The impact of comprehensive student support on teachers: Knowledge of the whole child, classroom practice, and Teacher Support

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HIGHLIGHTS

- Out-of-school barriers due to poverty can impede children's success and thriving in school.
- Comprehensive interventions such as City Connects have been found to improve student achievement.
- Teachers report having a better understanding of the whole child when City Connects is implemented in a school.
- Teachers feel supported when this comprehensive support intervention is in place.

ARTICLE INFO

ABSTRACT

Comprehensive, school-based student support interventions are an approach to addressing out-of-school factors that may interfere with students' achievement and thriving. The effect of these approaches on teachers has not been extensively studied, although the literature points to potential benefits. This paper explores the impact of student support on teachers through a case study of City Connects, which collaborates with every teacher in a school to tailor services for students. A mixed-methods study finds that teachers report new awareness of students' out-of-school lives, develop classroom management strategies, and feel more supported. Implications for teacher education and holistic student support are discussed.

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1. Introduction

Teachers recognize that what happens in a student's life outside of the school day matters in the classroom. A 2015 Scholastic-sponsored survey asked award-winning "Teachers of the Year" what barriers to learning most affect their students' success. The top responses included family stress (cited by 76% of teachers) and poverty (62%), followed by learning and psychological problems (52%). If these teachers could choose where to focus education funding in order to have the highest impact on student learning, their top priorities would include anti-poverty initiatives and reducing barriers to learning through "wraparound" services such as healthcare (Worrell, 2015).

Research confirms that what teachers recognize as poverty-related barriers can have a major impact on students' academic achievement. Several studies have documented negative effects of poverty, including poor academic achievement (Hair, Hanson, Wolfe, & Pollak, 2015), family chaos (Evans, Gonnella, Marcynyszyn, Gentile, & Salpekar, 2005), parents' mental health challenges (Engle, 2009), food insecurity (Winicki & Jemison, 2003), homelessness (Herbers et al., 2012), obesity (Taras & Potts-Datema, 2005), and a lack of after-school supervision (Mahoney, Lord, & Carryl, 2005). Students' non-academic needs, often associated with or intensified by poverty, can manifest as externalizing behaviors or disengagement in the classroom and hinder achievement (Berliner, 2013). Effective instruction is perhaps the most important purpose of schooling, but this task is made more difficult

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for teachers when their students face these external challenges.

While schools have a long history of attempting to address out-of-school challenges through the work of school nurses, psychologists, and social workers, there is growing momentum to expand and systematize student support as a core function of schools. Over the past decade, districts have also turned to the surrounding community, where a wide range of services and enrichments may be available. Researchers have called for moving student support from the margins of schools to a central position (Adelman & Taylor, 2011), and for implementing a systematic practice with measurable outcomes. In the United States, momentum to address out-of-school factors is growing. Recently, an in-depth review of current trends in student support not only identified many organizations across the country that integrate school, district, and community supports in a systematic manner, but also reported that some of these approaches have demonstrated effectiveness in promoting student outcomes (Moore et al., 2014).

A study of efforts across the United States to consolidate resources in support of educational outcomes revealed 182 cross-sector collaborations in a wide range of locations (Henig, Riehl, Houston, Rebell, & Wolff, 2016). Places where systematic student support is being implemented in the United States include New York City, which recently began creating 100 new "community schools" aimed at meeting the needs of children and families through access to social services, health and mental health resources. Similarly, Cincinnati is developing infrastructure to coordinate service delivery to high-need children (Blank, 2015). This trend has also occurred internationally, with community schools and community learning centers in Canada (Salm, Caswell, Storey, & Nunn, 2016), Belgium (Blaton & Van Avermaet, 2016), the Netherlands (Heers, Ghysels, Groot, & van den Brink, 2015), and the United Kingdom (Dyson, Kerr, Heath, & Hodson, 2016). A broad range of efforts to support learning through comprehensive services, out-of-school learning enrichments, and/or addressing individual educational needs is underway in Scotland, Brazil, Finland, Canada, and the United Kingdom (Peterson, 2016). Importantly, the trend toward systematizing an approach to addressing out-of-school barriers to learning aligns with contextual theories of child development, which identify the family, school, and community as important settings that influence a child's development (Bronfenbrenner, 1986).

There is new recognition that student support should be individualized and tailored, aligning with current trends toward individualizing learning (Zmuda, 2015). For example, in a school with systematic student support, a child who is underperforming academically might receive school-based tutoring, as well as interventions to address other domains of development that may be impeding achievement (e.g. behavioral or health-related services). For a child with behavior challenges, a systematic review of both needs and strengths might lead a school to understand and address the root cause of the behavior; this could result in providing support for a family-related need or connecting the student to enrichments that match his/her areas of interest.

This paper explores the impact of comprehensive student support on teachers. Our core research question is: how does comprehensive, systematic student support impact teachers' professional practices and understanding of the lives of their students? We approached this question through a case study of City Connects, an example of a student support intervention in which a full-time City Connects Coordinator conducts annual conversations with every teacher in a school and develops for each student a tailored plan of supports and enrichments from the school and community. The research reported here mined findings from an annual survey of all teachers in schools implementing City Connects in one of its eight cities (Boston, Massachusetts). A mixed-methods research approach was employed to study alignment of survey results with literature on the impact of student support on teachers.

2. Conceptual framework

In order to inform predictions about how a comprehensive student support intervention might impact teachers' experiences, we sought to establish a conceptual framework grounded in the literature on areas of teachers' work that are theoretically related to students' non-academic needs. A review of research on student support and its relationship to the work of teachers uncovered two key categories of findings. First, a wide set of mental health, social, behavioral, and other non-academic needs has been increasingly acknowledged by schools. During the time of this shift, teachers have recognized the importance of knowledge of the whole child, and this knowledge has impacted several areas of their work. Second, teachers are aware of the degree to which students' non-academic needs go unmet, especially in under-resourced schools. Lacking the resources, time, and training to address these needs, teachers experience significant stress.

The research in these two categories of findings informs the conceptual framework for the study, and leads to identification of concrete ways in which systematic student support could theoretically impact the work of teachers and, in turn, impact students.

