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RESEARCH ARTICLE

An Investigation of Characteristics, Practices, and Leadership Styles of PBIS Coaches

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Across the country, local education agencies are using coaching to augment school-based leadership and support classroom instruction that improves student outcomes. Effective systems for positive behavioral interventions and supports (PBIS) include the establishment of coaching capacity to initiate and sustain implementation. We conducted a state-wide survey of district-level PBIS coaches (n = 41) to document and evaluate relationships across perceptions of skills, time allocations for service provision, and leadership style and school outcomes as measured by the *School-wide Evaluation Tool*, the *School-Wide PBIS Implementation Inventory*, and the state's *PBIS Recognition Process*. Generally more positive outcomes were evident for district coaches who reported providing less than 35 hours per month of direct and indirect supports; and, perceptions of district coach skills and time related positively to outcomes. The reported leadership skills of coaches reflected a transformational (i.e., establishing relationships by gaining trust and confidence as a role model) rather than transactional (i.e., establishing relationships by rewards or punishments depending on performance) or laissez-faire (i.e., establishing relationships by allowing others to make decisions) approach to implementing and supporting PBIS with skills directed at the micro level (i.e., student, school, LEA) more evident than those associated with guiding state level decision-making. Implications for future research and practice are discussed.

Keywords: instructional coaching, leadership style, positive behavior support

Research and professional wisdom hold that school- and classroom-based coaching will increase the likelihood and sustainability of positive instructional outcomes (Bean, Belcastro, Hathaway, Risko, Rosemary, & Roskos, 2008; Bean, Draper, Hall, Vandermolen, Zigmond, 2010; Cornett & Knight, 2008; Horner, n.d.; Israel, Carnahan, Snyder, & Williamson, 2012; Jager, Reezigt, & Creemers, 2012; Kincaid, & Dewhirst, n.d.; Knight, 2005, 2008; Showers & Joyce, 1996; Sugai,

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& Simonson, 2007). In typical approaches, the coach is a "…former teacher whose central role is to partner with the principal and teachers to bring research-based instructional practices into classrooms" using a systematic model that includes (a) implementing new instructional practices with interested teachers; (b) discussing instructional practices to meet needs of students; (c) modeling instructional practices with students; (d) observing and providing supportive and corrective feedback related to implementing practices; and, (e) identifying and discussing areas for improvement (Knight, 2012, p. 54). The practice of teachers or other professionals helping teachers to address school-based academic and social problems has been around for many years (cf. Joyce & Showers, 1987; Joyce, Showers, & Rolheiser-Bennett, 1987; Showers, 1984; Showers, Joyce, & Bennett, 1987; Showers & Joyce, 1996). Originally framed as a way to engage and enhance staff development, coaching is currently included as a core feature of large-scale reform practices (e.g., Multi-Tiered System of Support, Response-to-Intervention, Schoolwide Positive Behavior Support) focused on improving academic and behavior outcomes for all students (McLeskey, Waldron, Spooner, & Algozzine, 2014; Sugai & Horner, 2009). Coaches may have full- or part-time assignments in one or more schools; and, their practice is built on the belief that teachers are more likely "…to make substantial changes in their classroom practice…" when they learn "…from a coach than from other sources" (Coburn & Woulfin, 2012, p. 5). While much has been written about the value of coaching and what coaches should do, research on the characteristics of coaches and what they actually do in daily practice is limited.

COACHING AS INSTRUCTIONAL LEADERSHIP

In many districts, coaches are valued and important leaders of school-wide and grade-level teams focused on preventing and remediating problems related to early literacy and mathematics achievement; and, they labor to improve instruction in many ways (Bean, 2004; Campbell & Malkus, 2011; International Reading Association, 2004, 2010; National Research Council, 2001; Neumerski, 2013; Polly, 2012; Reinke, Stormont, Herman, Wang, Newcomer, & King, 2014; Sailors & Shanklin, 2010; Showers & Joyce, 1996; Toll, 2004). For example, they may help teachers to plan their instruction, to develop effective routines and procedures, and to create effective materials and learning environments (Algozzine, Babb, Algozzine, Marsh, McCombs, & Martorell, 2010; Mraz, Kissel, Algozzine, Babb, & Foxworth, 2011; Neuman & Cunningham, 2008; Poglinco & Bach, 2004). They also are seen as a cost-effective alternative to providing often ineffective traditional "train-and-hope" professional development; however, this promise was found unfulfilled in a recent study of the cost instructional coaching in a school district in the Midwestern United States (Knight, 2012. While most professionals agree that there is no universal form or model of coaching (Neumerski, 2013), the practice generally involves placing a highly knowledgeable professional in a direct or indirect leadership role to "advance instructional and programmatic change across the whole school" and there is a limited body of research addressing the intended or actual practices of coaches (Campbell & Malkus, 2011, p. 432).

Coaches provide different types of administrative or quasi-administrative leadership. For example, while principals are instructional leaders in effective schools, they often distribute leadership tasks and duties to teams and individuals; in fact, instructional coaching emerged as a way to share leadership responsibilities in the context of authentic classroom teaching (cf.

Edmonds, 1981; Leithwood & Jantzi, 2008; Lezotte, 2001; Neumerski, 2013; Spillane & Diamond, 2007). While districts have focused resources on coaching and practices related to it have been widely adopted (Matsumura, Garnier, & Resnick, 2010; Neuman & Wright, 2010), "…no one definition of coaching exists, making it challenging for schools to determine the use of these leaders" (Neumerski, p. 322). For some, it is any kind of short- or long-term support addressing specific instructional needs, for others it is narrowly focused on increasing the use of targeted evidence-based practices, and for others it addresses implementation of new ways to teach and provide leadership for instructional improvement; but, in general, the research knowledge base here is thin (cf. Bean, 2004; Mraz, Algozzine, & Kissel, 2009; Poglinco & Bach, 2004; Resnick, 2010; Sailors & Shanklin, 2010; Walpole & Blamey, 2008; Walpole & McKenna, 2004).

