This study describes the results of a research evaluation of a school dropout prevention program and adolescents' self-reported perceptions of their motivations and role models. The program was a partnership between an urban university and an urban school district that was designed to prevent 9th grade students from dropping out of high school. It included tutoring, personal development, summer enrichment, and parental involvement. The specific research goals were 1) to evaluate whether this approach to intervention with these urban, at-risk teens was effective in changing educational attitudes and behaviors, as well as school grades, and 2) to examine these teens' career goals and role models. The participants were 140 ninth grade, male and female, primarily African-American, low income, public high school students in a major urban city in the Midwest (n=75 experimental group; n=65 comparison group). Findings were mixed. Results are discussed in several contexts, including the role of school transitions, especially the adjustment required when moving into high school.

Introduction

This study describes the results of a research evaluation of a school dropout prevention program and adolescents' self-reported perceptions of their motivations and role models. The program was a partnership between an urban university and an urban school district that was designed to prevent 9th grade students from dropping out of high school. It included tutoring, personal development, summer enrichment, and parental involvement. Students in this district are at significant risk of dropping out of school, as the four-year graduation rate from 9th grade to 12th grade was approximately 50%, compared to a statewide graduation rate of 76 percent. This substantial relative decline occurs during the critical transition period in adolescent development, which further demonstrates the need to provide academic support to at-risk students. School transitions are difficult and have been associated in past research with decreased self-esteem, involvement in activities, and grade point average (Cantin & Boivin, 2004). This is especially problematic when transitioning to high school, as the academic, organizational, and social demands increase significantly, typically disproportionately to the amount of support that adolescents receive for developing these skills. Many youngsters, including inner city youth, likely would benefit from a less complex
and more intimate school structure (Entwisle, 1990) that is more secure, predictable, and responsive. Drop out is the most devastating consequence of youths' frustration with the demands of schooling. In addition to being frustrated, environmental stressors (e.g., neighborhood) may contribute to the youths’ dropping out of high school (Crowder & South, 2003).

Drop-out prevention is an important area of study because society’s cost for individuals who drop out of high school can be estimated into billions of dollars (Rouse, 2005; Buckley, Storino, & Sarni, 2003). Funding aimed at crime prevention, prosecution programs, welfare programs and unemployment programs can be extremely costly (Buckley, Storino, & Sarni, 2003). It becomes imperative for researchers to examine factors associated with dropping out of school as well as those factors associated with dropout prevention. School programs that are designed to reduce dropout rates would clearly benefit all stakeholders, including policy makers, educators, and families alike, as well as society as a whole (Christenson & Thurlow, 2004).

Urban school children have approached a crisis point in terms of needs that are going unmet (Rice & Roelke, 2003). Policy makers and education officials have been working continuously to address some of the unique needs faced by urban school children (Goertz & Stiefel, 1998; Hunter, 2000). These unique needs vary. They include but are not limited to a breakdown of community structure, violence, gang activity, poor housing, and poverty (Levine and Lezotte, 1990). Research has shown that poverty is related to school disengagement (Guo, Wilson & Corbett, 2001). In addition to the unique needs faced by urban school children, there are factors that have been associated with school dropout. For example, these characteristics include but are not limited to poor academic performance, low socioeconomic status (SES), and children who display behavioral problems (Phelan, 1992).

Strategies have been identified that could assist with drop-out prevention. For example, Azzam (2007) identified strategies that school officials could take to assist with high school dropout prevention. Many academic recommendations were made including integrating experiential learning. Schools must make learning more engaging and help students understand the connection between the world of work and school. Varied instructional styles to accommodate a host of learning styles should be integrated into teaching. Adding support mechanisms for academically struggling students is imperative. These include but are not limited to hiring highly qualified teachers, reducing class sizes, giving more attention to individualized instruction, increasing teacher support, allowing students additional time with teachers, reaching out to parents to improve their relationship with the school, and assuring that students have close ties with one adult in the building with whom they feel they can trust and confide in about school and personal issues. This final recommendation, which could be described as a form of mentoring, is especially salient.
Mentoring is commonly defined as a person of a senior rank who guides and counsels a person who wishes to enter and participate in a particular culture (Blackwell, 1989). The mentoring relationship between a group of individuals can be either formal or informational (Rhodes, Grossman & Resch, 2000). There is a stronger emphasis being placed on mentoring in schools (Jekielek, Moore, Hair, & Scarupa, 2002) than ever before. Although mentoring has been seen as a positive endeavor that can lead to less students dropping out of high school and more academic success (Rhodes, Grossman & Resch, 2000), further research is warranted to explore the effects of mentoring on academic success for underprivileged children.

