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Special Issue on Systems Change in School Psychology

Guest Editors: Elise Hendricker and Stephanie Coleman

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Article

Introduction to the Special Issue on Systems Change in School Psychology

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This article introduces the *Research and Practice in the Schools* special issue on systems change in school psychology. While school psychologists can play a critical role in systems change efforts to strengthen educational systems and practices, this is a less researched area when compared to other school psychology competencies. Given the various challenges facing public education, it is imperative that we identify and share systems change practices and efforts to broaden our research and practice base. This special issue provides a sampling of studies and case examples that illustrate training, practice, and school-based considerations for initiating and leading systems change efforts in schools.

Key words: systems change, systems consultation, collaboration

Current training standards in school psychology emphasize the role school psychologists play in systems change. Within the National Association of School Psychologists (NASP) Model for Comprehensive and Integrated School Psychological Services (NASP, 2020), school psychologists provide systems level services aimed to address domains such as school-wide practices to promote learning, safe and supportive schools, and family, school, and community collaboration. These professional standards specify "school psychologists function as change agents, using their skills in communication, collaboration, and consultation to advocate for necessary change at the individual student, classroom, building, district, state, and national levels" (NASP, 2020, p. 4). Furthermore, promoting systems change efforts is echoed in the NASP Principles for Professional Ethics (NASP, 2020). Graduate training programs in school psychology must ensure that field-based experiences build professional competency through "diverse activities that address breadth and scope of the NASP Practice Model" (NASP, 2020, p. 21). Taken together, these professional standards and guidelines highlight that systems change knowledge, competencies, and services should be reflected in school psychology training, applied practice, ethical decision-making, and ongoing professional development.

Calls for systems change are pertinent during a time that has been particularly challenging in education. Existing frameworks, such as an emphasis on evidence-based practices and multi-tiered systems of supports to address a variety of student concerns, may be needed more than ever to address the academic, behavioral, social, and mental health needs of children and adolescents in schools due to ongoing challenges such as the COVID-19 pandemic. A compilation of research indicates increases in mental health emergency visits, elevated child mental health symptoms, and worsening emotional health for young children receiving virtual instruction (NASP, 2021). As children return to school with increased needs, ongoing concerns with teacher burnout (Sutcher et al., 2016), increased staff attrition (Zamarro et al., 2021), and school psychology shortages (Deni et al., 2021) raise questions regarding access to high quality educational and mental health supports

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in schools. One may argue that systems change knowledge and competencies are especially vital during these ever-changing and turbulent times.

Although systems change is an important competency and can be highly valued within educational reform efforts, systems change can be viewed as somewhat nebulous when compared to other practice domains (Coleman & Hendricker, 2020). Systems level services can span multiple practice areas (NASP, 2020) and different skills may be required of school psychologists whether they are initiating, leading, or responding to systems change projects. The lack of definitional clarity can hinder further efforts at training within this area and may affect efforts of practicing school psychologists to incorporate systems work into their practice. Data from the 2020 NASP Membership Survey (Farmer et al., 2021) indicates 41% of school psychologists surveyed do not engage in consultation related to systems-level programs, 47% do not participate in systems level evaluation, and 65% do not conduct research or research reviews. In addition, Barrett and colleagues (2017) found school psychologists are less confident in this component of their practice, resulting in calls to improve competencies and expand the skillsets of school psychologists so they are better prepared to take on systems level work (Conoley et al., 2020).

Existing research on systems level initiatives in school psychology may contribute to the concerns listed above. A systematic literature review examining systems change work in school psychology (Coleman & Hendricker, 2020) yielded 49 articles related to systems change knowledge and competencies over a 15-year period, with the majority being published since 2014. Most of the articles were non-empirical in nature and a lack of a unifying framework to discuss systems change among the articles was noted (Coleman & Hendricker, 2020). With school psychologists often priding themselves on being data-based decision makers and consumers of research, it is evident that the lack of research and broad unifying discussion of systems change from an empirical perspective may further contribute to the lack of systems change work done in schools.

Although systems change is an important professional competency in school psychology, it has received little research and attention when compared with other competencies and roles of school psychologists. Given the number of systems in education that may warrant reform to improve a variety of areas – such as increasing the school psychology workforce, improving access to mental health services in schools, and addressing issues related to the COVID-19 pandemic – an increase in empirical research, a focus on bridging related disciplines, and working toward a unified framework of systems change are important goals for future research. In addition, practical examples from the field can play a significant role in highlighting the systems change efforts of school psychologists, as well as lessons learned and opportunities for expanding traditional roles.

