Before the bell rings: Implementing coordinated school health models to influence the academic achievement of African American males

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Guest Editorial: Before the Bell Rings: Implementing Coordinated School Health Models to Influence the Academic Achievement of African American Males

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This article addresses a void in the literature that connects the wellness of African American boys to academic achievement. The authors call attention to ecological risk factors that impact the vulnerability of Black boys and compromise their learning even before the school bell rings. The No Child Left Behind legislation has created a culture where educational outcomes are placed before student outcomes. The authors posit that school policy, for example Coordinated School Health Programs that provide a holistic approach to addressing the academic achievement of Black Boys should be supported as innovation in education. The findings of the Breaking Barriers report as it relates to personal and emotional factors are highlighted; then the Coordinated School Health Model is outlined; and finally recommendations on how to implement Coordinated School Health Programs reflective of African American boys are offered.

The relationship between academic achievement and health status has been overlooked in school reform efforts. The overemphasis on high-stakes testing results as the primary measure of accountability has crippled many school districts' ability to fully educate students. Consequently, student outcomes have been sacrificed for educational outcomes. Extant literature reveals that even before the first school bell rings, African American males are vulnerable for school failure. The academic underachievement of African American males has received considerable attention in academic and popular media. While it is well-established that educational attainment is a gateway to improved socioeconomic outcomes, the educational achievement of African American adolescents should be a national priority. For African American boys the mix of school failure, fragmented families, communities that lack cohesion, and educational policy and practice that expect substandard performance have lethal consequences as evidenced by the disparities in health and life expectancy.

Geographic location notwithstanding African American male students are more likely than their peers to come from fatherless homes (The Annie E. Casey Foundation (AECF), 2009 [A map constructed from AECF's online database indicates that in all states with reliable data that Black children comprised more than half of those children living with single-parents. Most single-parent families are mother-only families.]; Fields, 2003), have a mother in poverty (Eggebeen & Lichter, 1991), have negative interactions with police (Brunson & Miller, 2006; Dannefer & Schutt, 1982; Hurst, Frank, & Browning, 2000), experience some form of trauma (Shakoor & Chalmers, 1991; Berton & Stabb, 1996), and suffer from chronic diseases such as asthma (Akinbami & Schoendorf, 2002; Getahun, Demissie, & Rhoads, 2005). Often ecological risk factors experienced the night before school compromise the required aptitude for learning in the morning. Education systems that ignore the realities of a community's risk and protective factors miss opportunities to educate the whole child. This has become the reality of practices following the implementation of No Child Left Behind Act mandates (NCLB, 2002). Educators have effectively been mandated to
sacrifice child outcomes for educational outcomes. The overemphasis on high-stakes testing scores as the primary index for accountability has created, in many cases, an inhumane system of education where the child is fragmented in order to produce test scores. Often, very little regard is given to the conditions or context from which this child has come. African American males are vulnerable in many communities in the United States and are asked to perform in schools without consideration of these conditions.

In this article, the authors intend to call attention to the responsibility of schools to address the ecological risk and protective factors confronting African American males. First, the findings of Toldson’s (2008) Breaking Barriers report are used to illustrate the importance of considering the influence of personal, emotional, and health factors in educating African American male students. Second, the authors outline how a large urban school district in the southern United States is implementing a coordinated school health (CSH) model to meet the needs of the whole child. Finally, recommendations on how CSH models can improve the academic achievement of African American male students are discussed. It is the intent of the authors to assess the potential of this school district’s implementation of CSH to improve the life outcomes of Black male students.

**REVIEW OF RELEVANT LITERATURE**

Polite (1994), using Chaos theory as an organizing framework, suggested that a holistic approach is useful in explaining the influence of patterns of institutions, individual, and group behaviors that contribute to the academic achievement of African American boys. Borrowing from Griffiths, Hart, and Blair (1991), Polite (1991) asserted that a holistic approach allows for the inclusion of all elements to be considered and monitored. To this end, little is known about the contribution of personal and emotional factors toward the academic achievement of African American boys.