Like literature on other instructional leadership positions (e.g., principal, school psychologist), scholarship on coaching describes and prescribes characteristics of coaches more than it documents who they are and how they say they (or actually do) spend their time (Atteberry, Bryk, Walker, & Biancarosa, 2008; Bean, 2004; Marsh, McCombs, & Martorell, 2010; Reinke et al., 2014; Resnick, 2010; Walpole & McKenna, 2004). Clearly, instructional leadership is part of coaching (cf. Taylor, 2008); and, rather than documenting leadership or teaching styles of coaches, again most literature promotes how they *should* spend their time (cf. Neumerski, 2013; Vanderburg & Stephens, 2010).

COACHING AND POSITIVE BEHAVIORAL INTERVENTIONS AND SUPPORTS

Positive behavioral interventions and supports (PBIS) is a research-based instructional approach framed by systems, data, and practices for improving the teaching, learning, and social culture needed to achieve academic and behavior success for all students (Lo, Algozzine, Algozzine, Horner, & Sugai; 2010; Horner, Sugai, & Anderson, 2010; Kincaid, George, & Childs, 2006; Reinke et al., 2014; Technical Assistance Center on Positive Behavioral Interventions and Supports, 2010). The PBIS framework is grounded in "tiered" levels of interventions that are typically developed in schools using systematic professional development opportunities. *Universal* interventions and supports are available for all students (e.g., establishing and teaching 3-5 explicit expectations for behavior in all areas of the school and throughout the entire school day; regularly monitoring discipline referrals or other behavioral data identify students in need of additional assistance). *Targeted* interventions and supports are available for students for whom data indicate emerging signs of problems (e.g., frequent office discipline referrals; emerging lack of school progress). *Intensive* interventions and supports are available for students who display more frequent misbehavior and for whom more individualized interventions are needed.

Effective PBIS implementation includes the establishment of coaching capacity to build and sustain implementation (Technical Assistance Center on Positive Behavioral Interventions and Supports, 2010). Due to the complex nature of establishing consistent and effective tiered instructional practice, many states and local education agencies identify district-level coaches to support classroom-based practices, while others use in-school professionals to enhance their PBIS effort. While the need for coaching within PBIS and other areas of instruction has been documented, there is little guidance provided in the literature regarding roles, responsibilities, or other critical aspects (e.g., time allocations, how many schools can be successfully supported) of how coaches spend their time (cf. Atteberry, Bryk, Walker, & Biancarosa, 2008; Neumerski,

2013; Poglinco & Bach, 2004; Resnick, 2010; Rodriguez, Loman, & Horner, 2009). Little is also known about the leadership style of coaches or about the relationships across leadership style, skills, professional practices, and expected educational outcomes. Coaches may assume different roles at different levels of PBIS implementation (e.g., exploration, initial implementation, full implementation) and we reasoned that studying coaching in the context of a single large-scale, state-wide initiative in which unified practices were expected was important.

CONTEXT AND PURPOSE OF OUR RESEARCH

We were interested in multiple aspects of coaching, including perspectives on leadership. In this context, transactional leaders set explicit goals, expectations, and rewards and provide feedback to keep followers "on task" (Avolio & Bass, 1999; Bass & Avolio, 1990); and, transformational leaders inspire others to achieve through their vision, excitement, and enthusiasm and they "…puncture time-worn assumptions through their resolve to reframe the future, question the tried-and-true, and have everybody do the same (Vera & Crossan, p. 224). Transformational leadership is the style best suited to "selling" a strategic vision for change or a new order of routines (Brown & May, 2012; Vera & Crosson, 2004) such as PBIS. Prescribed or practiced leadership styles of PBIS coaches, or perceptions of them, remain undocumented in the coaching literature.

Our study focuses exclusively on district-level PBIS support personnel and we use the term "coach" when referring to these individuals in our state. We surveyed a sample of coaches regarding their professional positions and documented reported time allocations and other key features of their service provision including their perceptions of skills related to critical features of PBIS data, practices, and systems and their reported leadership style as well as relationships between these variables and important educational outcomes.

Our research was grounded in a conceptual model including four features of effective coaching. First, coaching requires knowledge and expertise in the content area within which the coach's efforts are focused and skills that support others in applying best practices. Effective coaching also requires creating conditions for targeted behaviors to be emitted so that corrective and supportive performance feedback can be delivered to shape the recently acquired skill(s). Once initial knowledge and skills are documented, efforts shift from acquisition to fluency building which requires supervised practice with performance feedback. Finally, effective coaching involves delivering (and sometimes developing) high-quality professional development and on-going technical assistance that builds or refines knowledge and skills of others. We were interested in broadly sampling perceptions of practicing coaches and conducted a survey to address the following research questions:

1. What are the characteristics of PBIS coaches' professional positions and practices?
2. What are coaches' perceptions of their skills related to critical features of PBIS?
3. What are PBIS coaches' perceptions of their leadership style?
4. To what extent are characteristics of positions and practices, perceptions of skills, and perceptions of leadership style related?
5. To what extent are characteristics of positions and practices, perceptions of skills, and perceptions of leadership style related to indicators of PBIS implementation effectiveness?

We believe our findings add to the extant and emerging knowledge base on coaching in the context of efforts to improve educational outcomes for all students.

