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The influence of meeting time on academic outcomes in school-based mentoring

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ABSTRACT

This study explores the role of mentor–youth meeting time on academic performance within school-based mentoring. Participants in the study ($N = 1139$) were part of a national evaluation of the Big Brothers Big Sisters school-based mentoring programs, approximately half of whom had been randomly assigned to receive mentoring at their schools. Within the treatment group, 44% were in programs in which matches met after school, 25% were in programs in which matches met during the school day excluding lunch, 6% were in programs in which matches met during lunch, and 26% were in programs in which matches met at various times during and after school. Among academically at-risk youth, the impact of school-based mentoring on academic outcomes was moderated by the time during which matches met. Specifically, academically vulnerable youth derived significant academic benefits from mentoring in programs that met after school or during lunch. In programs that met during school as a pullout program, there was no evidence of benefits and some evidence of negative effects on academic outcomes. Implications of the findings for research and intervention are discussed.

1. Introduction

Youth mentoring programs in the United States have experienced tremendous growth in the past two decades, with approximately 3 million youth in one-to-one structured mentoring relationships (Rhodes & Lowe, 2009). The fastest growing form of mentoring is school-based mentoring (SBM) (MENTOR/National Mentoring Partnership, 2006). In SBM, youth meet with mentors during or after school in the school building, unlike traditional community-based mentoring (CBM) where meetings take place outside the school setting and each match chooses where and when they will meet. The rise in SBM programs stems, in part, from hopes that mentoring can be harnessed to improve academic outcomes. Particularly since the advent of high-stakes tests under the No Child Left Behind Act in 2001, there is increased pressure on schools to raise academic performance. Although recent random assignment impact evaluations have shown relatively few statistically significant effects of SBM (Bernstein, Dun Rappaport, Olsho, Hunt, & Levin, 2009; Herrera et al., 2007; Karcher, 2008a), a recent meta-analysis of these evaluations (Wheeler, Keller, & DuBois, 2010) concluded that SBM was modestly effective in improving selected outcomes, including increased scholastic efficacy, lower rates of truancy, absenteeism, and school-related misconduct, as well as improved perceptions of support from non-familial adults and peer support.

Interpretation and application of these results is complicated by the fact that there is considerable variation in the implementation of SBM programs. Several studies have demonstrated variability in effects across different subgroups of youth and programs (e.g., DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011; Grossman, Chan, Schwartz, & Rhodes, 2012; Karcher, 2008a; Karcher, Davidson, Rhodes, & Herrera, 2010; Schwartz, Rhodes, Chan, & Herrera, 2011). One potentially important area of variation that has not previously been examined is the time of day during which SBM programs are offered. Specifically, some SBM programs offer mentoring after school or during lunch, while other programs offer it during the school day, which generally requires pulling participating students from other school activities and classes (Herrera, 2004; Herrera et al., 2007). Given that pulling students from class could potentially disrupt academic instruction, it is important to consider how these differences in implementation influence the academic outcomes of the intervention. The present study draws on data from a national evaluation of Big Brothers Big Sisters (BBBS) SBM programs (Herrera et al., 2007) to examine whether the timing of mentor–youth meetings is associated with differential academic impacts.

1.1. Mentoring and academic achievement

Research suggests that the elementary and middle school years are crucial in determining academic self-concept and future academic

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success (e.g., Archambault, Eccles, & Vida, 2010; Helmke & van Aken, 1995; Huang, 2011). Youth who experience academic difficulties often feel inadequate at school, causing them to disengage or act out to avoid the embarrassment of being unable to keep up with peers (e.g., Finn, 1989; Laird, Jordan, Dodge, Pettit, & Bates, 2001). Moreover, eighth grade reading achievement and ninth grade academic performance play a major role in predicting high school graduation and college enrollment (Lesnick, Goerge, Smithgall, & Gwynne, 2010). Providing academically at-risk students with the support and attention they need is critical to their future success.

SBM programs are well positioned to reach academically at-risk youth and provide them with a range of benefits. Theory indicates that mentoring relationships can influence a range of cognitive developmental processes (Rhodes, 2005). This is supported by research on the collaborative and social nature of learning, suggesting that mentors can facilitate the development of new cognitive processes and skills in children and adolescents (Radziszewska & Rogoff, 1991; Vygotsky, 1978). Empirical evidence suggests that mentoring may be effective in improving academic outcomes among at-risk youth, in particular (e.g., DuBois et al., 2011; Thompson & Kelly-Vance, 2001). Moreover, SBM programs may be uniquely suited to influence academic outcomes due to being located within schools. Participants in SBM programs are more likely than those in community-based programs to be referred by teachers. In addition, because the programs are located in schools, mentors may be more inclined to assist with school work, discuss youth school experiences, and communicate with teachers and school personnel. In fact, studies suggest that SBM's strength is likely in its ability to affect school-related outcomes (e.g., Diversi & Mecham, 2005; Herrera, Grossman, Kauh, & McMaken, 2011; Karcher, 2008a; Portwood & Ayers, 2005; Portwood, Ayers, Kinnison, Waris, & Wise, 2005; Wheeler et al., 2010). It should be noted, however, that the benefits that have been reported tend to be behaviors and attitudes that may contribute to school success, such as truancy, self-perception of academic abilities, connectedness to school and to peers, and school misconduct, rather than academic performance (Wheeler et al., 2010).