2.1. Whole-child perspective

Many researchers and practitioners over the past 25 years have acknowledged that the work of schools goes beyond curriculum and instruction. Basch (2011) asserts: "No matter how well teachers are prepared to teach, no matter what accountability measures are put in place, no matter what governing structures are established for schools, educational progress will be profoundly limited if students are not motivated and able to learn" (p. 593). In addition to addressing students' academic needs, schools must address non-academic factors that impact learning, such as students' mental health (Bond & Compas, 1989; Dryfoos, 1994). Although there has historically been much debate about the importance of addressing academic versus social-emotional needs, this is in fact a "false dichotomy; " decades of research demonstrates that academic and non-academic skills are interconnected, and, because academic and social-emotional skills develop and operate together, efforts to promote them should be designed to promote both simultaneously (Jones & Bouffard, 2012, p. 9). Teachers are central to this effort, and believe addressing students' non-academic needs is part of their role, though they view it as challenging (Roeser & Midgley, 1997). Teachers both can and want to be involved as informants with respect to their students' mental health needs and as partners in addressing these needs (Ford & Nikapota, 2000).

Over time, students' non-academic needs have increasingly been viewed in the broader picture of the "whole child". The Association for Supervision and Curriculum Development (ASCD) implemented a Whole Child Initiative in an effort to "change the conversation about education from a focus on narrowly defined academic achievement to one that promotes the long-term development and success of the whole child" (ASCD, 2014, p. 6). The initiative helps educators, families, community members, and policymakers progress toward sustainable and collaborative action. The "Whole School, Whole Community, Whole Child" (WSCC) model, developed by the ASCD and the Centers for Disease Control (CDC), combines and builds on elements of the traditional school health approach and the whole child framework (ASCD, 2014, p. 6). With an ecological approach that is directed at the whole school, the overall aim of the model is to improve each child's development across multiple domains.

According to this seminal ASCD framework, understanding the "whole child" also refers to a teacher's ability to understand all aspects of a child's development (including the domains of family, health, and social-emotional wellbeing), as opposed to only the academic domain. For example, one important strategy for addressing the needs of the whole child is social and emotional learning (SEL), which provides a foundation for safe and positive learning and improves academic achievement (Weissberg, Durlak, Domitrovich, & Gullotta, 2016). Effective SEL programming in schools involves coordinated school-wide practices that help students develop critical skills including: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (CASEL, 2013). Rather than distracting from academic curricula, research points to the merits of integrating student support efforts, such as the teaching and reinforcement of SEL skills, into daily interactions and practices with students.

In connection to the important role of students' SEL skills, research shows that teachers' SEL skills influence "everything from teacher-student relationships to classroom management to effective instruction and teacher burnout," and that practices and policies to support and foster educators' social and emotional competencies are fundamental to addressing stressors that serve as barriers to teaching and learning (Jones, Bouffard, & Weissbourd, 2013, p. 62). Further, socially and emotionally competent teachers set the tone of the classroom by developing supportive student relationships, designing lessons that build on student strengths and abilities, promoting intrinsic motivation, and acting as a role model for respectful and appropriate communication and behavior (Jennings & Greenberg, 2009, p. 492).

Scholars are increasingly pushing for schools to nurture all aspects of student development, viewing students as "whole persons—not mere collections of attributes, some to be addressed in one place and others to be addressed elsewhere" (Noddings, 2005, p. 10). Further, according to Noddings (2005), it is critical to encourage and allow teachers and students to interact as whole persons and to develop policies that treat the school as a whole community. Rather than placing more stringent demands on teachers and students, it is recommended to consider the metaphorical "big picture" of their lives, and of their co-existence with one another in the school setting.

Teachers continue to recognize this big picture and, according to several studies, are open to acquiring and applying a more comprehensive understanding of their students' lives. For example, in a study of how teachers approached problematic behaviors, Brophy and McCaslin (1992) report that teachers attempted to understand the root causes of behaviors and advocated for long-term solutions. In a qualitative study of teachers' perspectives on student mental health, the family context and parents' partnership in service delivery is viewed by teachers as critical (Williams, Horvath, Wei, Van Dorn, & Jonson-Reid, 2007).

Teachers' work is at the heart of why the whole child perspective is important. In a review of the ways schools address non-academic needs, scholars have called for a systematic approach to student support that, as one of its core areas, "enhance[s] classroom-based efforts to enable learning" (Adelman & Taylor, 2000, p. 56). There is evidence in the educational literature that teachers' knowledge of the "whole child" is profoundly important to several areas of work that influence their efforts to enable learning, in turn impacting achievement.

First, an understanding of the whole child affects the teacher-student relationship. The quality of this relationship may change as teachers understand more about a child's strengths, needs, and out-of-school life. Negative teacher-student relationships are associated with negative outcomes in achievement (Ray, 2007). In contrast, at-risk students provided with strong emotional and instructional support can achieve gains similar to those of lower-risk peers (Hamre & Pianta, 2005). Teacher-child closeness serves as a protective buffer against maladjustment and is associated with factors important to academic success such as participating in class and liking school (Ladd & Burgess, 2001). As noted above, teachers' SEL competencies influence the quality of teacher-student relationships. Teachers who excel at regulating their emotions are more likely to display positive affect in the classroom and are better equipped to treat students with challenging behavior in a sensitive manner (Jones et al., 2013, p. 63).

The quality of student-teacher relationships is "developmentally consequential" with respect to impact on student achievement (Hughes, 2011, p. 53). The potential benefits of improving teacher-student relationship quality are important: "…achievement, effortful engagement, and [teacher-student relationship quality] form part of a dynamic system of influences in the early grades, such that intervening at any point in this nexus may alter children's trajectories" (Hughes, Luo, Kwok, & Lloyd, 2008). Hughes (2011) reviews theoretical processes proposed to explain the relationship between teacher-student relationship quality and positive student outcomes, which include more sensitive and responsive instruction that may occur in the context of a positive relationship.

Second, understanding more about the whole child impacts the ways in which teachers respond to student behavior. Behavior has an effect on achievement and may predict later mental health and academic issues (Brouwers & Tomic, 2000; Schaeffer, Petras, Ialongo, Poduska, & Kellam, 2003; Schaeffer et al., 2006). In early childhood settings, caregivers who attribute behavior problems to external rather than internal factors used less-power-assertive strategies than those who thought the behavior could be controlled by the child (Scott-Little & Holloway, 1992). In a study of teachers' perceptions of classroom behavior problems, Bibou-Nakou, Kiosseoglou, and Stogiannidou (2000) suggest that teachers connect behavior problems with "disposition and familial factors" (p. 130). This connection would be affected by deeper knowledge of the child. Behavior-specific praise has been argued to decrease problem behaviors and promote achievement (Brophy & Good, 1970; Reinke, Herman, & Stormont, 2013). Knowing more about a particular child's strengths and needs could also enable teachers to offer more specific, positive praise.