METHOD

Participants

We solicited participation from all local education agencies (N = 89) in our state with active PBIS programs at the time of the study. Forty-one coaches (46%) returned completed surveys. They represented all 8 geographical sections of the state served by Regional PBIS Coordinators and 32 (28%) of the state's 115 administrative districts. Less than one-fourth (22%) of the participants coordinated district leadership team meetings and most of those teams (68%) did not include district-level administrators or a variety of stakeholders. About half (46%) were the only person responsible for PBIS implementation in their district; and, most reported being the person responsible for (73%) or the leader of (76%) the PBIS implementation in their district. Twenty-two percent had less than 1 year of experience, 54% had 1-3 years of experience, and 24% had 4 or more years of experience as a coach; 63% worked ten months per year and 37% worked for twelve months. While most (71%) of the coaches served less than 13 schools, 19% served 13-19 and 10% served more than 20.

All coaches participated in similar training. Each of the PBIS District coaches attended three two-day PBIS Module Trainings provided by the [State] Department of Public Instruction. To provide on-going technical assistance and professional development as they worked with their schools, coaches were offered opportunities to attend bi-monthly or quarterly meetings with regional consultants supporting statewide initiatives and implementation of large-scale interventions. In the [State] PBIS Initiative, the participants were considered the leadership professionals in charge of providing direct and indirect district-level coaching support in the local education agencies in which they worked (e.g., partnering with administrators and teachers to bring research-based instructional practices into classrooms, observing and providing supportive and corrective feedback related to implementing the practices, and taking a leadership role in identifying and discussing areas in need of improvement).

Procedure

We were interested in coaches' perceptions of their current position, skills, and leadership style. We reasoned that a cross-sectional statewide survey provided the option for collecting data over a broad geographical area in a reasonable amount of time from professionals with similar responsibilities and little time to spare for participating in interview or observation research. Without the availability of a single instrument addressing these areas, we combined two widely-used measures of coaching skills (Coaches Self-Assessment: Lewis-Palmer, Barrett, & Lewis, 2004) and leadership style (Multifactor Leadership Questionnaire (MLQ) Leader Form 5X Short: Avolio & Bass, 1999) with a set of questions about coaching into an on-line survey. Participation in the survey was voluntary and respondents were offered the opportunity to enter their names in a drawing of PBIS resources valued at $100 after completing the survey. The survey was distributed by each of the 8 PBIS Regional Coordinators via email to his or her corresponding

regional PBIS contact list of district representatives. The invitation to participate specified that participants for the survey should identify as district, rather than school-based, PBIS coaches.

The first 29 items of the survey included a variety of questions about the coach, the district, and the support provided by the coach. Answer options included both Yes/No, forced-choice, Likert-type ratings, and multiple-response items. Questions focused on demographic variables (e.g., number of PBIS schools on caseload) as well as details about district resources (e.g., leadership teams, number of other coaches), allocation and use of time (e.g., number of hours of direct and indirect support, number of team meetings attended), and other topics related to coaching (e.g., challenges, additional training needs). The next section of the survey (Coaches Self-Assessment) included 43 items using a 3-point Likert-type rating to assess perceptions related to12 data skills (e.g., can teach and support teams use of data to guide decision making, can evaluate status of school using multiple data sources), 17 practices skills (e.g., know and can define essential features of school-wide PBIS, can assist in coordination of training, evaluation, and dissemination activities at state level), and 14 systems skills (e.g., can facilitate effective team meetings, can effectively communicate across districts/regions) features of PBIS implementation. The items also reflect different skill levels of coaches: Level I-Preliminary (13 items), 17 Level II-Advanced (17 items), and Level III-Coordinator (13 items). We averaged items across levels and skill areas to create composite scores for subsequent analyses. Internal consistency reliability estimates for coach level ($\alpha_{\text{Preliminary}} = .93$; $\alpha_{\text{Advanced}} = .93$; $\alpha_{\text{Coordinator}} = .93$) as well as total and skill area responses were high ($\alpha_{\text{Total}} = .97$; $\alpha_{\text{Data}} = .94$; $\alpha_{\text{Practices}} = .93$; $\alpha_{\text{Systems}} = .91$).

The final section of the survey was the Multifactor Leadership Questionnaire (MLQ) Leader Form 5X Short used to assess coaches' perceptions of the leadership style. This instrument consists of 45 items and uses a 5-point Likert-type scale rating. The MLQ is comprised of items representing 3 different leadership styles (i.e., Transformational, Transactional, and Laissez-Faire) which are based on 9 factors of leadership characteristics (Idealized Influence (Attributed), Idealized Influence (Behavior), Inspirational Motivation, Intellectual Stimulation, Individualized Consideration, Contingent Reward, Management by Exception (Active), Management by Exception (Passive), and Laissez-Faire). Transformational leaders "are proactive, raise follower awareness for transcendent collective interests, and help followers achieve extraordinary goals" (Antonakis, Avolio, & Sivasubramaniam, 2003, p 264); MLQ items included "I instill pride in others for being associated with me," "I go beyond self-interest for the good of the group," and, "I act in ways that build others respect for me" (Avolio & Bass, 2004, Appendix A). Transactional leadership is "an exchange process based on the fulfillment of contractual obligations" and is often based on "setting objectives and monitoring and controlling outcomes" (Antonakis, et al., 2003, p.265); MLQ items included "I provide others with assistance in exchange for their efforts," "I discuss in specific terms who is responsible for achieving performance targets," and, "I express satisfaction when others meet expectations" (Avolio & Bass, 2004, Appendix A). Laissez-faire leadership suggests the leader "avoids making decisions, abdicates responsibility, and does not use their authority" (Antonakis, et al., 2003, p. 265); MLQ items included "I am absent when needed," "I avoid making decisions," and, "I delay responding to urgent questions" (Avolio & Bass, 2004, Appendix A). The MLQ authors (cf. Avolio & Bass, 2004; Bass & Avolio, 1990) report that its technical adequacy is acceptable for research purposes (e.g., reliabilities for the total items and for each leadership factor scale ranged from .74 to .94).