Based on this review of literature, the overall purpose of the current school failure and dropout prevention effort was to provide students with a more personalized supplemental academic environment. Increasing the number of students who achieve success in their academic and personal lives was of primary importance to this purpose. The specific research goals were 1) to evaluate whether this approach to intervention with these urban, at-risk teens was effective in changing educational attitudes and behaviors, as well as school grades, and 2) to examine these teens' career goals and role models.

Method

Participants

The participants in this study were 140 ninth grade public high school students in a major urban city in the Midwest. Seventy-five of the students were in the experimental group. They elected to participate in the tutoring/mentoring experiences. A group of 65 ninth graders in the same school were the randomly selected comparison group. The sample was approximately half male and half female, 99% African-American, and primarily low income.

Measures

Achievement. Grade point average (GPA), calculated on a 4.0 scale, was used as the measure of academic performance. GPA was logged at five points in time: End of 8th grade, October of 9th grade, January of 9th grade, April of 9th grade, and June of 9th grade.

Educational attitudes and behaviors.

Four attitudinal and behavioral subscales were included. On each subscale, there were five response options for each item, ranging from 1=strongly disagree to 5=strongly agree. The four subscales were: 1) Educational Intentions (4 items, pretest $\alpha=.72$, posttest $\alpha=.77$; i.e., "I plan to finish high school"), 2) Educational Commitment Behavior (3 items, $\alpha=.60$, posttest $\alpha=.71$; i.e., "I am absent a lot from school because I skip my classes"), 3) Identification of the Financial Value of Education (single item, "A high school diploma will help me earn more money"), and 4) Identification of the Personal Value of Education (single item, "If I finish high school I will feel good about myself").

Career goals and role models.
of what types of careers they ideally and realistically would like to have and who their role models are. Specifically, the questions were: 1) At this point in your life, what kind of job do you see yourself having after high school?; 2) Who do you most look up to? Responses were coded into categories, based on responses given by the students (e.g., sales, retail, politics, education, entertainment, media services, etc.) by two independent coders and any inconsistencies were discussed and settled with a third coder. Inter-rater reliability was above .95.

Procedure and Program Description

Participation in the study was voluntary. All ninth graders were invited to participate until the space allotment was filled. Recruitment occurred through several mechanisms: Announcements were made by classroom teachers, flyers were distributed to students to take home to parents, flyers were left in the office for parents, and parents were given flyers at the open house at the start of the school year. Once students expressed interest in participating, both formal adolescent assent and parental consent were obtained. Students completed the survey at the beginning of ninth grade year in the fall, before the tutoring program began.

Prior to being assigned to the tutoring program, tutors were required to complete a two hour training session at a local university at the start of the academic year. Psychosocial development of adolescents, motivation theory, multicultural teaching strategies, and working with parents were the topics covered in the training sessions for tutors. Each tutor was also given a copy of the Tutoring Handbook authored by the University of Washington/The Pipeline Project. Tutors also had regularly scheduled meetings that they were required to attend through the school year. During this school year, tutors discussed best practices and received formal retraining from professional consultants.

The academic tutoring took place after school between the hours of 3:15pm and 5:15pm in designated classrooms throughout the school, and was offered four afternoons per week. Students were paired with paid tutors who were university college students. Students dictated subject areas in which they needed the most assistance. Students in the tutoring program also attended monthly enrichment programs that were designed to enhance self efficacy, self esteem, knowledge of career options and motivation. Programs were often very interactive. Students received information from professional consultants (often with advanced degrees such as a Ph.D. or MSW) on how to best prepare themselves for college. At the end of the tutoring program and the 9th grade school year, students completed the post-test survey.

Results

In order to examine whether change occurred among the experimental group that did not occur among the comparison group on the academic performance measures, an Analysis of Covariance (ANCOVA) procedure was run. End of 9th grade GPA was entered as the dependent measure, end of 8th grade GPA as the
covariate to statistically control for pre-test variation, and experimental versus comparison group as the independent variable. Results revealed that the underlying assumption of homogeneity of variance was not violated, although there were no significant differences between the two groups over the school year in terms of amount of progress made ($F = .08, df = 1, 63, p = .78$) for GPA.

An examination of descriptive statistics for GPA revealed additional information. Both groups experienced a drop in GPA between end of 8th grade and beginning of 9th and then both groups slowly made slight improvement in GPA by end of 9th grade. The experimental group’s GPAs were slightly higher than the comparison group GPAs at each GPA data collection point (see Table 1), though most were not at statistically significant levels.