Previous studies have presented evidence that a variety of factors increase the likelihood that African American males will achieve in school (Ford, Grantham, & Whiting, 2008; Garibaldi, 1992; Lewis, James, Hancock, & Hill-Jackson, 2008). Family background, self-concept, teacher expectations, and value orientation are factors that have been positively linked to academic achievement among Black students (Parham, Parham, Berry, & Asamen, 1989). Osborne (1999) demonstrated that self-identification as a scholar or a student promotes positive self-esteem and influences academic performance. Similarly, another study found that student effort, parent-child communication, and peer associations strengthened achievement among Black students (Stewart, 2007).

Black-White gaps in child and maternal health status and health behaviors are thought to form portions of the Black-White gap in school readiness (Currie, 2005). In households with higher levels of food insecurity, Black males report diminished physical functioning and quality of life (Casey et al, 2005). Within economically deprived areas, early age nutritional status, as measured by indirect anthropometric indicators or direct assessments of dietary intake, has been linked with inequities in cognitive performance over time and aptitude testing at the end of high school (Gewa et al, 2009; Ivanovic et al, 2009).

Over a twenty-two year period from 1977 to 1999, research showed that Black high school students were less likely to smoke cigarettes, binge drink, or use marijuana than their White peers; however, the racial gap was smaller for younger students than older students (Wallace & Muroff, 2002). Furthermore, the authors showed that risk factors for substance use varied across race with education, family, economic, ideological, political, and religious attributes having weaker or opposite effects among Blacks than typically assumed. However, Black males’ greater trauma exposure is thought to increase the likelihood of alcohol and substance use across the life course. Both male gender and psychological strain have been found to increase marijuana use among young adults in general, and the relationship between psychological strain and marijuana use has been found to be stronger among minorities (Preston, 2006). A study of primarily Black preadolescents with high levels of violence exposure found that exposure to trauma was associated.
with greater odds of reporting substance abuse among peers, but not with the odds of reporting substance abuse personally (Joseph, Augustyn, Cabral, & Frank, 2006).

The literature also pointed to unique cultural aspects of Black development, such as collectivism and resistance to racism, as factors that increase the need for the mental health community to become stakeholders in Black education (Berry & Asamen, 1989). Similar research suggests that motivational factors, self-esteem, self-concept and ethnic identity are associated with achievement among African American males (Graham, Berry, & Asamen, 1989; Powell, Berry, & Asamen, 1989). Consideration of the educational trajectory of African American males from an ecological perspective is required if the desired outcome is longitudinal change. Factors such as mental health (e.g., substance use), wellness (e.g., nutrition and physical activity), deserve primal and proximate attention in advanced discussions of the academic achievement of African American males. In addition, approaches to improving the educational outcomes of African American male students should pay particular attention to the ecological risk factors that compromise their learning before the school bell even rings.

**BREAKING BARRIERS: PERSONAL, EMOTIONAL, AND HEALTH FACTORS INFLUENCE ON ACHIEVEMENT**

Toldson's (2008) *Breaking Barriers* report explored personal and emotional factors that statistically improved educational outcomes for African American males by analyzing academic success indicators from three national surveys: (a) Health Behavior in School-Aged Children (HBSC, N = 1225), (b) National Survey of America's Families (NSAF, N = 2497, Urban Institute and Child Trends, 2007), and (c) National Survey on Drug Use and Health (NSDUH, N = 1208). The domain areas explored included emotional well-being and self-esteem, future plans, nutrition, peer relationships, and substance use. Major findings of the study revealed affective adjustment patterns, psychosomatic features, aspirations, dietary practices, and social behaviors that significantly improve academic functioning among Black males, with implications for clinical practice, public policy, parenting, and educational administration. The findings illustrated the need for non-cognitive interventions to promote the academic success of African American males. In addition these findings pointed to the need for whole child approaches to promote academic performance for African American males.