Third, knowledge of the whole child impacts classroom management, which can be defined as the steps teachers take to create an environment in which learning can take place (Brophy, 1987). Elements of the environment include physical space, routines, and heuristics for responding to the constantly evolving events of a classroom. Knowledge of the whole child has the potential to improve teachers' work in all areas of classroom management (e.g., better knowledge of a student's needs might impact planning of his or her physical space and the ways these needs impact class routines). Effective classroom management may help prevent more serious disorders from developing (Franklin, Kim, Ryan, Kelly, & Montgomery, 2012).

Finally, knowledge of the whole child may directly impact instruction by allowing teachers to have a better sense of children's strengths and needs across a variety of dimensions. Donohue, Weinstein, Cowan, and Cowan (2000) report that if teachers define "ability" broadly, they create "multidimensional" classrooms where different teaching strategies are used. Differentiated instruction is a teaching philosophy and practice based on the belief that because there is variety in learning styles among any group of students, there should also be a variety of instructional practices. In a classroom with differentiated instruction, teachers understand students' individual differences, use formative assessment, modify teaching content and style to meet each learner's needs, and collaborate with students in the learning process (Smit & Humpert,

2012).

2.2. Teacher stress

Literature from the fields of education and child development indicates that students' non-academic needs can be overwhelming to teachers and lead to significant stress (Ball & Anderson-Butcher, 2014; Ball, 2011; Kyriacou, 2001). Students' non-academic needs are often perceived by teachers as burdensome (Ball, 2011; Roeser & Midgley, 1997). While teachers view it as part of their role to address these needs (Roeser & Midgley, 1997), they report having a lack of preparation, knowledge, and confidence to engage in this work on their own, as teacher training programs often overlook this important topic (Berzin et al., 2011; Weston, Anderson-Butcher, & Burke, 2008).

Teachers with stronger SEL competencies have more positive relationships with students and manage their classrooms more effectively; this results in a positive classroom climate that supports positive student outcomes, which can reduce teachers' stress (Jennings & Greenberg, 2009). However, the reverse is also true, and stress increases when teachers are unable to promote a positive classroom climate or positive student outcomes (Jennings & Greenberg, 2009). Thus, the most effective approaches are likely to be those that simultaneously work to mitigate factors that cause stress and help teachers learn to cope with sources of stress that cannot be avoided (Jones et al., 2013, p. 64). Kyriacou (2001) also identifies the presence of excessive demands as a source of stress for teachers and notes that support can create a "virtuous circle" in which the demands begin to feel more manageable.

When support to teachers takes the form of a systematic school-based approach to addressing student needs, teacher stress is reduced. Ball and Anderson-Butcher (2014) found that when teachers have positive perceptions of their school's student support system, they report lower levels of stress. Theoretically, this reduction in stress may have at least three sources. First, teachers may experience reductions in stress through knowing that students are receiving supports they need. Second, they may feel they are supported in an area for which they have not received enough training. The literature suggests that teachers value consultation services with mental health professionals in order to cultivate the skillset required to understand and address students' non-academic needs (Gutkin, Singer, & Brown, 1980). Third, systematic student support may provide the kinds of collaborations teachers feel are most useful. For example, in consultation-based relationships with other support staff, teachers value sharing information and resources in a systemic manner (Ray, 2007; Suldo, Friedrich, & Michalowski, 2010). Therefore, while the missions of most student support interventions directly relate to students, they provide important support to teachers as well.

Reducing teacher stress may lead to subsequent benefits for students. For teachers working with children who have emotional and behavioral challenges, teacher stress is negatively correlated with student achievement; in other words, when teachers feel supported, students are also positioned to thrive (Nelson, Maculan, Roberts, & Ohlund, 2001). In a developmental-contextual framework, collaborative prevention efforts go hand-in-hand with an enhancement of students' development and learning. We would thus predict that reduction in teacher stress through systematic student support would ultimately promote achievement.

3. Case study: City Connects

In this paper, we explore these theoretically possible effects of comprehensive student support on teachers through a case study of City Connects, one example of a student support approach that offers a system for reviewing every student in a school to identify individual strengths and needs across developmental domains. The intervention has repeatedly demonstrated positive effects on student achievement (Dearing et al., 2016; Shields, Walsh, & Lee-St. John, 2016; Walsh et al., 2014), and reduces dropout in high school, after students leave the intervention at the end of elementary school.

City Connects operates in under-resourced urban K-5 and K-8 schools. The intervention addresses out-of-school factors impacting learning through a systematic practice that works with every teacher in a school and leverages partnerships with community agencies. It began in Boston Public Schools in 2001, and has since grown to 83 schools in five states. At the core of the intervention is a full-time professional in each school called a City Connects Coordinator who is a Master's-trained, licensed school counselor or social worker. The City Connects Coordinator meets every year with each classroom teacher in the school to conduct a "Whole Class Review"—a discussion of the strengths and needs of every child in the class across four domains: academic, behavioral/social, family, and health. Using the information collected via the Whole Class Review, Coordinators and teachers collaborate to identify a unique set of services for each student that match his or her individual strengths and needs. These services range from prevention to intensive intervention, and might include family counseling, tutoring, food donations, before-school care, and extracurricular activities. In order to document and follow up on recommendations throughout the school year, Coordinators enter demographic, strengths and needs, and referral data into a secure, proprietary database. Coordinators then contact families to review the support plan and discuss permission and logistical issues (e.g. transportation). All individual student and family information is treated as confidential, is disseminated only within the school, and is shared exclusively on a need-to-know basis.

During the school year, students identified as having especially intensive needs in the Whole Class Review process (approximately 8–10% of students in a given school) also receive an Individual Student Review. The Coordinator arranges this Individual Student Review with a wider group of professionals that may include teachers, administrators, nurses, and community agency staff, as well as family, to put additional supports into place and develop a goal-based plan for the child.