For purposes of our study, we followed guidance provided by Avolio and Bass (2004, pp. 110-111) for evaluating the leadership styles of participating coaches. We grouped MLQ items into 12 scales reflecting transformational (5), transactional (2), passive avoidant (2), and outcomes of leadership (3) characteristics; calculated a score for each scale by adding responses for each item in the scale and dividing by the number of items in the scale; and, averaged these scores across participants for subsequent reporting and analysis.

The outcome variables for coaching impact were the *School-Wide PBIS Implementation Inventory* (II), *School-Wide Evaluation Tool* (SET), and the total number of schools recognized by the state's *PBIS Recognition Process*. The II and SET are planning and fidelity measures used by teams to document specific phases or stages and other critical features of school-wide positive behavior support implementation (cf. Bradshaw, Debnam, Koth, & Leaf, 2009; Technical Assistance Center on Positive Behavioral Interventions and Supports, 2010; Vincent, Spaulding, & Tobin, 2012). Recognition scores reflect where a school is and perceptions of its current progress in the implementation process.

The *School-Wide PBIS Implementation Inventory* (Lewis & Newcomer, 2005) is an assessment that schools can use to document strengths and weaknesses across critical features of universal, secondary, and tertiary practices, systems, and decision making. We used the mean II scores for each district from which a coach completed the survey in our outcome analyses.

The *School-Wide Evaluation Tool* (Horner, Todd, Lewis-Palmer, Irvin, Sugai, and Boland, 2004) is a 2-3 hour school-wide review conducted by an external evaluator to (1) assess critical features that are in place, (2) determine annual goals for on-going behavior support, (3) evaluate progress, (4) redesign and revise extant procedures as needed, and (5) provide a basis for year-to-year evaluation efforts. We used the mean SET scores for each district from which a coach completed the survey in our outcome analyses.

Schools participating in the state's *PBIS Recognition Process* by documenting that they had completed Module I team training, begun implementation, and attained at least a Level I on the II and 80% total on the SET (Green Ribbon); or, that completed all of the requirements for Green Ribbon Schools, completed Module 2 training, and achieved a Level 2 on the II and 90% total SET score (Banner); or, that they completed requirements for Green Ribbon and Banner schools, completed all three team training Modules, scored a Level 3 or higher on the II and 95% total on the SET, and provided evidence of at least two consecutive years of improvement on required academic, attendance, and behavior data (Exemplar). The number of schools earning recognition in an LEA served as an additional outcome measure in our study.

Design and Data Analysis

We used a cross-sectional survey design and extant information from state data systems to provide a snapshot of characteristics and skills of coaches and relationships with important outcomes. We documented coaches perceptions of key aspects of their professional positions, skills related to effective implementation of PBIS, and leadership style. We also related selected demographic characteristics and perceptions of skills to critical and key indicators of PBIS success.

RESULTS

We report descriptive and inferential statistics documenting characteristics and practices of coaches (Research Question 1); perceptions of coaching skills related to PBIS (Research Question 2) and leadership styles (Research Question 3). We also report relationships among characteristics, practices, and perceptions (Research Question 4) and between characteristics and perceptions and implementation effectiveness (Research Question 5).

Characteristics and Practices of Coaches

Twenty-eight percent of the respondents reported spending an average of 4-6 hours per month providing *indirect support* (i.e., assistance not openly focused on schools such as coordinating or planning district- or regional-level meetings) and 59% reported providing an average of 1-6 hours per week of *direct support* (i.e., assistance focused on school personnel such as facilitating PBIS team meetings, consulting, and providing technical help) to PBIS schools in their districts. Four (10%) participants reported not attending any team meetings, 31 (75%) reported attending from 1 to 6 meetings, and 6 (15%) reported attending more than 8 meetings per month. Seven (17%) participants reported never attending a regional "coach" meeting, 11 (27%) reported attending monthly or quarterly, 4 (10%) reported attending bi-monthly, and 8 (19%) reported attending these meetings once or twice a year. Eighteen (44%) of the coaches reported that they were prepared or very prepared to lead the implementation of PBIS in their district and 15 (37%) indicated that they were somewhat prepared.

Perceptions of Coaching Skills

The average ratings were generally positive (i.e., between 2 and 3 on 3-point scale) with the highest rating (M = 2.78) evident for "Understands features of effective classroom instruction and management*"* and the lowest (M = 1.66) for "Can train schools in the use of [state data system] and [state] [office discipline referral] spreadsheets."

We compared perceptions across skill levels (i.e., I-Preliminary, II-Advanced, III-Coordinator) with a one-way repeated-measures analysis of variance (ANOVA) procedure. Using the multivariate test to account for an observed violation of the assumption of sphericity or equality of variances of the differences between skill levels, $X^2(2) = 10.28$, $p < .05$, statistically significant differences, $V = 0.61$, $F(2,39) = 30.20$, $p < .05$, were evident in our data. Follow-up analysis indicated that perceptions of Level I-Preliminary skills (M = 2.52) were significantly higher than those for Level II-Advanced skills (M = 2.42) and Level III-Coordinator (M = 2.08) skills; perceptions of Level II and Level III skills were also significantly different.