In *Breaking Barriers*, linear relationships between academic achievement and external factors are the cornerstone of the findings. A linear relationship emerged when academic achievement improved because the level of a characteristic or asset increased or decreased. In this article the focus is on the findings relevant to personal and emotional factors including emotional well-being and self-esteem. Review of the entire *Breaking Barriers* report goes beyond the scope of this article, but the authors suggest reviewing it for a greater context.

**Emotional Well-being and Self-Esteem**

*Breaking Barriers* cited a wide range of factors that directly and indirectly measured emotional well-being and self-esteem in the HBSC dataset, including measures of self-worth, psychomotor stressors, and use of psychotropic medication. Step-wise multiple regression analysis was used, whereby measures of well-being and self-esteem that significantly increased or decreased academic achievement were accepted into the equation, and others were thrown out. Of the factors proposed, three demonstrated a significant relationship with academic achievement: (a) “Quality of life”, (b) “Tired in the morning”, and (c) “Feel lonely.” The ANOVA results revealed that collectively the three factors had an F(3) value of 9.03 with a p of less than or equal to .001.

Quality of life, which addressed the question, “In general, how do you feel about your life at present?” had the greatest impact on the variance in grades among African American students. To further scrutinize the relationship between quality of life and academic achievement descriptive statistics with Pearson chi-square was used. Cross-tabulated scores on quality of life and academic achievement revealed that African American male students who receive very good grades were almost twice as likely (64.3% compared to 33.3%) to report feeling “very happy” about the quality of their lives.
of their life. Thirty-eight percent of Black male students with poor academic performance reported not being happy with their life, compared to only 13% of the students with good grades. Pearson chi-square indicated a less than .01% probability that the differences are due to chance alone.

Figure 1a shows that as the self-reported quality of life improves, academic achievement also improves. The opposite is true of feeling tired in the morning. Students who reported being more frequently tired in the morning, had poorer performance in school. Whole child approaches to improve a student’s sense of connectedness to a larger community or a person, as in mentoring programs, may improve the academic performance of the African American males. In addition, Figure 1b demonstrates the need to acknowledge the importance of sleep practices. Educators should begin to question if a student’s home environment is conducive to sleep especially if they live in high-stressed neighborhoods.

The NSAF dataset was explored to further explain the relationship between mental health and well-being and academic success among African American males. A MANOVA was run on the five items that comprise the NSAF Mental Health Scale, with Positive School Engagement (two levels) as one factor and gender of participant as the second factor. No significant differences between male and female students were found. Positive School Engagement exhibited significant main effects for all five items including: (a) Very nervous in past month, (b) Felt calm and peaceful in last month, (c) Felt downhearted in last month, (d) Was a happy person in last month, and (e) Could not be cheered up last month. Collectively, the items yielded a Hotelling’s Trace of .036, F(5) = 13.7, p < .001.

ANOVA was used to explore the main and interaction effects of each item. A significant interaction effect, F(11.81) = 7.36, p < .001, between gender and Positive School Engagement was found for the item “Was a happy person in last month.” Academic achievement is significantly more sensitive to happiness among African American boys than for African American girls.

Figure 1. The linear relationship between wellness factors and academic achievement among African American males

Note. Data from .U. S. Dept. of Health and Human Services, National Institutes of Health, & National Institute of Child Health and Human Development (2001). Health behavior in school-aged children survey, 1997-98 [Computer file]. Calverton, MD: ORC Macro. X axis = In your opinion, what does your class teacher(s) think about your school performance compared to your classmates? (a) In general, how do you feel about your life at present? (Range = I’m not happy at all; I don’t feel very happy; I feel very happy; and I feel quite happy). (b) How often do you feel tired when you go to school in the morning? (Range = Rarely or never; Occasionally; 1 to 3 times a week; and 4 or more times a week).
**Nutrition**