In addition to developing and implementing student support plans, City Connects Coordinators help teachers manage student crises, implement classroom-level and school-wide prevention programs, and facilitate social skills groups throughout the school year. Coordinators are also responsible for developing and maintaining working relationships with local community partners, making City Connects a true school-community-family partnership.

City Connects conducts annual surveys of teachers to better understand its implementation and monitor satisfaction. Using City Connects as a case study allows us to draw on survey findings to explore how systematic student support impacts teachers.

4. Method

Methods were selected to best address our purpose and central research question: how does comprehensive, systematic student support impact teachers' professional practices and understanding of the lives of their students?

4.1. Participants

Data for the present study come from surveys administered to all teachers in Boston public schools where the City Connects

intervention was implemented during the 2012—13 and 2013-14 school years (16 schools each year).[1] In 2012—13, the survey was sent to 384 teachers, and 175 (46%) participated with 162 (42%) completing the survey in its entirety. In 2013—14, the survey was sent to 447 teachers, and 205 (46%) participated with 189 (42%) completing the survey in its entirety.[2] Survey respondents were guaranteed anonymity, so it was not possible to track how many of the teachers responded to both the 2012—13 and 2013-14 survey or to track changes in individual teachers' responses over time.

In 2012—13, 2% of teachers reported being in their first year of teaching, while 18% had taught for 2—5 years. Thirty-two percent of teachers had been teaching 6—10 years, and the remaining 48% had been teaching 11 years or more. In 2013—14, 7% were in their first year of teaching, while 23% taught for 2—5 years. Thirty-four percent taught for 6—10 years, and the remaining 37% taught 11 years or longer. In both years, approximately half of the respondents were regular education teachers, while the remaining participants were special education teachers, teachers of English Language Learners, and other types of teachers (such as specialty teachers and teachers in inclusion classrooms).

4.2. Measures

4.2.1. Measure development

In the early 2000s, City Connects conducted an annual written survey with teachers in the five schools where the intervention was first implemented. In 2008—09, City Connects sought to better understand the impact of the intervention, and conducted a teacher interview study. Seventeen teachers from ten City Connects partner schools were randomly selected to participate in individual hour-long interviews with program staff members familiar with the intervention about their perceptions of City Connects and its effectiveness. Teachers' responses were transcribed and analyzed to identify the ways they described the influence of student support on their work. The goal was to arrive at preliminary themes and subthemes that could be validated through questions on later surveys. The approach was an emic approach, drawing themes from the data, rather than imposing constructs from the field. A qualitative researcher on the program staff worked with a quantitative expert to revise categories of survey items based on the analysis of these interviews. Annual revisions addressed the original findings and findings from the previous year. Most of the items referred to specific aspects of the intervention (such as Whole Class Review or Individual Student Review), and asked teachers to report on their satisfaction with City Connects, comparing it with the student support system (or lack thereof) that existed in their schools before City Connects was implemented.

4.2.2. Survey administration and tool

The current teacher satisfaction survey was administered through Qualtrics, an online survey platform. City Connects Coordinators were asked to compile email addresses of all teachers in their schools who worked with students in the City Connects program (this included all classroom teachers and other faculty such as music teachers). In spring of the academic year, teachers received an email invitation to participate that included a link to the Qualtrics survey. Informed consent was collected electronically.

The survey was designed to take approximately twenty minutes to complete; average response time was 14 min in 2012—13 and 13 min in 2013—14. The survey included 82 quantitative items and 3 open-ended questions. The quantitative items were structured as Likert scales (strongly disagree to strongly agree), yes/no responses, and check-all-that-apply. Items included satisfaction with various aspects of City Connects, the impact of the intervention on teacher practice, work with families, and recommendations for program improvement.

4.3. Analytic strategy

We sought to investigate specifically how components of the City Connects intervention helped teachers to understand their students, and whether it impacted their professional practice. Like many researchers addressing complex topics in the social sciences, we believe that a mixed-methods approach would allow for a deeper, more nuanced analysis of teachers' perceptions of the City Connects intervention than traditional mono-method approaches (Dellinger & Leech, 2007, p. 309; Jang, McDougall, Herbert, & Russell, 2008). According to Creswell and Plano Clark (2007), the central premise of mixed methods research is "that the use of qualitative and quantitative methods in combination provides a better understanding of research problems than either approach alone" (p. 5). Therefore, this study utilized data from a survey tool that included both quantitative and qualitative components.

When compared to traditional mono-methods approaches, a mixed methods approach can allow for stronger inferences to be drawn from a greater assortment of divergent views (Teddlie & Tashakkori, 2009). Pragmatic considerations (such as participants' time and the need for anonymity) guided our choice of a brief yet comprehensive survey instrument that included both quantitative and qualitative components and enabled teachers' voices to be showcased.

We utilized a triangulation design, as defined by Creswell and Plano Clark (2007), which required concurrent implementation of both quantitative and qualitative methods. The specific variation of triangulation design used here is the Validating Quantitative Data Model (Creswell & Plano Clark, 2007), in which quantitative findings are confirmed and expanded upon through a small number of open-ended qualitative questions on a survey. In this model, a single instrument (e.g. survey) is used to collect both quantitative and qualitative data, but the qualitative items are considered as a supplement to the quantitative items and are not the primary focus of data collection. We describe first the separate analysis of quantitative and open-response items, then turn to the mixed-methods integration of findings.

4.3.1. Quantitative analyses

Because survey respondents were guaranteed anonymity, each respondent was assigned a numeric identifier after completing the survey so that their responses could not be linked to their email address or any identifying information. It is important to note that the individual teachers participating each year likely differed. For example, teacher turnover (e.g., retirement, new hires, changing schools) and changes in schools implementing City Connects (2 of the 16 schools changed) meant that there were differences in the set of teachers who received the invitation each year.

Quantitative items were analyzed descriptively to yield overall percentage of agreement (e.g., percentage responding "yes," percentage responding "Strongly agree"/"Somewhat agree," or percentage endorsing an item on a check-all-that-apply list). T-tests and chi-squares were computed to assess each item's relationship with global satisfaction items (overall satisfaction with the City Connects intervention as well as overall satisfaction with support

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[1] Fourteen of the schools were the same across the two years. Two schools discontinued implementing City Connects at the end of 2012—13. Three new schools began implementation in 2013—14, but one of these schools did not receive the survey in 2013—14 because the coordinator was hired relatively late in the year, meaning the intervention was not fully implemented yet in that school.