Next, a Multivariate Analysis of Covariance (MANCOVA) procedure was run in order to examine whether change occurred among the experimental group that did not occur among the comparison group on the four attitudinal measures (educational intentions, educational commitment behavior, identification of personal value of education, identification of financial value of education). The four post-test attitudinal measures were entered as the dependent measures, the pre-test measures as covariates to statistically control for pre-test variation, and experimental versus comparison group as the independent variable. Results of the MANCOVA revealed that the underlying assumption of homogeneity of variance was not violated, but the multivariate test was not statistically significant ($Hotelling's \ T^2 = .05, F = .52, df = 5, 52, p = .76$). This means that there was no statistically significant difference.

### Table 1

**Means and Standard Deviations for Grade Point Averages**

<table>
<thead>
<tr>
<th>Grade Point Average</th>
<th>Experimental Group</th>
<th>Comparison Group</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>End of 8th grade</td>
<td>2.3</td>
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</tr>
<tr>
<td>October 9th grade</td>
<td>1.8</td>
<td>.82</td>
</tr>
<tr>
<td>January 9th grade</td>
<td>2.0</td>
<td>.94</td>
</tr>
<tr>
<td>April 9th grade</td>
<td>1.8</td>
<td>.97</td>
</tr>
<tr>
<td>June 9th grade</td>
<td>2.0</td>
<td>.98</td>
</tr>
</tbody>
</table>

*Note.* GPA calculated on a 0.0 to 4.0 scale.
Table 2

**Means and Standard Deviations for Educational Attitudes and Behaviors**

<table>
<thead>
<tr>
<th></th>
<th>Pre-test</th>
<th></th>
<th>Post-test</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td><strong>Experimental Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Intentions</td>
<td>4.68</td>
<td>.56</td>
<td>4.46</td>
<td>.82</td>
</tr>
<tr>
<td>Educational Commitment Behavior</td>
<td>4.38</td>
<td>.75</td>
<td>4.24</td>
<td>.85</td>
</tr>
<tr>
<td>Identification of Personal Value</td>
<td>4.79</td>
<td>.58</td>
<td>4.65</td>
<td>.54</td>
</tr>
<tr>
<td>Identification of Financial Value</td>
<td>4.24</td>
<td>1.14</td>
<td>4.17</td>
<td>1.18</td>
</tr>
<tr>
<td><strong>Comparison Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Intentions</td>
<td>4.54</td>
<td>.52</td>
<td>4.62</td>
<td>.47</td>
</tr>
<tr>
<td>Educational Commitment Behavior</td>
<td>4.34</td>
<td>.62</td>
<td>4.26</td>
<td>.66</td>
</tr>
<tr>
<td>Identification of Personal Value</td>
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<td>.37</td>
<td>4.83</td>
<td>.38</td>
</tr>
<tr>
<td>Identification of Financial Value</td>
<td>3.91</td>
<td>1.35</td>
<td>4.21</td>
<td>1.23</td>
</tr>
</tbody>
</table>

*Note.* Possible mean score range=1 (strongly disagree) to 5 (strongly agree).

between the two groups on the attitudinal post-test scores with their respective pre-tests used as covariates.

An examination of the descriptive statistics for the four attitudinal measures indicated that the average ratings made by these adolescents were high on all four subscales. This indicates that they did wish to finish their education, practice good school behavior, and identified both the personal and financial value of continuing with their education (see Table 2). Although there was variation in responses, the averages were generally above 4.0, indicating that they agreed to strongly agreed with these values and behaviors. Their perception of the financial value of education, however, was relatively the lowest score, and the range of scores (standard deviation) indicated the widest variability.

Adolescents also answered narrative questions about their perceptions of what types of careers they would like to have and who their role models are. Samples of the more frequently endorsed responses are presented here. The most common pre-test responses concerning career expectancies included careers involving politics (e.g., mayor and other city and state government), sales/retail, and media services (e.g., TV announcer, cable company, phone company, etc.). The most common post-test...
responses concerning career expectancies included careers in entertainment (e.g., singer, dancer, musician, actor, sports player) and education (e.g., teacher). Other categories, such as health care, business, law, computers, etc., were infrequently endorsed at either pre- or post-testing. Parents, including step-parents, were endorsed as the most common role models during both pre- and post-testing.