In *Breaking Barriers*, using the HBSC dataset, 13 food and beverages were tested to assess their relationship with academic achievement among Black males. Survey respondents were asked, “How often do you eat or drink any of the following?” Due to the large number of, and similarity between, the food and beverage items, principle component analysis with varimax rotation was used to reduce the odds of random significance. Four factors were derived, which were initially accepted based on statistical derivations of the Kiser-Guttman eigenvalue one criteria, a scree plot, and the logical arrangement of items. The total amount of the variance accounted for by the four factors was 59.57%. Most of the items clustered in the first two factors. Factor 1 indicated a statistical relationship between all the items that might be considered “junk food” (chips/fried potatoes, potato crisps, cakes and pastries, hamburger, hot dogs, sweets, and cola). Factor 2 revealed a statistical link between the items that are considered healthy (cooked vegetables, raw vegetables, fruit, and whole wheat or rye bread).

*Breaking Barriers* displayed a means plot of a MANOVA that tested the main and interaction effects of nutrition on academic achievement across Black, Hispanic and White students. Findings indicated a statistical link between dietary practices and academic achievement across all races ($F = 27.25; df = 6; p < .00$), and significant differences between the nutritional habits of Black, Hispanic and White students ($F = 70.86; df = 3; p < .00$). Black students were more likely to eat junk food more frequently and less likely to regularly eat healthy food, than Hispanic or White students. More healthy foods and less junk food are associated with higher academic achievement. Subsequent ANOVA procedures revealed that eating raw vegetables was the only nutritional practice that independently had a significant relationship with academic achievement for Black males ($F = 2.61; df = 3; p < .05$). African American males, who reported eating raw vegetables more frequently, were significantly more likely to also report higher levels of academic performance.

**Substance Use**

Toldson (2008) used the NSDUH dataset to explore 25 items that measured attitudes, perceptions, and experiences with substance use among school-aged African American males. To reduce data, researchers used principle component analysis with varimax rotation, which revealed six underlying variables that measured: (a) The extent of drug and alcohol use at the respondents’ school, (b) The perception of parents toward drug and alcohol use, (c) Perception of peers’ toward drug and alcohol use, (d) Participation in drug prevention programs, (e) Participation in drug counseling, and (f) Participation in illegal drug distribution. The total amount of the variance accounted for by the six factors was 78.1%.

To explore the specific contribution of substance use factors to academic achievement among African American males, the statistically derived factors were entered into a regression equation. Step-wise multiple regression analysis was specified to reject factors that did not significantly increase the variance of academic achievement among Black males. Of the factors proposed, the extent of drug and alcohol use at the respondents’ school and perception of peers’ drug and alcohol use, were accepted into the regression equation. Results of a MANOVA revealed that collectively the two factors had an $F$ value of 6.08 with a $p$ of less than or equal to .001. However, the factors revealed had only a small impact (less than 2%) on the total variance in grades among African American males.

Toldson (2008) used the HBSC dataset to further examine the relationship between problematic alcohol and drug use and academic achievement. The specific substance relating behaviors explored were frequency of binge drinking; drinking liquor, beer, or malt liquor, and wine or wine coolers; smoking cigarettes; smoking cigarettes at school; smoking marijuana; and using alcohol and other drugs at school.

Among the smoking-related behaviors explored smoking cigarettes, in general ($F = 14.68, df = 3$, and $p < .001$) and at school ($F = 10.81, df = 3$, and $p < .001$), had the most significant negative
impact on academic achievement among Black male students. Other behaviors that were linked to poor academic performance were smoking marijuana \((F = 8.87, df = 3, and p < .001)\), binge drinking \((F = 7.77, df = 3, and p < .001)\), and using alcohol and other drugs at school \((F = 6.80, df = 3, and p < .001)\; see Figure 2a, b).
American boys if schools consider targeted versus universal interventions that integrates the cultural “verve” of Black males (Akbar, 1991; Boykins, 1983; Caldwell, 2000; Caldwell & White, 2001 Kunjufu, 1995; Majors & Billson, 1992).

Below the descriptions of the aforementioned eight components of CSH provided by the National Center for Chronic Disease Prevention and Health Promotion are used (see CDC, 2008) as examples of how each component can be applied to the unique cultural legacy of African American male students.

