
Academically Gifted	0	0	0	7
SES				
Not Free/Reduced	63	25	12	147
Free/Reduced	160	52	26	191

The overall mean score in reading for Year 3 (N=676) was 256.29, SD = 9.59. In addition, the overall mean score in math for Year 3 (N=676) was 261.17, SD = 8.93. Table 10 shows that there was a consistent trend in that the longer students stayed in Helping Hands, the better their scores were in reading. Results also show that those who were in Helping Hands for two years performed higher than any of the other groups in math. Although math scores were better for students participating in Helping Hands for 2-3 years compared to those who only participated for one year, the positive growth trend in math was not as consistent as reading (See Table 10).

Similar to the first two years, the standard deviations for the comparison group were slightly higher than the students in Helping Hands but presented no extreme violations (see Table 10). Thus all means were included the analysis.

Table 10

Mean Reading and Math Scores for Mentored Groups and Comparison Group (N=676)

Year 3												
Numeric Scores												
	HH at least 1yr			HH at least 2 yrs			HH at least 3 yrs			Comparison Group		
Subject	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*
Reading	253.98	8.06	223	255.19	8.19	77	256.45	4.91	38	258.05	10.79	338
Math	259.22	8.23	223	262.58	7.65	77	261.68	7.74	38	262.07	9.56	338
Reading Growth	3.34	6.55	223	3.23	6.14	77	2.82	5.60	38	5.81	6.12	338
Math Growth	3.27	6.18	223	3.26	5.08	77	1.58	5.43	38	6.62	6.08	338

As shown in Table 11, Wilk's lambda statistics show that there is a significant difference between those in Helping Hands and those in the comparison group. Tukey's post-hoc analysis shows that for reading, there was a significant difference in the comparison group (M = +4.07, SE = .79) and those who participated in Helping Hands for only one year. In similar regard, students in the comparison group (M = +2.85, SE = .73), scored higher than students who were Helping Hands for one year in math. However, if students were participants in Helping Hands for at least 2 or 3 years, these differences were not found, suggesting that HH may influence results over time.

Table 11
Multivariate Analysis of Mean Scores in Reading and Math (N = 676)

Year 3				
Source	*df*	*F*	$?^2$	*p*
Years In HH (Y)	6	5.18**	.02	.00**
Exceptionality (E)	4	7.81**	.07	.00**
SES (S)	2	.83	.00	.44
Y x E	6	2.81**	.01	.01**
Y x S	6	1.52	.00	.17
E x S	4	.83	.01	.51
Y x E x S	6	1.22	.01	.29

Note. ** $p \leq .01$

The second significant main effect for this model was exceptionality. Tukey's post-hoc analysis for this variable showed that the AG students (M = +21.53, SE = 1.87) scored higher than students with disabilities and those without disabilities (M = -24.44, SE = 3.53). Further those with disabilities (M = -3.09, SE = .90) scored lower than those not having a disability.

The final variable that showed significance was the interaction of years in Helping Hands and exceptionality. Follow-up univariate analysis revealed a significant difference for math (see Table 12) and similar results for reading, although not statistically significant at an alpha level of .05. (p=.09). Figures 1 and 2 show that out of those who participated in Helping Hands in Year 3 and had been in Helping Hands for at least 2 years (N=18), those with disabilities scored higher than those in Helping Hands without a disability (N=59) during the 2003-04 school-year.

Table 12
Univariate Analysis of Variance of Mean Scores in Reading and Math (N = 676)

Year 3					
Source	Dependent Variable	*df*	*SS*	*F*	*p*
Years In HH (Y)	Reading	3	355.63	1.43	.23
	Math	3	995.84	4.69	.00**
SES (S)	Reading	1	.82	.01	.92
	Math	1	60.58	.86	.36
Exceptionality (E)	Reading	2	1985.36	12.01	.00**
	Math	2	1954.41	13.83	.20
Y x S	Reading	3	103.21	.42	.74
	Math	3	142.49	.67	.57
Y x E	Reading	3	547.12	2.21	.09
	Math	3	992.89	4.68	.00**
S x E	Reading	2	95.38	.58	.56
	Math	2	218.28	1.55	.21
Y x S x E	Reading	3	71.42	.29	.83
	Math	3	297.91	1.41	.24