Discussion

These findings can be discussed on several levels. In the quasi-experimental portion of this research, academic tutoring with supplemental enrichment activities was not found to be an effective method of improving attitudes toward staying in school, or in actually producing better achievement outcomes via GPA. It may be that GPA is not the best indicator of achievement, because it involves so many other behavioral factors such as motivation, homework completion, class participation, attendance, student-teacher relationships. Future research could utilize standardized test data to determine actual skill acquisition, factoring out all of these other dynamics that invariably contribute to school grades. However, it can also be interpreted that the program permitted this self-selected group of 9th graders to maintain at least close to the GPA they had when they entered 9th grade, and protected them somewhat from the common and serious risks associated with transition to high school, the most notable of which is failing grades in 9th grade.

Similarly, regarding the educational attitudes and commitment behaviors measured in this study, this tutoring program did not appear to effect significant change. However, it is important to note that the average responses were in the “agree” to “strongly agree” range on all subtests and for both cohorts. Thus, it is difficult to statistically detect change when students’ ratings are so high to start. Their ratings indicate a strong desire to do well and pursue schooling. Additionally, some anecdotal information, though not based on data analyzed with inferential statistics, should also be mentioned. Based upon the researchers’ observations, close relationships were developed between mentors and students. Both the students and the tutors demonstrated excellent attendance at the program, indicating commitment on both parts. Despite the commitment and motivation they appeared to be communicating, the average GPA was relatively modest. It may be that, even though they are committed to the tutoring and to doing well in school, they need help with transferring that motivation into actual school performance.

It seems especially important to also highlight the results of the narrative and descriptive portions of this study, as there were additional themes worth noting. Regarding these students’ career goals, at least at this point in their lives, one theme was that they were inconsistent between pre- and post-testing in what they most commonly identified as career goals. At neither time did they endorse more relatively mainstream career choices. With the exception of becoming teachers, careers that typically involve a four-year college degree were rarely mentioned (e.g., busi-
ness, health care, computers, etc.). A large number of students identified careers in entertainment and media, which is unrealistic for most. Although this is not surprising, it indicates a need for helping students make a better connection between options for career choices and what it takes to achieve each choice. Related to this, students reported the lowest scores in the area of identification of the financial value of getting an education, and their scores varied quite widely. This indicates that many of them do not understand the link between high school preparation, college preparation, and earning potential, which is clearly linked to life stability. However, these are critical skills that students at their age should be exposed to. Taken together, these results indicate that much more intervention with students is needed—they need guidance, even as early as 9th grade, in career development, and it needs to be specific and not vague. They need to understand the link between their classroom performance starting in 9th grade and their education path after high school.

Another noteworthy theme observed in the descriptive data on GPA was the increased variability in GPAs as the 9th grade year went on. Although both groups slightly improved their GPAs over the year, the standard deviations indicated increasingly widening ranges of classroom performance. As already established, 9th grade students are at significant risk during the transition to high school. Adolescents from urban, poor settings also often have multiple difficulties and stresses that make it challenging to focus on and see the benefits of academic success. This group acknowledged that they wanted to finish high school, and obtain further education, yet they may not know how to actually execute such intentions. Cognitive development theory suggests that adolescents are still relatively concrete at this age and thus they may need very concrete skills related to carrying out their educational intentions. For just one example, as alluded to above, adolescents may need concrete education about the realities of achieving careers in media.

Their role model choices should also be mentioned. Despite that it was a common career goal to be involved in entertainment and media, sports and music figures were not commonly endorsed as role models by these students. Parents were the most commonly endorsed group. The power of parents to shape their children, though well documented in the literature, may often be underemphasized or even overlooked by schools. Schools would likely benefit from developing and implementing programs or even low technology efforts to educate and involve parents regarding their potential as role models. This could be done through home-school notes, in-service presentations, asking parents to come to school to talk about their careers with students, or any number of options, but in any case, the ultimate goal is for schools to persist in the often challenging task of obtaining parental buy in and participation.

Overall, the program did not demonstrate significant improvements in GPA or educational attitudes and behaviors using inferential statistics. However, considering the aforementioned limitations, and
considering the narrative data, descriptive data, and anecdotal information also mentioned above, the results of this study collectively suggest that this personalized educational setting may have been helpful in avoiding failure during the transition to high school. Factors and challenges unique to urban, minority youth must be considered as we strive to understand and improve the academic success of all children, and this research contributes information that educators can use to better understand the nuances of at-risk adolescents' motivations and understandings about career development. This knowledge is expected to aid in more effective intervention approaches with these teens.

References