While the average ratings for the data area skills were generally positive (i.e. 2.0-3.0), only "*Can conduct direct observation of individual students for FBAs and other assessments"* had a mean above the 2.5 rating that we used to sort more positive from less positive perceptions on the 1-3 scale of the measure. Participants' responses also indicated that conducting SETs and sharing the results in a written report with their schools fell at the border of the more positive to less positive scorings (M = 2.37). Writing evaluation reports for district/regions and/or assisting

with state level reports, in contrast, were the least honed skills (M = 1.83). Similarly, coaches rated their skills in analyzing state level data as emerging or still developing (M = 1.98).

On average, coaches' perceptions of their "system" skills ranged 1.93 to 2.73 (M = 2.37). More specific to individual items, positive perceptions were found among items that addressed skills at communicating across schools (M = 2.73), facilitating effective team meetings (M = 2.70), and providing effective consultation and technical assistance to school teams (M = 2.59). Along a similar trend, coaches rated their skills at assisting schools in the development of support systems as being grasped but not yet fluent in use (M = 2.51). Providing guidance in policy development to state-level PBIS teams (i.e., "*Can assist in developing policies that guide state-level PBIS efforts"*) emerged as the least positively rated skill in the systems domain (M = 1.93).

Ten items tapped into PBIS practices. In general, ratings were positive ranging from 1.66 to 2.78 (M = 2.45). Notable within this domain is that 10 of the 17 items on the subscale were rated positively. A general theme across the positively rated items reflects coaches' understanding of classroom-based (M = 2.78) and school-wide (M = 2.76) behavior management, knowledge of strategies to increase appropriate behavior from positive behavior (M = 2.68) and applied behavior approaches (M = 2.66). The practices domain also asked coaches to rate their skills at developing and providing professional development to their schools. Coaches rated their skills at delivering professional development positively (M = 2.56). Two items reflected positive ratings of perceptions of skills at guiding schools in identifying and adopting evidence-based practices (M = 2.54) and implementing targeted-group function-based interventions (M = 2.50). Of the items in the practices domain, the least positively rated perception of skills was identified in training and preparing schools and teams to use state data systems and spreadsheets (M = 1.66).

Ratings of all data, systems, and practices skill items were available for 33 (89%) coaches; we compared these perceptions with a one-way repeated-measures analysis of variance (ANOVA) procedure. Using the multivariate test to account for an observed violation of the assumption of sphericity or equality of variances of the differences between skill areas, $X^2(2) = 10.29$, $p < .05$, statistically significant differences, $V = 0.37$, $F(2,31) = 9.26$, $p < .05$, were evident in our data. Follow-up analysis indicated that perceptions of data skills (M = 2.12) were significantly lower than those for practices (M = 2.32) and systems (M = 2.43).

Other topics. Coaches indicated the following among "primary challenges" experienced with PBIS implementation: Time (27%), lack of follow-through from schools (24%), district support (12%), skill limitations within schools (12%), and material (10%) and human resources (7%); and, one coach included school support and access to information as concerns. Sustainability (63%), creating a district implementation plan (61%), advanced training (54%), and district coordination (51%) were indicated as areas of need for additional professional development by participating coaches (see Table 1. Increasing buy-in and motivation for change (49%), Regional PBIS coordinators (78%), Exceptional Children Directors (42%) and other district leaders (39%), regional colleagues (37%), state and region trainings (29%), and national conferences (20%) were included as "*most beneficial in support of [the] coaching role*;" and, coach/coordinator professional development (66%) and opportunities to network with other schools (49%) were indicated among the "*most beneficial supports*" the state leadership could provide to help its coaches.

TABLE 1
Coaches' Perceptions of Their Additional Training and Support Needs

Question/Multiple-Response Options	Number	Percent
What additional training would you find beneficial?		
Sustainability	26	63.4
Creating a District Implementation Plan	25	61.0
Advanced Training Topics	22	53.7
District Coordination and Implementation	21	51.2
Buy-In/Motivation for Change	20	48.8
Coaching	16	39.0
Regional Collaboration	15	36.6
Policy Change	10	24.4
Personal Leadership Skills	7	17.1
Personal Presentation Skills	6	14.6
Personal Communication Skills	3	7.3
Other	25	61.0
Using Data within a Problem-Solving Process	*13*	*31.7*
Data Analysis	*10*	*24.4*
Grant Writing/Funding	*2*	*4.8*
Which supports do you find most beneficial?		
Regional PBIS Coordinator	32	78.0
EC Director	17	41.5
District Leaders	16	39.0
Regional PBIS Colleagues	15	36.6
State and Regional Trainings	12	29.3
State PBIS Coordinator	8	19.5
National Conferences	8	19.5
Which DPI supports provide would be beneficial?		
More regional meetings	12	29.3
More state meetings	7	17.1
More state trainings,	12	29.3
Opportunities to network with other schools	20	48.8
More district networking opportunities	10	24.4
More coach/coordinator professional development	27	65.9
District assistance from Regional Coordinator	3	7.3
Other	5	12.2
District Use of Data and Data Systems	*3*	*7.4*
Funding	*1*	*2.4*
Booster Sessions for Schools	*1*	*2.4*

Perceptions of Leadership Styles

Avolio and Bass (2004, pp. 94-96) posit that the "full range" of skills includes transformational, transactional, passive/avoidant, and outcomes of leadership domains. *Transformational* leaders

are "proactive," seeking to "optimize individual, group, and organizational development and innovation, not just performance 'at expectations.'" *Transactional* leaders define expectations and promote performance to achieve them using contingent rewards as well as vigilant monitoring of mistakes and errors and "corrective action as quickly as possible when they occur." *Passive/avoidant* leaders seldom specify agreements or expectation or provide goals or standards for achievement and respond only after mistakes have occurred. *Outcomes of leadership* reflect beliefs about efforts, effectiveness, and satisfaction of leaders.