**Health Education**

Health education can apply the findings of Breaking Barriers to curriculum lessons on the importance of sleep, junk food versus healthy food consumption, and the influence of emotional health on learning. In addition, curriculum content and delivery are important considerations for African American males. Content should include relevant health education topics that provide information on disease prevalence rates, etiology, and prevention to dispel myths about what exactly are the leading causes of death for non-Hispanic, African American men which are, (in order) heart disease, cancer, unintentional accidents, stroke, homicide, diabetes, HIV-related diseases, chronic lower respiratory diseases, kidney diseases, and influenza/pneumonia (Heron, 2007; Xu, Kochanek, and Tejada-Vera, 2009). Although Black males comprise a relatively small portion of all American males (11.9 percent) (U.S. Census Bureau, 2002), the all-cause age-adjusted death rate for Black non-Hispanic males in 2006 (1,241 per 100,000) was almost 35 percent higher than that of White non-Hispanic males (922.8 per 100,000) and almost 84 percent higher than that of Hispanic males (675.6 per 100,000) (Heron, Hoyert, Murphy, Xu, Kochanek, and Tejada-Vera, 2009). U.S. vital statistics indicate that though the racial gap in death rates is fairly comparable for males and females across the life course, the Black-White death rate ratio for males between the ages of 15 and 19 is 53 percent higher than the comparable ratio for females (based on authors’ analysis of Table 3 in Heron et al, 2009). Prevention practices should be a cornerstone to health curriculum. In particular, health education should include candid conversations about the impact of such issues as prostate cancer, unintentional injuries, suicide, infant mortality, environmental racism (e.g., lead poisoning) and HIV/AIDS in Black communities.

The delivery of health curriculum should be interactive and integrate the creative learning styles of African American boys such as the use of hip-hop and rap, poetry, and debate teams. Health educators should employ diverse teaching methodologies that capture the interests and attention of Black boys. Ultimately, targeted school-based health education strategies should be considered in the rubric of health disparities elimination strategies.

**Physical Education**

Physical education practices that incorporate diverse cultural knowledge may address Toldson’s (2008) personal and emotional factors finding by improving the way students feel about themselves, their quality of life, and ultimately, their academic achievement. Schools can invest in African drum and dance classes that incorporate movement, memory, and cultural consciousness to expose Black boys to a variety of cultural practices of physical activity (see Diallo & Hall, 1989). In addition, psychical education activities that promote developing cognitive and emotional skills to reduce anxiety such as Tai-Chi and Yoga are useful life-long wellness activities that promote good health and wellness. More culturally diverse physical education options, for example African drum and dance, can also be useful for integrating the community in the CSH.

**Health Services**

The co-location of health services is an important consideration to mitigate disparities in health access experienced by Black males. Access to health services in familiar non-threatening places is
essential for Black male students in cities and towns where public transportation is insufficient and there is a history of mistrust toward non-Black health professionals. Proximity to health resources that can disseminate prevention information, answer questions, and provide restorative health services is necessary to building self-esteem and a positive feeling toward the school environment. In addition, school-located health services could reduce the cultural mistrust of health practitioners which may reduce health-compromising behaviors and increase the likelihood that Black boys grow up with a positive attitude toward health practices.

**Nutrition Services**

The relationship between nutrition and academic achievement was found statistically significant in the Breaking Barriers study (Toldson, 2008). CSH can address the food consumption of Black boys by providing nutritious and appealing meals in cafeterias and expose Black males to a variety of fruits and vegetables as alternatives to those typically found in obesigenic (high dietary intake and low physical activity) environments. Just as important to healthy food options are lessons in food preparation. Nutrition classes can teach healthy and creative strategies to prepare snacks and meals. The authors recommend that school districts invest in school garden programs or co-ops where students can learn agricultural skills to produce their own raw vegetables and even participate in agribusiness entrepreneurship to supply fresh produce to their community. The importance of having a school-based nutritional lesson and choices for consumption are important points of intervention to improve the educational achievement of African American boys.