Note. $**p < .01$

Figure 1

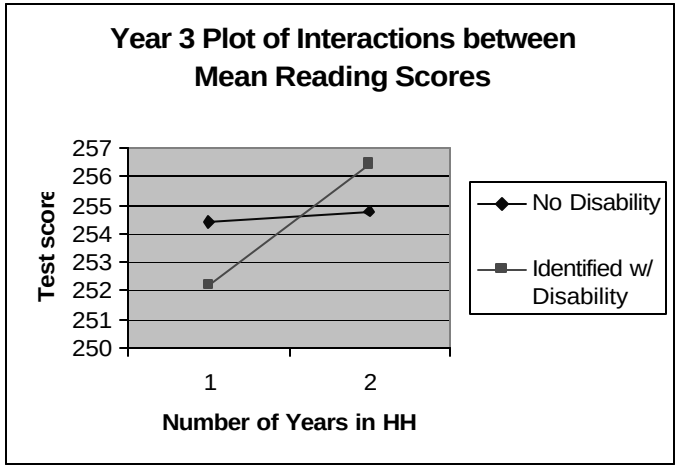
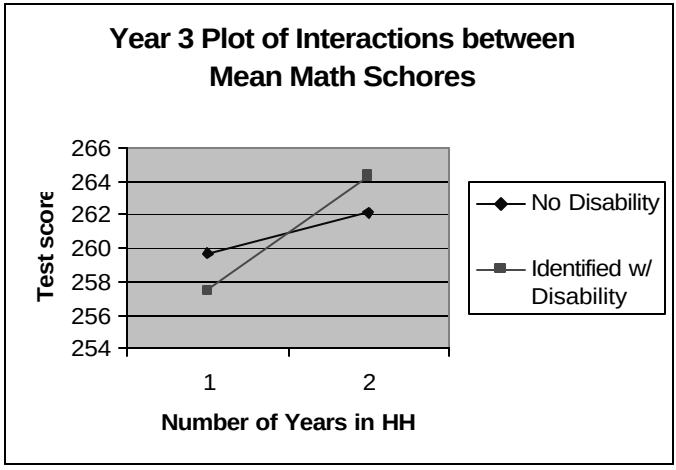


Figure 2



DISCUSSION

Since there were no significant interactions or main effects for the Helping Hands variable in year 1, these results reveal that there was no significant difference in achievement between the Helping Hands group and the comparison group for the 2001-02 academic year. Interestingly, despite the multivariate tests being statistically insignificant at an alpha level of .05, univariate follow-up analysis revealed that those in Helping Hands with a disability, performed better in math than those not in Helping Hands with a disability ($p < .07$). For Year 2, there were no significant main effects or interactions for the Helping Hands group.

For Years 1, 2, and 3, there were no significant interactions detected between SES and Helping Hands. Thus, it is safe to conclude that regardless of the student's socioeconomic background, Helping Hands produced similar results. This may suggest that the African American males in this district are facing similar issues that affect their performance on standardized tests and these issues may not necessarily be related to socioeconomic background. Moreover, the variable used to capture socioeconomic status may not have captured the moderating factors that influence socioeconomic status. Likewise, this further supports the idea that socioeconomic status may be overemphasized when considering the achievement of African American males.

For Year 1, there was no significant interaction between exceptionality and Helping Hands. In math, as shown by the univariate p-value of .07, the interaction between math results and Helping Hands was close. As for Year 2, there were no significant interactions between exceptionality and Helping Hands either. However, at the univariate level, there was a significant interaction effect between the Helping

Hands group and exceptionality for reading, $F(2, 436) = 3.49$, $p < .05$, $?^2 = .02$. As with Year 1, those in Helping Hands with a disability (M = 252.29, SD = 7.69) outperformed those in the comparison group with a disability (M = 249.89, SD = 8.11).

Since cumulative records were available for a three-year period, length of time was assessed in year 3. When controlling for length of time, year 3 results produced significant main effects for 2 variables, years in Helping Hands and exceptionality. The interaction of these two variables yielded a p-value of .07. Although the multivariate statistic was not significantly different using an alpha level of .05, this relatively low p-value prompted me to explore these results at the univariate level.

Follow-up univariate analysis revealed that this difference was present for math at an alpha level less than .01. As shown previously in Figures 1 & 2, this analysis showed that out of the students who participated in Helping Hands for 2 years, students with disabilities outperformed students without disabilities. Although these results were not consistent year after year, these results suggest that mentoring has the potential to promote positive change in performance on standardized tests. This finding may also support the notion that many African American males receiving special education services could really benefit from a positive relationship with an African American male adult.

The results of this study highlight the complexities in improving the performance of African American males on standardized testing. As an aside, the year 3 descriptive statistics showed that academically gifted students also grew more than did the other groups. These results reinforce that African American males identified as academically gifted are likely to perform much better on standardized tests. In that same notion, it is plausible to suggest that intellectual capacity or potential are not the sole factors influencing these results. Rather, those in academically gifted courses are likely held to higher expectations and receive a higher quality education.

CONCLUSIONS AND RECOMMENDATIONS

At the outset of this study, my goal was to evaluate the effects of an established mentoring program on standardized achievement of African American males. Secondly, my goal was to develop a solid body of empirical data supporting these results. My third goal was to use the results of this study to inform program and curriculum developers on important factors to consider when planning interventions for African American males. Reflecting on these goals, this section provides a comprehensive summation of how this study accomplished these goals. First, a discussion of African American male achievement will be discussed. Secondly, strategies for improving

intervention programs will be discussed. Lastly, critical issues regarding SES, exceptionality, and teacher development will be presented.