Our participants' responses were more *transformational* than the norm relative to Idealized Behaviors (e.g., specify the importance of having a strong sense of purpose and emphasize the importance of having a collective sense of mission), Inspirational Motivation (e.g., talk optimistically about the future, talk enthusiastically about what needs to be done, express confidence that goals will be achieved), and Individual Consideration (e.g., spend time teaching and coaching, consider each individual as having different needs, help others to develop their strengths) scales and less transformational than the norm on Idealized Attributes (e.g., go beyond self-interest for the good of the group, display a sense of power and confidence), and Intellectual Stimulation (e.g., re-examine critical assumptions to question whether they are appropriate, seeking different perspectives when solving problems) scales. Responses of participating coaches were more transactional than the norm relative to Contingent Reward skills (e.g., provide others with assistance in exchange for their efforts, express satisfaction when others meet expectations). They were less transactional than the norm relative to Management by Exception (Active) skills (e.g., keep track of all mistakes, direct attention toward failures to meet standards). In practice, they would be less likely to focus on control, standardization, and inflexible compliance, less like to expect or promote compliance through rewards and punishments, less likely to pay attention to team members and teachers work to find faults, and more likely to be working to change the future rather than accepting that things will remain the same (Vera & Crossan, 2004).

Our participants responses were similar to the norm relative to *passive/avoidant* scales of Management by Exception (Passive) skills (e.g., fail to interfere until problems become serious, wait for things to go wrong before taking action, show a firm belief in "if it ain't broke, don't fix it") and Laissez-Faire (e.g., avoid getting involved when important issues arise, avoid making decisions, delay responding to urgent questions) skills. *Outcomes of leadership* responses were more positive than the norm on Extra Effort (e.g., get others to do more than they expected to do, heighten others' desire to succeed, increase others' willingness to try harder) and Satisfaction (e.g., use method of leadership that are satisfying, work with others in a satisfactory way) skills. They were less positive than the norm on Effectiveness (e.g., effective in representing group to higher authority, effective in meeting organizational requirements) skills.

Relationships across Perceptions of Characteristics, Practices, and Leadership Styles

The coach's caseload was related to the amount of time allocated to provide both direct and indirect support: The number of schools coordinated was positively correlated with hours per week of direct, $r = .36$, $p < .05$, and indirect support $r = .48$, $p < .05$. The number of school team meetings attended was also correlated with the number of hours of direct, $r = .49$, $p < .05$, and indirect support, $r = .44$, $p < .05$. Ratings of data, practices, and systems PBIS skills were not

statistically significantly related, $p > .05$, to their reported levels of direct, $r = .28, .24, .27$, or indirect, $r = .14, .20, .28$ support provided to schools. With the exception of Transformative leadership style which was related to indirect service, $r = .46$, $p < .05$, reported levels of direct and indirect service were not statistically related to perceptions of skills or leadership style.

Relationships with Outcomes

Non-statistically significant relationships (*Range* = .09-.31) were observed for SET, II, and Recognition scores of participating coaches. The overall SET ($M = 88.94$, $SD = 8.68$, *Range* = 60-100) and II ($M = 77.25$, $SD = 14.78$, *Range* = 38-100) represented a high degree of effectiveness across schools and the average number of schools receiving statewide recognition ($M = 9.90$, $SD = 13.03$, *Range* = 0-37) may reflect positively on the support being provided by the participants. No statistically significant differences were evident in SET, $F(7,25) = 0.99$, $p. >.05$, II, $F(7,33) = 0.57$, $p. >.05$, or Recognition, $F(7,33) = 2.06$, $p. >.05$, scores across the 8 PBIS regions represented in our study. We completed a series of quasi-experimental comparisons of differences across these outcomes.

Means, standard deviations, and test statistics for differences in outcomes across characteristics of coaches and of their positions are in Table 2. While trends favoring higher levels of support and smaller school-caseloads were evident, no statistically significant differences were evident for SET, II, or Recognition scores of schools with coaches who provided less than 7 hours or 7 or more hours per month of direct or indirect support. Similarly, no statistically significant differences SET, II, or Recognition scores of schools with coaches who provided support to less than 7 or 7 or more schools.

While an increasing trend was evident for SET scores for schools of coaches who were in the first year of their position ($M = 84.83$, $SD = 13.81$) compared to their peers with 1-3 years ($M = 89.44$, $SD = 7.99$) or to those with 4 or more years of experience ($M = 90.67$, $SD = 5.45$), the observed differences were not statistically significantly different, $F(2,30) = 0.87$, $p. >.05$. Observed II differences were also not statistically significantly different, $F(2,38) = 1.32$, $p. >.05$; a similar trend was evident for schools of coaches who were in the first year of their position ($M = 72.38$, $SD = 11.31$) compared to their peers with 1-3 years ($M = 76.57$, $SD = 16.10$) or to those with 4 or more years of experience ($M = 83.12$, $SD = 13.74$). The number of schools receiving statewide recognition was statistically significantly different, $F(2,38) = 5.45$, $p. <.05$, across participants with different tenure as a coach; that is, there were significantly more schools earning recognition ($M = 20.60$, $SD = 14.88$) for coaches who had 4 or more years of experience than there were for their peers with less than 1 year ($M = 6.67$, $SD = 12.67$) or 1-3 years ($M = 6.36$, $SD = 9.77$) of experience.