This special issue presents a variety of manuscripts to bridge this gap and build momentum towards an increased emphasis on evidence-based systems change. Specifically, the included articles add to the growing knowledge base of systems change research in school psychology and provide practitioners with knowledge to enhance systems change efforts within their districts. The special issue represents empirical research and case studies highlighting various frameworks in which to approach systems change in schools. There is particular emphasis on the systems level variables that must be critically examined when initiating, implementing, leading, and sustaining systems change efforts over time. Below, we offer brief summaries of the included articles, as well as specific ways in which school psychologists may find the articles relevant to their practice.

School Psychologists as Systems Change Advocates: Beginning the Efforts in a Stressed System

Focusing on initial stages of exploration and installation, Kurtz et al. detail the ways in which school psychologists can contribute and lead systems change efforts within multi-tiered systems of supports, with an emphasis on Tier 1. The authors accurately point out the ways in which school psychologists are specially equipped to take active involvement in such systems change efforts due to their unique training and experience.

There are many ways in which school psychologists can begin to engage in systems change efforts, which are highlighted in the article. Specifically, school psychologists possess knowledge and skills that will enable them to be strong contributors to systems change efforts. Conceptually, Kurtz et al. draw parallels between the problem-solving model of consultation, with which many school psychologists are well familiar, to the stages of systems change im-

plementation. This conceptual rooting can help school psychologists feel more confident in their knowledge when initially engaging in systems change efforts. In terms of skills, school psychologists likely possess competency in needs assessment and collaboration with stakeholders, among other areas. Leveraging this knowledge and skill can help school psychologists competently and confidently lead in their school's systems change efforts. Kurtz and colleagues provide a realistic case study that illustrates the ways in which school psychologists can assist their schools in systemic efforts to address social-emotional competencies.

Towards the Identification of Systems-Level Consultation Competencies in School Psychology: Principals' Perspectives

School psychologists' ability to engage in systems-level consultation is a product of many factors, including the recognition of requisite systems-level skills from relevant stakeholders. Although there is not a set of readily agreed upon systems level competencies, understanding administrator perceptions of needed competencies to engage in systems level change can help inform professional development at an individual level and can help build relevant skill-based training at the graduate level. Wood and Nellis detail the results of a survey of principals to further understand what competencies may be valued within systems change efforts. From the perspective of campus-based administrators, key competencies in initiating and leading systems change include knowledge of legal and ethical applications, use of the problem-solving model, and needs and outcomes assessment.

The data offered in this paper show promise for school psychologists wanting to engage in systems-level change – for one, school psychologists may already possess knowledge and skill in many relevant areas. For instance, school psychologists regularly engage in the problem-solving process, such as through individual consultation. This presents an opportunity for school psychologists' role expansion to systems change by bootstrapping based on existing competencies. For trainers, the data in this paper support enhanced training in focus areas such as implementation science and theories of systems change. Finding ways to embed such training within the graduate curriculum can help school psychologists improve their self-efficacy for systems change as well as their advocacy of such roles within their campuses.

Exploring Social Validity in the Context of Universal Behavior Screening in Elementary Schools

For any systems change effort, understanding stakeholder perspectives is vital to create buy-in and sustain the effort. Wellons et al. provide a good model of a process to interrogate the various components of social validity to understand how universal screeners are perceived by end users. Further, the authors discuss the use of resource mapping within the broader context of systems change efforts. Resource mapping can be implemented at the beginning stages of systems change efforts to situate the proposed intervention within the broader context of needs and resources within the system.

As anyone who has ever participated in a change effort can attest, buy-in is critical for systems change. Wellons et al. discuss two elements that can lead to enhanced buy-in: resource mapping at the beginning stages of a change effort and social validity to examine the specific components of the change efforts. School psychologists interested in systems change will want to engage in such practices as a means of assessing and building buy-in. Assessing social validity with the end users of interest, rather than relying on research studies of other populations, can help school psychologists garner the data to determine how the effort will be perceived and can inform a series of decisions by school psychologists, including whether to use the existing intervention or whether to include additional training to bolster buy-in, among other options. In planning for the change effort, resource mapping can help inform stakeholders of existing assets as well as the gaps in resources and how to bridge those gaps.

Development and Implementation of a Rural School-Based Mental Health System: An Illustration of Implementation Frameworks

Applying systems change at a broader level, Skaar discusses the implementation of a multi-tiered system of support for school-based mental health in a rural school district. The author describes this change effort within the context of two pertinent systems change theories that address levels of implementation and evidence-based strategies for implementation support. Although the effort described in the article

is broad in scope, the principles drawn from systems change theories, as well as processes and procedures for implementing change, can certainly be applied across a range of focus areas and at a smaller scale.