[2] The difference in total N invited is due to the larger size of the schools that began implementing in 2013—14.

provided to teachers).

4.3.2. Qualitative analyses

The overarching qualitative approach included exploratory content analysis that served as a complement to the analysis of quantitative items. For each of the three open-ended questions, responses from all participants were downloaded from Qualtrics and combined into a single Microsoft Word document. To maintain anonymity, any specific names of people or schools were removed from the responses and replaced with generic terms (e.g., [Coordinator name], [principal name], [school name]). The resulting documents (one for each open-ended question) were converted into text files and uploaded to ATLAS-ti for analysis.

Responses were analyzed by one coder in 2012—13 and by two independent coders in 2013—14. In 2012—13, a coder identified themes within each document and tagged all examples of text associated with each. A codebook recorded the code's name, definition, inclusion examples, and (for some codes) exclusion examples. In 2013—14, a coder carried out the same process with the new data and the previously established codebook, adding codes when new themes emerged. A second coder then applied the full set of codes independently to the 2013-14 data. An analysis of inter-rater reliability for the 2013-14 data identified coding agreements and disagreements for themes appearing in both year's codes. Kappa values were created for each theme as recommended by Viera and Garrett (2005). The average Kappa value across themes was 0.53 for themes discussed in this paper, signaling moderate agreement overall. We return to the details of coding and inter-rater reliability below.

4.3.3. Mixed-methods analysis

Mixed methods data analysis involved the integration of statistical and thematic data analytic techniques, requiring the investigators to transition back and forth between quantitative and qualitative data in the analysis (Teddlie & Tashakkori, 2009, p. 8). As noted above, in this study, the survey instrument was designed, refined, and used by a student support intervention to better understand how implementation actually worked in schools. The literature review on teacher impact of systemic student support followed the original data collection and analysis, and the mixed-methods analysis drew on the existing data and findings to address the hypotheses emerging from the literature review. This required (a) categorizing and organizing quantitative items and (b) selecting qualitative codes in order to find places of convergence with the literature.

In principle, this process could reveal themes in the literature that had not been studied in the survey, areas of questioning in the survey that were not reflected in the literature, and areas of convergence across the literature and the survey. It is important to note that, as discussed above, the City Connects intervention is theoretically grounded, and that the survey developed to understand its implications for teachers thus indirectly reflects the developmental literature. As described below, the categories related to the impact of student support on teachers emerging from the literature aligned with categories of inquiry in the City Connects survey, but the City Connects work also probed other areas that to date have not been extensively treated in the literature specific to the impact of student support on teachers.

After completion of the literature review, members of the research group sought to identify quantitative items that addressed each of the topical themes and subthemes that emerged from relevant research:

1. Knowledge of the whole child
2. Effects on teacher practice

   a. Student-teacher relationship
   b. Student behavior
   c. Classroom management
   d. Instruction
3. Teacher support
   a. Support
   b. Services

The full set of 82 survey items was first reduced to 52 by elimination of demographic items, overall satisfaction questions, questions on teacher efficacy, open-ended questions, and questions to inform survey skip logic. Skip logic was used to ensure teachers who had not taken part in an aspect of the practice in a given year were not asked questions about that area. For example, teachers were asked whether they had participated in a comprehensive review for students with intensive needs; those who responded "no" did not see the questions about this review.

The remaining 52 survey questions were those that related to the content of the intervention and that could potentially relate to the themes from the literature review summarized above. Three team members independently labeled each of the remaining 52 quantitative items in the survey as belonging to one of the themes and subthemes above, or as belonging to none of them. The team then compared their categorization decisions. Categorization matched for either two or three team members in all but eight cases (discussed below). When categorization matched for only two members, the team discussed and ultimately agreed on the classification.

Quantitative items that did not fit any of the themes from the literature review included eight items related to work with families, four health-related items, five items related to satisfaction with the Individual Student Review process, four questions related to general practice of City Connects in the school (e.g., the frequency with which Coordinators worked with a teacher's students). These quantitative items were removed from the set of survey questions to be analyzed but the largest of them (work with families) is discussed below.

The remaining 23 quantitative items were distributed across the categories identified in the literature as shown in Table 1.

These quantitative items are presented in the Analysis section below.

In the next mixed-methods step, the team sought to identify qualitative data that corresponded to the themes from the literature and determined that the open-ended question that elicited the most pertinent responses was "What would you say to a colleague is the most important benefit of City Connects?" Twenty-one different qualitative codes were applied to responses to this question in one or both of the survey years. Of this set, seven codes were determined to be related to the themes in the teacher literature: Awareness, Behavior Problems, General Resources, General Support, Student Resources, Teacher Support, and Student Support.

5. Results

This section presents findings from the quantitative and

Table 1
Number of quantitative items per theme identified in literature.

Whole child	4
Teacher practice: student-teacher relationship	2
Teacher practice: student behavior	3
Teacher practice: classroom management	3
Teacher practice: instruction	3
Teacher support: support	3
Teacher support: services	5

qualitative components of the annual Teacher Satisfaction Surveys illustrating major themes that directly correspond with the emerging themes from the literature.

Quantitative and qualitative survey item data for each of these themes, including *Whole Child, Translation to Practice,* and *Teacher Support*, are presented below.

5.1. Reliability

An analysis of inter-rater reliability for the 2013-14 data identified coding agreements and disagreements for pertinent themes appearing in both year's codes. Observed agreement was high, ranging from 76% to 94%. Kappa values were created for each theme and interpreted as recommended by Viera and Garrett (2005). The average Kappa value across themes was 0.53, signaling moderate agreement overall. Values for each theme are presented in Table 2.

The qualitative coding of responses to the question "What would you say to a colleague is the most important benefit of City Connects?" included 14 themes that did not overlap with themes from the literature review. Five were versions of non-response (e.g., "No answer," "Unsure") and five touched on specific aspects of the City Connects practice (e.g., "Coordinator Accomplishments" coded praise for particular City Connects staff; "Follow through" coded the practice of following up on service referral).

The remaining four categories illuminated areas of work in student support that teachers value, but that did not emerge in the literature review. Two themes related to work with families: "Health" and "Communication." The most prominent of these areas—work with families—is addressed in the discussion section.