TABLE 2
Outcomes for Coaches with Different Characteristics

Group	Subgroup	Outcome	*M*	*SD*	Test Statistic
Direct Support	Less than 7 hours per month	SET	88.33	9.19	$t(31) = -.43$
	7 or more hours per month		89.67	8.28	
	Less than 7 hours per month	II	73.68	15.04	$t(39) = -2.00$
	7 or more hours per month		82.82	12.88	
	Less than 7 hours per month	Recognition	7.12	11.49	$t(39) = -1.75$
	7 or more hours per month		14.25	14.45	
Indirect Support	Less than 7 hours per month	SET	90.56	8.91	$t(31) = 1.04$
	7 or more hours per month		87.41	8.43	
	Less than 7 hours per month	II	75.21	15.56	$t(38) = -.84$
	7 or more hours per month		79.18	14.52	
	Less than 7 hours per month	Recognition	8.37	12.72	$t(38) = -.81$
	7 or more hours per month		11.76	13.54	
Schools	Less than 7	SET	91.63	8.76	$t(31) = 1.78$
	7 or more		86.41	8.04	
	Less than 7	II	73.94	12.06	$t(39) = -1.34$
	7 or more		80.10	16.52	
	Less than 7	Recognition	12.74	14.29	$t(39) = 1.31$
	7 or more		7.45	11.62	
Experience	First year	SET	84.83	13.81	$F(2,30) = 0.87$
	1-3 years		89.44	7.99	
	4 or more years		90.67	5.45	
	First year	II	72.38	11.31	$F(2,38) = 1.32$
	1-3 years		76.57	16.10	
	4 or more years		83.12	13.74	
	First year	Recognition	6.67	12.67	$F(2,38) = 5.45$[1]
	1-3 years		6.36	9.77	
	4 or more years		20.60	14.88	

[1] $p < .01$

Means, standard deviations, and test statistics for differences in outcomes across coaches with different perceptions of preparation, competence, and leadership are in Table 3. While trends favoring those with more favorable perceptions were evident, no statistically significant differences were indicated except for II in two comparisons. Team-reported implementation indicators in schools of coaches who perceived themselves as more skilled (M = 83.31, SD = 10.89) were statistically significantly higher, $t(39) = -3.79$, $p < .05$, than those in schools with coaches who perceived themselves as less skilled (M = 67.78, SD = 5.24). Similarly, II scores were statistically significantly higher, $t(31) = -.43$, $p > .05$, in schools with coaches who perceived their leadership skills to be more developed (M = 83.26, SD = 10.35) compared to their peers who perceived their leadership skills to be less developed (M = 70.29, SD = 16.27).

TABLE 3
Outcomes for Coaches with Different Perceptions of Preparedness and Skills

Area	Subgroup	Outcome	*M*	*SD*	Test Statistic
Preparation	Less prepared	SET	88.67	9.68	$t(31) = -.20$
	More prepared		89.27	7.62	
	Less prepared	II	72.75	14.08	$t(39) = -2.33$
	More prepared		83.00	13.96	
	Less prepared	Recognition	7.04	11.88	$t(39) = -1.62$
	More prepared		13.56	13.85	
Competence	Less skilled	SET	87.38	11.48	$t(31) = -.83$
	More skilled		89.95	6.40	
	Less skilled	II	67.78	15.24	$t(39) = -3.79$[1]
	More skilled		83.31	10.99	
	Less skilled	Recognition	6.13	11.41	$t(39) = -1.51$
	More skilled		12.32	13.65	
Leadership	Less developed	SET	90.67	7.63	$t(31) = .30$
	More developed		87.50	9.43	
	Less developed	II	70.29	16.27	$t(39) = -3.09$[1]
	More developed		83.26	10.35	
	Less developed	Recognition	9.79	13.45	$t(39) = -.05$
	More developed		10.00	12.98	

[1] $p < .01$

DISCUSSION

Research and professional wisdom have promoted the usefulness of coaching as a component of building high capacity, sustainable instructional initiatives. For example, "[m]athematics coaches are placed in elementary schools to construct leadership roles and provide professional development addressing mathematical content, pedagogy, and curriculum" (Campbell & Malkus, 2012, p. 449). Yet there are still many unanswered questions about how coaches spend their time, the skills they believe they have and need, and reported leadership styles associated with promoting implementation of large-scale school-based improvement initiatives and providing instructional support for teachers (cf. Fixsen & Blasé, 2009; Fixsen, Blasé, Naoom, & Wallace, 2009; Hobson & Moss, 2010; Kincaid, Childs, Blasé, & Wallace, 2007; Lohrmann, Forman, Martin, & Palmieri, 2008; Lohrmann, Martin, & Patil, 2012; Neumerski, 2013; Poglinco & Bach, 2004; Reinke et al., 2014; Resnick, 2010; Sailors & Shanklin, 2010). Similarly, although detailing strategies that coaches use is "an emerging area of research" (cf. (Reinke, Herman, & Stormont, 2013; Reinke, Herman, Stormont, Newcomer, & David, 2013), the body of knowledge about all areas of coaching is relatively thin and the need for systematic study is strong on many levels (Reinke et al., 2014, p. 3

We compiled information from PBIS coaches and related it to outcomes from schools in which they were coaching. As Horner, Sugai, and Anderson (2010) indicate, "SWPBS is not a formal curriculum but a 2–3 year process of leadership team training intended to establish local or school capacity for adoption of effective and preventive behavioral interventions, high implementation integrity, continuous use of data for decision making, embedded professional development and *coaching* to establish predictable, consistent, positive and safe social contingencies at the whole school level" (p. 4, emphasis added). We reasoned that documenting

perceptions of key aspects of positions, skills related to effective implementation of PBIS, and leadership style represented an important base for further understanding and possibly improving the support provided by district-level and other coaches.