Skaar models the use of several evidence-based implementation strategies, such as training and technical assistance, as well as data-based decision making. Such strategies can help school psychologists increase the likelihood of success and sustainability of systems change efforts. Further, Skaar models decision-making procedures about important considerations within school mental health, such as active vs. passive consent. Reading case studies grounded in relevant theory, such as this article, can help practitioners think in both broad terms about their roles, as well as in specific terms to determine strategies and practices to help facilitate systems change.

Statewide Recognition System for Promoting Implementation Fidelity of Multi-Tiered System of Supports in Schools

In any systems change effort, implementation fidelity is a key metric of the implementation process. Measuring fidelity can inform efforts to understand what went well in the intervention, as well as what can be improved and can help inform the interpretation of outcome data. Morrison et al. detail state-wide efforts to systematically measure fidelity and reward schools that achieve a high level of fidelity. The recognition system has important implications for sustainability and modeling positive outcomes for other schools.

The article presents a compelling argument for measuring process variables, such as implementation fidelity. School psychologists are likely familiar with outcome measurement, but including process measures such as fidelity, and systematically providing rewards based on fidelity can enhance the systems change effort. A key lesson for school psychologists is to tell the story of implementation to contextualize the outcomes achieved.

Concluding Remarks

We hope that this special issue serves multiple purposes. First, we hope it will broaden understanding of systems change research in the field and draw attention to the diverse ways systems change efforts can be undertaken within educational systems. Second, throughout the manuscripts, discussion of conceptual and empirical foundations to guide systems change efforts can assist practitioners in understanding frameworks on which to build projects and educate their stakeholders. Finally, we have aimed to highlight voices that not only contribute to the research, but at the same time, explore the strengths, weaknesses, opportunities, and lessons learned. Our hope is this compilation can serve as a resource and inspiration for school psychologists to take on systems change efforts that improve their current systems and positively impact learning outcomes for students they serve.

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Article

School Psychologists as Systems Change Advocates: Beginning the Efforts in a Stressed System

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Systems change efforts in a school are complex. It can be overwhelming to consider where and how to start the change effort in a system that is stressed and has few resources. Despite this complexity, it is critical that school psychologists support their schools and districts in beginning the work of changing oppressive and ineffective systems. The current paper proposes strategies for beginning systems change efforts within a multi-tiered systems of support framework that are guided by implementation science. The exploration and installation phases of a systems change effort will be reviewed and applied to a case study involving a school psychologist supporting the development of a plan around the implementation of social-emotional learning (SEL).

Key words: systems change, multi-tiered systems of support, equity, data-based decision making, social-emotional learning

Schools are complex systems replete with antiquated policies, inefficient practices, and bureaucratic red tape, which have resulted in disproportionate student outcomes and inequitable access to academic and behavioral health resources (Gregory et al., 2010; 2017). These ways of operating often pose a unique set of challenges for anyone who wishes to engage in systems-level change. The process of knowing where to begin is arguably one of the most challenging aspects of any systems-change initiative. There has been a call for action for the expanded role of the school psychologist, including advocating for and supporting implementation of systems change efforts in schools and districts. To support this expanded role, there is a need for more examples and explicit guidance in the research for school psychologists to draw from (Coleman & Hendricker, 2020). This article aims to provide school psychology practitioners with a comprehensive, accessible guide to initiating systems change efforts in their schools.

Needs in Schools

There is a well-established disparity in academic and discipline outcomes between students from marginalized backgrounds and their White peers (Gregory et al., 2010). For example, Black and Latinx students are referred out of the classroom for misbehavior, suspended or expelled at drastically higher rates than their White and Asian peers despite no evidence that they display unsafe behavior at higher rates (Skiba et al., 2002; 2011). Additionally, there is a growing body of research demonstrating a direct link between disproportionate school discipline and lower achievement among Black and Latinx youth (Gregory et al., 2010).

On top of the existing inequities, children are experiencing unusual challenges and stress due to COVID-19, increased national attention to racial violence, and a tumultuous political climate. These more recent stressors have only exacerbated existing racial inequalities (Masonbrink & Hurley, 2020). One potential upside of this period of crisis and stress is that schools are becoming increasingly aware of the need for implementation of universal culturally responsive, anti-racist academic and behavioral supports. This begs the question of how best to allocate resources, train staff, organize supports,

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and develop and implement equity-informed, effective systems and interventions that make schools a more positive and safe place for students and staff.