**Counseling and Psychological Services**

Given the psychological vulnerability of African American males and its importance to academic achievement, CSH are critical parts to providing an array of services. Schools as partners with community and state mental health initiatives are critical to addressing the mental health needs of Black boys. Schools that develop partnerships to share student data, serve as referral sources to children and families, confront the limitations of the NCLB regulations, and perceive themselves as part of a “system of care” (Hernandez & Hodges, 2003) are well-positioned to meet the mental health needs of African American male students. CSH must also acknowledge and confront the stigma of mental illness in African American communities. The authors recommend universal prevention attempts using psycho-educational approaches to provide information to target audiences, disseminate information, and provide non-stigmatizing opportunities for community members to interact with mental health professionals.

An especially strong recommendation is being made to CSH that psychologists, school administrators, primary care physicians, and parents/caregivers investigate their practices with assessing and diagnosing students for attention deficit disorder (ADD) and related disorders. A primary goal of this component for African American male students would be to make the distinction between their behavioral, learning, and emotional challenges. The differential experiences and expressions of emotional distress should be investigated prior to developing interventions to promote the mental health of African American boys.

**Healthy School Environment**

Bullying and positive relationships were among the statistically significant findings in the Breaking Barriers study (Toldson, 2008). CSH can provide leadership and training for faculty staff and students on building and teaching practices that promote a healthy building environment. The authors recommend teacher in-service training on uncovering latent or residual race- and gender-based perceptions, attitudes, and behaviors toward Black males. In some schools, there may also be teachers and administrators exhibiting bullying behaviors. Schools through clubs, innovative targeted classes, intergenerational mentoring programs, language usage, images on school
property, and community partnerships can create an empowering school environment (Caldwell, Beech, Olfield, & Price, 2007).

**Health Promotion for Staff**

A healthy school staff can only be positive for the academic achievement of all students. Faculty, staff, and administrators who can effectively handle stress, are rested in the morning, and can personally discuss their sleep behaviors, nutrition practices, and fitness activities are role models for students. School staff could develop personal commitments to health goals as challenges to students and hold each other accountable.

**Family/Community Involvement**

The authors recommend that school health advisory boards include a taskforce, working groups, or subcommittees for segmented student populations that are at greater risk than others. Integrating cultural nuisances, patterns of communication, community-specific social networks, and health communications research and practices are strategic methods to building African American community support for CSH. For example, historically Black fraternities and sororities could adopt school health programs and coordinate an organization’s nationally mandated health program with a local school district. In many of these communities, members of these organizations are teachers, administrators, and parents. Additionally, faith-based men’s health screenings or assessments could partner with schools to include a youth voice in their health promotion strategies.

**Implications**

The educational future of Black boys requires a comprehensive strategy to address the ecological factors that compromise their educational achievement even before the school bell rings. Unilateral initiatives historically employed have demonstrated to be ineffective since the educational outcomes for Black boys continues a downward trajectory. What the authors attempted to demonstrate in this article is that reports such as *Breaking Barriers* should be employed to inform implementation of the policy such as the Coordinated School Health program. A comprehensive strategy to address the health of schools can have profound benefits for African American male students if implemented using cultural knowledge and community input.

Coordinated School Health programs have the potential for long-term implications to change the health and educational outcomes of African American males. Developmentally appropriate strategies in the earlier course of one’s educational experience may alter attitudes and behaviors that are related to health-compromising behaviors of Black youth. Recommendations are offered for implementing CSH that consider the African American male cultural nuisances.

**Conclusion**

Coordinated School Health programs offer important contributions to addressing the question posed by the Think Tank for African American Progress: What is the future for Black boys? This article and the others in this special issue of *The Journal of Negro Education* are exemplars of the need to translate research into interventions address the challenges confronting Black communities across academic disciplines and professional boundaries, bridge the gap between practitioners and researchers, and create strategic plans that employ innovative solutions.

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**References**


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