We found that despite the typical barriers being reported (e.g., lack of time, limited follow through at schools, wavering district support, and limited skills in the school team members), the majority of our coaches rated themselves as prepared to support and sustain PBIS implementation in their districts. Not unexpected, time allocated for service delivery was reported as a constant pressure and, although no exact service delivery model emerged as the most efficacious, we did define a general framework that can assist districts in allocating resources. Another critical finding points to the skill sets that coaches possess. Notably, coaches' perceptions of their skills reveal established competencies in working with schools to address individual student or school/team issues. Less well-developed skills, in contrast, were found in tasks that would take coaches' work from the district level to policy making and data-based problem solving activities that drive PBIS implementation and sustainability at the "big picture" or state level. Leadership skills mirror this finding with engagement with teams and working at the micro level (e.g., coaching others with enthusiasm and sharing the sense of purpose that helps eliminate barriers) representing areas that are supported by coaches.

Identifying constellations of coach characteristics provides valuable features for those training and developing coaches in state and local education agencies. For example, coaches identified themselves as having strong skills in training teams behavioral approaches and supporting the overall structures needed to infuse these practices into school settings. In contrast, coaches reported that their skills in interpreting data at a higher level and working within database systems were in need of additional refinement. These findings highlight training needed for coaches that also would help elevate their perceptions of power and confidence to facilitate change in their LEA (and their state). In addition, documenting time associated with coaching provides a basis for developing policies regarding how many schools a coach should be assigned to maximize the likelihood of success. We propose the following as a beginning decision-making frame for planning the amount of coaching capacity required for implementing schools–this needs replication, and ongoing assessment and evaluation as the roles of LEA coaches and implementation of PBIS evolve.

> 160 hours/month = 1.0 FTE Coach per 16 schools
> 128 hours/month = General and targeted support 4 days/week (16 schools/month); and,
> 32 hours/month = Administrative/planning/office 1 day/week.

Implications for Practice, Future Research, and Policy

Our study has other implications for the practice of school district level PBIS coaching that provide a starting point for future research. While we focused primarily on relationships across characteristics and perceptions of skills and leadership style of coaches, two findings related to outcomes actually were collected as part of the background information and were not directly related to any of these three areas. These results suggest that districts having larger numbers of schools with positive PBIS outcomes also have evidence of support through commitment of resources to invest in implementation. It is not surprising that districts with leadership willing to

commit staff FTE to support of school implementation would also see the value in making the initiative a priority with their support and planning for sustainability with a district level leadership team to share the planning and implementation.

But it is not only the investment in leadership teams that is important to outcomes. Administrators must recognize the need for and value of their coaches having adequate time to access support for their own learning in order to continue to build their own skill set. Coaches with more coaching experience, specifically four or more years of it, reported more positive perceptions of their skills related to data, systems, and practices and had schools with higher outcome scores, which aligns with the idea that skills develop through experience not just exposure (cf. Campbell & Malkus, 2011; Mraz, Algozzine, & Kissel, 2009; Neumerski, 2013; Sailors & Shanklin, 2010; Vera & Crosson, 2004).

Limitations

A limitation of our work is our reliance on self-reported indicators of skills, practices, and competencies. Relying mainly on self-reported survey data, we did not document variations in or effects of how coaching practices were implemented in schools (e.g., differences in focus, priorities, and common and distinct activities; details of instructional and other interactions with teachers). We also did not document perceptions of other professionals (i.e., administrators, teachers) of key features of coaching. Replication and extension of our work to address these limitations with similar and other types of field-extension studies will further clarify the potential and value of site-based coaching leadership supporting the improvement of behavior instruction and learning with the context of PBIS.

Additionally, while our respondents were considered representative of professionals providing district-level coaching support in our state, they were volunteers and their responses potentially reflected positive (e.g., supported coaching and responded to represent it well) or negative (e.g., did not support coaching and responded to represent it poorly) bias with regard to the job they were expected to do.

Conclusion

Instructional coaching is a promising practice in efforts to improve academic skills and a preferred practice in efforts to improve teaching and learning in core academic content areas such as reading and mathematics. Coaching is also a core feature of efforts to improve behavior instruction and learning. We found that the perceptions of PBIS coaches were generally positive in relation to roles and responsibilities of the position and skills related to them; their reported leadership style was less likely to result in compliance through rewards and punishments of personally-valued actions and more likely to achieve change through thoughtful consideration and support of the opinions of others; and, trends in relationships between and among reported characteristics of coaches and coaching and broad outcomes were promising.

Clearly, school teams and in-school coaches need just enough support to keep them moving forward, but not so much that they fail to take/keep responsibility for their own implementation. In this regard, coaches must establish their relationships with schools not as outside implementers but instead as partners in school change so that implementation and

sustainability does not rest solely on their shoulders but is embraced across the school and/or district (Fixsen et al., 2009; Kloo, Barron, St. John, & Zigmond, 2011; Lohrmann, Martin, & Patil, 2012). In this context, PBIS coaches play a dual role of supporter and leader. Specifically, their job responsibilities reflect training, coaching, and moving schools/teams toward innovative practices for addressing student needs. In light of this, their skills must include those that guide teams in their implementation of PBIS practices, systems, and data. Additionally, coaches must possess characteristics that can lead those same teams as they navigate through changes in how they reform their work with students. Leadership skills such as those identified as critical in school reform research (e.g., Denton, Vaughn, & Fletcher, 2003; Klinger, Vaughn, Hughes, & Arguilles, 1999; Kloo, Machesky, & Zigmond, 2011) must be groomed in PBIS coaches as well.

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