5.2. Whole child

As noted in the literature review, there is evidence that teachers seek out and apply information about the "whole child." Quantitative and qualitative findings from the City Connects teacher survey support this claim.

The survey included several items in the category of knowledge of the whole child. A core City Connects practice, the Whole Class Review, involves a conversation with every classroom teacher about every student's individual strengths and needs. Survey items asking about the value of knowledge of the "whole child" developed through the Whole Class review process were endorsed by more than four out of five responding teachers, with percentages approaching 90% for some items. For example, over two years, a consistently high percentage (87% or more) of teachers reported that this process enhanced their awareness of class dynamics and of their students as individuals. Further, teachers agreed that this process provided information about their students' lives outside of school (88% in 2012—13; 81% in 2013—14). Finally, a survey item asking whether City Connects served as a source of knowledge about services and supports for students was endorsed by 79% of teachers in 2012—13 and 80% in 2013—14. These findings are summarized in Table 3.

Qualitative responses converged with these quantitative findings. Survey participants were asked the open-ended question, "What would you say to a colleague is the most important benefit of City Connects?" Responses mentioned awareness of out-of-school factors and of the whole child in both 2012—13 (7% of responses) and 2013—14 (9% of responses). For example, one respondent replied, *"I think the most important benefit of City Connects is the ability to see the whole child … City Connects really does a great job of making sure all factors in a child's life are reflected upon."*

5.3. Translation to practice

Overall, quantitative and qualitative data findings confirmed many of the concepts in the literature indicating that a whole-child intervention such as City Connects may translate into teacher practice and affect the student-teacher relationship, student behavior, as well as classroom management and instructional practices. Table 4 displays quantitative findings corresponding with each of the subthemes in this area.

5.3.1. Student-teacher relationship

Eighty-one percent of teachers in 2012—13 and 79% of teachers in 2013—14 said that the Whole Class Review process increased their empathy for students (Table 4). A majority (62% in 2012—13 and 68% in 2013—14) also said they were more patient with their students because they better understood the non-academic issues contributing to their struggles in the classroom. These findings were echoed under the related "Awareness" code in the qualitative data, with a teacher in 2013—14 saying, *"City Connects has made it easier for me to understand the reasons behind the behaviors that my students exhibit and to develop a better understanding of the supports I can provide in the classroom."*

5.3.2. Student behavior

Three quantitative items (c through e in Table 4) in the survey asked whether City Connects had an effect on teachers' behavioral management. Sixty-nine percent of teachers in 2012—13 and 68% in 2013—14 responded affirmatively to the statement "As a result of knowing more about the non-academic aspects of students' lives, I think about the factors influencing student behavior before I react to the behavior." Teachers also felt that the City Connects Coordinators helped with challenging student behavior, with 74% and 69% endorsing this item in 2012—13 and 2013—14, respectively. Over 80% of teachers during both years endorsed the statement "City Connects helps me address the behavior of students in my classroom." In 2012—13, 9% (12 out of 129) of qualitative responses corresponded to this theme; in 2013—14, 6% (9 out of 142) of qualitative responses corresponded to this theme. These responses mirrored the quantitative findings, with one teacher in 2013—14 saying a key benefit of City Connects is *"having an additional resource to support students struggling with behavior in the main classroom."* Another said, *"It is important to have someone who can help children calm down and take a break in a safe space so class time*

Table 2
Reliability across themes.

Theme	Observed Agreement	Kappa Value	Interpretation
Awareness	0.91	0.41	Moderate Agreement
Behavior Problems	0.94	0.53	Moderate Agreement
General Resources	0.84	0.82	Almost Perfect Agreement
General Support	0.88	0.42	Moderate Agreement
Student Resources	0.89	0.67	Substantial Agreement
Teacher Support	0.84	0.51	Moderate Agreement
Student Support	0.76	0.33	Fair Agreement

Table 3
Quantitative items for the "knowledge of the whole child" subtheme.

Subtheme	Quantitative Survey Item	% Endorsed 2012-13 N = 164	% Endorsed 2013-14 N = 191
Knowledge	a The Whole Class Review process enhanced my awareness of the dynamics of my class as a whole.	87%	87%
	b The Whole Class Review process enhanced my awareness of my students as individuals.	89%	87%
	c The Whole Class Review process added to my knowledge of the non-academic aspects of my students' lives (e.g., neighborhood and family context).	88%	81%
	d The SSC supports my work … By serving as a source of knowledge about student support in and out of the school	79%	80%

Note: N reflects the number of teachers who responded to at least one of the items.

Table 4
Quantitative items for the "translation to teacher practice" subthemes.

Subtheme	Quantitative Survey Item	% Endorsed 2012-13 N = 164	% Endorsed 2013-14 N = 191
Student-Teacher Relationship	a The Whole Class Review process increased my empathy for students.	81%	79%
	b I am more patient with my students because I better understand the non-academic issues that contribute to their struggles in the classroom.	62%	68%
Student Behavior	c (As a result of knowing more about the non-academic aspects of students' lives …) I think about the factors influencing student behavior before I react to the behavior	69%	68%
	d (The City Connects coordinate supports the work I do …) by helping to deal with challenging student behavior	74%	69%
	e City Connects helps me address the behavior of students in my classroom.	82%	81%
Classroom Management	f (As a result of knowing more about the non-academic aspects of student's lives …) I provide more breaks for certain students (e.g., movement, gross motor activities)	57%	58%
	g City Connects helps me make my classroom more conducive to learning.	75%	72%
	h By helping to deal with classroom crises	64%	59%
Instruction	i My instructional practices were enhanced as a result of the Whole Class Review	68%	71%
	j I provide more differentiated instruction to meet the various learning styles of my students (e.g., small group work, visuals, movement).	57%	53%
	k I adjust lessons to fit my students' attention spans	50%	51%

Note: N reflects the number of teachers who responded to at least one of the items.

is not wasted."

5.3.3. Classroom management

Results supported the literature finding that knowledge of the whole child impacts teachers' classroom management strategies (items f through h in Table 4). More than half of respondents in 2012–13 and 2013–14 agreed with the statement "As a result of knowing more about the non-academic aspects of students' lives, I provide more breaks for certain students (e.g., movement, gross motor activities)." A larger majority, 75% in 2012–13 and 72% in 2013–14, agreed that City Connects helped to make their classroom more conducive to learning. Sixty-four percent of teachers in 2012–13 and 59% in 2013–14 agreed that the City Connects coordinator supports the work they do by helping to deal with classroom crises.