African American Male Achievement

In retrospect, results from this study did support that the Helping Hands program had significant effects on the achievement of African American males. The most consistent trend related to students with disabilities. When African American males who were identified as having a disability had a mentor, their performance on standardized testing usually improved. These results were consistent in that improvement was shown on multiple years with different data sets. In fact, year 3 data showed that out of the African Americans who were in the mentoring program for at least two years, those identified with a disability performed better than students not having a disability. The sample size in this group was small (N=18), so interpretation of this finding must be stated with caution. Although the sample size was small, this finding verified that African American males with disabilities are likely underachieving in schools. Furthermore, some of the participants in this study may not really have a disability; thereby supporting the notion that African American males are over-identified in special education.

Interventions and Expectations

Based on Cohen's (1988) benchmarks, the effect size of significant findings with this intervention appeared to be small ($?^2$ = .02). From a practical stance, interventions like this one have the potential to affect a large amount of students at small costs. In fact, the results of this study were similar to the small effects sizes of taking aspirin relative to reducing heart attacks (Thompson, 2006). Although statistically small, the benefits of taking aspirin can be powerful in a practical sense and the same is plausible for mentoring. Moreover, as shown in the literature review, mentoring has proven beneficial in areas other than standardized testing; thus, the somewhat inconsistent, but added benefit regarding standardized testing and mentoring can be applauded. Lastly, these results may suggest that if the specific goal of an intervention is to promote higher scores on standardized tests for African American males, then mentoring alone, may not be the most fruitful option. Yet, mentoring, in addition to direct math and literacy prevention/intervention programs may be necessary.

Socioeconomic status

Contrary to common perspectives and some of the research literature, SES produced little variation among African American males. Surprisingly, there were no significant interactions for socioeconomic and exceptional status in this study. This implies that importance of socioeconomic status is likely exaggerated in the field of education. Furthermore, the lunch status of a student does not provide the complete socioeconomic story of a child. It may provide the "economic", but not the "socio". Factors such access to social capital, treatment by teachers, school-level socioeconomic status, parental education levels, and other factors may moderate this relationship. To a large degree, a student's current financial status is not able to be remedied or altered by the schools. Realizing this, educational leaders must not use socioeconomic status as an inferential crutch or as an excuse not to properly educate students. In a capitalistic society, there will always be financial haves and have nots. For schools, this should not equate to "educables" and "educable nots".

Exceptionality

The findings in this study produced one conclusive outcome for African American males: exceptionality is highly correlated to standardized test outcomes! As Ford (1996) suggests, many African American males are over-identified as having a disability. Based on the results of this study, being identified with disability significantly reduces the chances of African American males performing well on standardized tests. Contrarily, if identified as academically gifted, these students are likely to perform much better than other African American males. These findings support Grantham's (2004) supposition that methods to attract and retain more African American males in gifted education should be explored. Additionally, these finding suggest that selection criteria should also be re-examined to ensure that African American males are not misidentified as having a disability. It is not uncommon for students to be placed in gifted tracks based on advocacy not prior achievement, suggesting that all gifted students are not necessarily intellectually superior; rather advocates realize that students in these tracks are apt to receive a different type of preparation. This same type of advocacy should be provided for African American males! However, realizing that our intellectual bell curve does not allow everyone to be labeled academically gifted, the next paragraph discusses what this means for the institution of the school.

Teacher and Curriculum Development

As shown by the results of this study, mentors should not be given the sole burden of improving African American male achievement. Mentors usually spend about 2 hours per week with these students, while teachers have more opportunities to engage students during the course of a year. Thus, teachers must be developed and held accountable for rigorous curricula and high expectations. One approach to achieving this is through formative growth analysis of achievement indicators, beginning with baseline data. While many teacher evaluations emphasize generic behaviors such as circulation or classroom management, components (with appropriate staff development) addressing how teachers gather baseline data and monitor progress should be included. In addition, confirming the positive identity for many African American males is important. Ford (2005) suggests that African American males lack an academic identity; therefore mentoring, staff development, familial engagement, and high expectations can contribute to developing this identity. On the whole, mentoring should not be treated as the key to a student's success or demise in schools; yet it should be treated as one factor in a complex string of factors.

Limitations

One limitation to this study is that this data did not represent all the students in the program. While most students in the program were included in the analyses, some had to be deleted, due to incomplete records. In addition, since this study was quasi-experimental and not truly experimental, no additional information on the comparison groups was available. Thus, participants in the comparison groups may have been involved in some sort of youth development program themselves, providing an opportunity for some data contamination. Moreover, this mentoring program was designed to improve student achievement in a general sense and standardized achievement is only one aspect of this achievement. If other school-based indicators were included, results would have been more comprehensive.

Significance

While this study does not attempt to provide a single solution to enhance the achievement of African American males, it does offer sound advice for promoting the achievement of this promising group. The results of this study can be used to inform the literature about the effects of mentoring on standardized testing regarding African American males. Additionally, the results of this study can be used to

inform practitioners about the effects of mentoring with students of various academic and socioeconomic levels. Lastly, the literature regarding youth development and mentoring is solid regarding general academic indicators, but the literature is lacking concerning standardized testing. As a result, this study contributes to this deficit.

AUTHOR'S NOTES

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