When the impacts of a range of programs are combined, however, positive outcomes can be masked by neutral or even negative outcomes associated with less effective programs. For this reason, it is important to examine program factors that may influence the effectiveness of the intervention. One factor in SBM that could greatly influence academic impacts is the timing of the intervention itself. Whereas some matches meet during the school day, others meet after school. This means that some programs provide youth with additional positive activities (academic or otherwise) beyond those that are part of the school day, while other programs provide mentoring by pulling students from other activities during the school day, in some cases supplanting academic activities. Although some "during-school" programs meet during lunch, most meet at other times in the day, including during class time, which could have detrimental effects on academic performance. By contrast, when mentors meet with their mentees during the after-school hours, they can advance students' understanding of classroom material. Rather than compete with school activities, after-school mentoring (or mentoring during lunch time) can play a valuable role in helping students to consolidate what they have learned, identify areas in need of additional assistance, and reinforce the value of school.

1.2. Research on pullout programs and academic achievement

In fact, research in education has long given mixed reviews to pullout programs that occur during the school day (e.g., Johnston, Allington, & Afflerbach, 1985). One study suggested that the more time at-risk students spent in pullout programs, the worse their progress was (Glass & Smith, 1977). A more recent study comparing an inclusive special education program (providing services within the context of the general education classroom) versus a pullout program for students with disabilities found that student in the inclusive program earned higher grades than those in the pullout program and did not differ on measures of behavioral infractions and attendance (Rea, McLaughlin, & Walther-Thomas, 2002). Other research emphasizes the advantage of supplementary programs over compensatory programs, that is, the importance of programs providing additional enrichment time to at-risk students as opposed to substituting an intervention for regular class time (e.g., Piluski, 1994). A study surveying student preferences for service delivery of specialized reading instruction revealed that the majority of students prefer to receive support within their regular classroom from their teacher (Jenkins & Heinen, 1989). A teacher's account also describes some of the dangers of pullout programs noting, "At first, I was concerned about the sheer loss of time—travel time and time spent in the pullout program rather than in class—but later I became alarmed over some students' sense of disengagement, their lack of connection and their feeling disheartened at not understanding what was going on when they reentered the classroom" (Brandts, 2005, p.60).

Providing mentoring during the school day not only may carry with it many of the risks associated with pullout programs delivering academic instruction, but it could potentially be more detrimental academically since it is not a primarily instructional intervention. Although mentoring may include academic activities, in BBBS SBM programs, only approximately one quarter of mentors report spending "a lot" or "most" of their time engaging in activities such as tutoring or homework help, while the majority (71%) reported spending a lot of their time engaging in casual conversation and approximately half spent a lot of their time playing indoor games (Herrera et al., 2007). As a result, it is possible that mentored students in programs that meet during the school day may be receiving less instructional time than their nonmentored peers. Research indicates that instructional time is associated with student learning generally (Brown & Saks, 1986; Fredrick & Walberg, 1980; Zeith & Cool, 1992), and specifically with achievement in math (Aksoy & Link, 2000). Notably, the association between instructional time and achievement was found to be particularly strong for students with lower initial abilities (Brown & Saks, 1986). This suggests that offering mentoring during the school day (outside of lunch) may be particularly problematic for students who are already academically at-risk.

Despite the risks associated with pulling students from class, to date, research on SBM has not distinguished between programs that provide mentoring after school or during lunch versus those that provide mentoring at other times during the school day. Yet it is possible that this difference may significantly influence the academic benefits that youth derive from such programs. Since academic improvement is a major goal of most SBM programs, including BBBS SBM programs (Herrera, 2004; Herrera et al., 2011; Portwood & Ayers, 2005), it is important to examine factors that could influence its impact on academic outcomes.

1.3. Current study

The current study employs data from the national evaluation of Big Brothers Big Sisters school-based mentoring programs (Herrera et al., 2007; Herrera et al., 2011) to investigate how mentor–student meeting time may influence the impact of the intervention. Our analyses sought to determine whether timing significantly moderated the effects of the program on academic outcomes. Specifically, we hypothesized that matches in programs that met during the school day but not during lunch would have negative effects on academic outcomes. Meanwhile, matches that met at other times (i.e., after school or during lunch) would have positive effects on academic outcomes. We hypothesized that this effect