5.3.4. Instructional practices

Items i through k in Table 4 directly measured whether teachers' instructional practices changed as a result of the implementation of City Connects in their schools. The majority of teachers both years reported that their instructional practices were enhanced as a result of the Whole Class Review, with 68% and 71% responding affirmatively in 2012–13 and 2013–14, respectively. Over half of respondents in both years also agreed with the statements "I provide more differentiated instruction to meet the various needs of my students" and "I adjust lessons to fit my students' attention spans."

5.4. Teacher support

Survey results corresponding with this theme include responses to both quantitative items and qualitative open-ended questions, each of which offers additional insight regarding this important topic. For example, one teacher's qualitative response illustrates the connection between this theme and the related findings from the literature: *"She provides a range of supports, from actually providing services and making referrals, to just being a helpful sounding board for my ideas and concerns."*

Within the subtheme that emphasizes the critical role of support Coordinators provide to teachers, the data highlighted two prominent and related sub-themes: (1) Teacher perceptions of receiving emotional support from the City Connects Coordinator ("Support"), and (2) Teacher perceptions of being supported in connecting students with appropriate services and resources ("Services").

5.4.1. Support

For the "Support" subtheme, five quantitative items from the teacher survey were reviewed. Four of these items were in response to the same overarching question regarding specific types of support provided to teachers by City Connects Coordinators. In the 2012–2013 schoolyear, the percentage of teachers who endorsed these statements regarding the support received from City Connects Coordinators ranged from 56% to 84%; in the 2013–2014 schoolyear, this endorsement percentage ranged from 47% to 87% (Table 5).

In 2012–2013, 70% of respondents reported that the City Connects Coordinator supports teachers "By being someone teachers can problem solve about their students with" (75% in 2013–2014); 64% reported that the Coordinator supports teachers "By contacting families on behalf of teachers (e.g. phone calls)" (53% in 2013–2014); 56% reported that the Coordinator supports teachers "By supporting teachers in having difficult or sensitive conversations with families" (47% in 2013–2014); and 76% reported that the

Table 5
Quantitative items for the teacher support subthemes.

Subtheme	Quantitative Survey Item	% Endorsed 2012-13 N = 164	% Endorsed 2013-14 N = 191
Support	a (*The City Connects Coordinator supports that work I do*) By being someone teachers can problem solve about their students with	70%	75%
	b (*The City Connects Coordinator supports that work I do*) By contacting families on behalf of teachers (e.g. phone calls)	64%	53%
	c (*The City Connects Coordinator supports that work I do*) By supporting teachers in having difficult of sensitive conversations with families	56%	47%
	d (*The City Connects Coordinator supports that work I do*) By being someone teachers can talk about their students with	76%	71%
	e The Whole Class Review was helpful to me	84%	87%
Services	f (*The City Connects Coordinator supports that work I do*) By obtaining services for students	84%	83%
	g (*The City Connects Coordinator supports that work I do*) By increasing teachers' awareness of the services available for families (e.g., translation, housing, transportation)	77%	75%
	h City Connects helps me follow through with securing non-academic supports for my students	93%	89%

Note: N reflects the number of teachers who responded to at least one of the items.

Coordinator supports teachers "By being someone teachers can talk about their students with" (71% in 2013—2014). The fifth item related to this subtheme asked respondents whether they found the Whole Class Review process to be helpful. In 2012—2013, 84% of respondent endorsed this item; in 2013—2014, 87% of respondents endorsed this item.

These quantitative findings were directly mirrored in and enriched by the qualitative data, with 30% (39 out of 128) of respondents in 2012—13 and 19% (27 out of 142) of respondents in 2013—14 reporting that they felt supported by the City Connects Coordinator. For example, when asked "What would you say to a colleague is the most important benefit of City Connects?" one respondent said: *"City Connects provides professional advice to teachers who need help with student, family, and community issues."* Similarly, another respondent said: *"There are people that you can go to for support and people that can help you problem solve."*

5.4.2. Services

For the "Services" subtheme, three quantitative items from the teacher survey were reviewed. Two of these items were in response to a question regarding the specific types of support provided to the teacher by the City Connects Coordinator. In the 2012—2013 school year, 84% of respondents reported that the City Connects Coordinator supports teachers "By obtaining services for students" (83% in 2013—2014); 77% of respondents reported that the City Connects Coordinator supports teachers "By increasing teachers' awareness of the services available for families (e.g. translation, housing, transportation)" (75% in 2013—2014). Relatedly, in 2012—2013, 93% of respondents endorsed the statement "City Connects helps me follow through with securing non-academic supports for my students" (89% in 2013—2014).

As in the previous sub-theme, these quantitative findings were directly mirrored in and enriched by the qualitative data, 34% (43 out of 128) of respondents in 2012—13 and 25% (36 out of 142) of respondents in 2013—14 reported that the City Connects Coordinator helped to connect students with services. For example, when asked "What would you say to a colleague is the most important benefit of City Connects?" one respondent said: *"It is also just nice as the classroom teacher to know that finding all these resources is not solely on your shoulders. They can help to get outside services for kids and their families. This is very time consuming and not always possible for classroom teachers to do."*

5.5. Family support

In contrast to such areas as behavior and classroom management, which are widely discussed in the literature on the impact of student support on teachers, the impact of student support on teachers' work with families has received relatively little attention. In this study, however, collaboration with families emerged as an area strongly influenced by the work of City Connects. For example, 42% of teachers said there was more collaboration with families and 45% said communication with families increased as a result of knowing more about the non-academic aspects of students' lives. Seventy-five percent of teachers said Site Coordinators support them by supporting work with families. In their spontaneous responses to an open-ended question about the greatest benefits of City Connects, teachers mentioned communication with and resources for families (45% of responses in 2012—13 and 44% in 2013—14).

6. Discussion

Empirical evidence supports the claim that an optimized student support intervention improves student outcomes (Dearing et al., 2016; Shields, Walsh, & Lee-St. John, 2016; Walsh et al., 2014; Moore et al., 2014). Despite the accumulating evidence that student support leads to achievement benefits for students, little research has directly examined its impact on teachers. Results from this study demonstrate that City Connects impacts teachers in several ways that are consistent with themes in the wider literature. Teachers report that City Connects increases their knowledge of the whole child, enhancing their understanding of their students as individuals. City Connects helped teachers better understand the non-academic spheres of their students' lives: over half said they were more patient because they better understood these non-academic issues contributing to classroom struggles. Teachers reported feeling better equipped to deal with challenging student behavior, and most changed classroom practices (i.e., providing breaks for students) after learning more about the individual strengths and needs of their students. Coordinators were viewed as allies by the teachers, helping to "pick up the slack" with behavior issues and interactions with families so that teachers could focus more of their energy on teaching.

Teachers reported that City Connects supported them by connecting their students to services and by helping teachers follow through with non-academic supports for their students. Responses to open-ended questions about the benefits of City Connects suggested that help in securing services for student support was a source of relief for teachers—as noted above, in one teacher's words, with City Connects, "finding all these resources is not solely on [the teacher's] shoulders." This finding suggests that above and beyond the inherent benefit to students of supports and enrichments that are tailored to their needs, an indirect benefit derives

from the easing of teacher stress when these connections are made. Lower stress and a sense that the teacher has a supportive colleague who is knowledgeable about outside services may both contribute indirectly to positive academic outcomes for students. This research is significant because the benefits of lower stress, feeling supported, and understanding students' out-of-school lives may enable teachers to focus on teaching, becoming freer to engage with and enjoy their students.

The findings that emerged in the "family" theme were not surprising, because family is one of the four core components of City Connects work, and is an area of emphasis in Coordinators' training. Coordinators work with families during the referral process, and track interactions with families in a communication log. Coordinators provide direct services, such as assisting with crisis management or educating parents about school processes. They refer families to services, including basic resources (utilities, clothing, and healthcare), childcare, and parent support (such as counseling or parenting workshops). They also play an important role in advocacy and facilitating access to services, assisting with the consent form process, language barriers, application processes, and transportation. This practice is consistent with ecological developmental understanding of family as the most proximal context in which the child develops (Bronfenbrenner, 1986). For this reason, understanding strengths and needs of the family in terms of their physical environment, and ability to provide physical resources or emotional investments, should be of great concern to student support professionals.

As evidenced by teacher responses, we believe that City Connects, and systemic student support more generally, may directly facilitate differentiated instruction, which research indicates is important for optimizing student achievement (Reis, McCoach, Little, Muller, & Kaniskan, 2011; Watts-Taffe et al., 2012). The Whole Class Review component of City Connects provides teachers with a structured, efficient way to identify the strengths and needs of each student in four main areas, establishing a way to understand students on a deeper level and alter classroom management or teaching techniques to meet them where they are most able to learn. Without a systematic and comprehensive approach to student support like City Connects, a standardized and effective way to quickly assess how to differentiate instruction in the areas of academics, social/emotional, family, and health, would not exist.

Systemic approaches to student support are gaining ground globally, as well. A recently-published volume focusing on international community-school models (Lawson & van Veen, 2016) described approaches to school-community partnerships across the globe. The authors noted that while these new designs for schools and learning centers have developed in various geographic contexts for a variety of reasons, they share a common mission. For example, with massive migrations occurring in many countries, schools are tasked with the job of socially integrating children and their families, which is made easier with the utilization of community resources. Additionally, many countries face a growing gap between the rich and poor, and schools may be more effective in reducing achievement gaps associated with income disparities when they create community partnerships for children in need. As noted in the introduction, concrete efforts to provide systematic supports to students are implemented in such countries as Canada, the Netherlands, Belgium, the United Kingdom, Brazil, Finland, Scotland, and the United States.

There were some limitations in this work. Given that we used only one wave of data and could not compare teacher satisfaction before and after the implementation of City Connects in their schools, we could not draw any causal conclusions about the impact of the program. Additionally, the anonymous nature of the survey and data-protection agreements meant that it was impossible to measure changes in teachers' perceptions of City Connects over time. Finally, because the survey instrument explicitly focused on teachers' experiences with the City Connects intervention, data on other strategies teachers use to effectively educate their students was not collected or analyzed. While other strategies used by teachers represent an important direction for future research, the literature review and methodology employed in this study were guided by quantitative survey items, with qualitative responses serving as a supplement.

Research demonstrates that optimized student support is strongly grounded in developmental theory and directly contributes to improved student outcomes (Moore et al., 2014). The data presented in this paper suggest that City Connects' support for teachers, evidenced by strong teacher endorsement of the intervention, allows teachers to more comprehensively understand the out-of-school struggles of their students, and helps them to feel supported. The intervention is also cost effective (Bowden et al., 2015). Results contribute to the argument that implementing tailored, holistic student supports such as City Connects would widely benefit students in American schools. From a policy perspective, this suggests that more research and funding should exist to implement these whole-child interventions in low-income schools. In future work, we would like to extend the study of City Connects' impact on teachers to additional public school districts that have implemented the intervention, including Springfield, Massachusetts, New York City, Hartford, Ohio, and Minnesota.

The study's findings relate to several important strands of teacher education research, including the power of collaborative inquiry (Butler & Schnellert, 2012), the importance of school context to the success of teachers' work (Stosich, 2016), and approaches to training and supporting teachers to work in high-poverty schools (Freedman & Appleman, 2009). Broadly speaking, the findings have implications for teaching, teacher preparation, and professional development opportunities. In order to adequately account for the role of context and non-academic factors in teachers' ability to effectively apply their professional skills and knowledge, it is critical to consider the stress and lack of preparation to which teachers allude in the arena of mental health and other non-academic needs. This is true across cultural contexts, as it is now widely accepted that comprehensive student support is critical to improved academic outcomes for at-risk students. In response, there is a growing international movement toward school re-design efforts that take non-academic factors into account (Lawson & van Veen, 2016).

While teacher preparation programs will likely continue to focus on curriculum and academic instruction, the findings presented suggest that teachers would benefit from receiving support regarding non-academic needs, particularly via professional development programming and/or other professional experiences that tap the expertise of supportive colleagues, such as the City Connects Coordinator. With increased knowledge about the whole child, the influence of students' out-of-school needs, and the potential resources to which students can be connected in order to have these needs met, it is possible that teachers could engage in a re-conceptualized approach to collective inquiry and co-constructing knowledge in their schools.

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