Multi-Tiered Systems of Support

Multi-tiered systems of support (MTSS) is a public health framework for schools to utilize in delivering efficient, equitable services to all students that are responsive to their strengths and needs. According to this framework, schools use data to inform their provision of services along a continuum (Sugai and Horner, 2002; 2009). The MTSS framework organizes this continuum of supports into three tiers. Tier 1 involves providing universal interventions, which are typically general prevention programs or supports that all students should receive at the whole school and classroom level. Examples of Tier 1 interventions include generally effective instructional practices, universal social emotional curricula, or school-wide reinforcement plans. Tier 2 services are more targeted supports provided to small groups or individual students who do not respond to Tier 1 services. Examples include social skills groups or attendance programs. Finally, Tier 3 services are reserved for the individual students who require more intensive, individualized supports. Schools often consider students with intensive needs, such as those receiving special education services, as those students displaying needs at Tier 3. Within the MTSS framework, we expect that approximately 80% of students will be successful with only Tier 1 services, 15% will require more targeted Tier 2 services, and approximately 5% will require intensive individualized supports at Tier 3 (Sugai and Horner, 2002; 2009).

MTSS is applied to multiple domains within schools. For example, the response to intervention (RTI; Fuchs et al., 2012) model is an example of a MTSS framework that focuses on academic outcomes, while Positive Behavior Interventions and Supports (PBIS; Sugai & Horner, 2002; 2009) is another framework that focuses on behavioral outcomes. All MTSS models rely on universal screening and data-based decision-making processes and are designed to avoid teacher nomination or referral processes that tend to over identify students from certain groups (e.g., racial/ethnic groups, students with high levels of externalizing behaviors; Bradshaw et al., 2008). Furthermore, in any MTSS model, it is absolutely imperative that schools develop and reliably implement effective Tier 1 interventions before identifying students in need of more targeted Tier 2 and 3 supports. Without solid universal supports in place, schools will likely over-identify students in need of Tier 2 and 3 support and will unnecessarily tax already scarce resources. This article will focus its attention on Tier 1 change efforts because they are so critical and so often overlooked by schools who want to adopt more equitable and efficient systems.

Why School Psychologists?

There is increased urgency for school psychologists to advocate for and support the implementation of systems frameworks such as MTSS with the goal of dismantling oppressive systems and fostering diversity, equity, and inclusion efforts (García-Vázquez et al., 2020; Jimerson et al., 2021). School psychologists are well-suited to lead or support systems-level change efforts due to their training and understanding of comprehensive supports and service delivery along with implementation science and program evaluation (Burns et al., 2017; National Association of School Psychologists, 2021; Skalski et al., 2015). That is, their knowledge of (a) the structure and organization of schools, (b) evidence-based learning and behavior support practices, (c) policy, and (d) how to engage in effective collaboration situates school psychologists as organizational change agents who may lead or contribute meaningfully to a systems-change effort (Skalski et al., 2015). In addition to the training school psychologists receive, our NASP Practice Model and 2020 Professional Standards emphasize systems work and advocacy across our ten domains of practice (National Association of School Psychologists, 2021). Supporting the development and implementation of systems change efforts that are guided by social justice is at the core of the expanded role of the school psychologist.

Defining Systems Change

While systems frameworks, such as MTSS and Interconnected Systems Frameworks (ISF; Barrett et al., 2013) are evidence-based frameworks for organizing supports tailored to students' needs (Horner et al., 2010), it can be difficult to know where to start the implementation of a systems framework without grounding the efforts in implementation science. Decades of research in organizational change theory have produced

several perspectives on the process (Durlak & Dupre, 2008; Fixsen et al., 2005; Rogers, 2003). This article will focus on the stages of implementation outlined by Fixsen and colleagues (2005), which include the exploration, installation, initial implementation, full operation, innovation, and sustainability phases. The exploration phase involves assessing needs, exploring possible interventions, assessing implementation drivers (e.g., training available, leadership), and determining fit of possible interventions (Bertram et al., 2015). This process requires leaders to work backwards, such that they envision their hope for outcomes of the program and plan the systems, practices, and data they think they will need to lead to these outcomes (Bertram et al., 2015). The installation phase requires leaders to obtain and allocate resources, train staff, and establish systems (e.g., scheduling, evaluation, communication, and feedback loops). During initial implementation, schools must begin implementing interventions, tracking interventions by progress monitoring their data, and modifying the intervention or implementation structures as needed. Finally, in full implementation, schools should strive to reach high levels of implementation fidelity, continue to track fidelity and outcomes, train new staff and provide coaching to returning staff, and manage implementation structures as needed (Bertram et al., 2015).

In school psychology, this process aligns well with problem-solving models rooted in behavior analytic theory and, specifically, behavioral consultation (Bergan, 1977), with careful attention paid to the organizational context, a hallmark of ecological theory (Bronfenbrenner, 1977). Our current NASP Practice Model (2021) continues to highlight the importance of adopting a problem-solving framework in our approach to data-based decision making. That is, systems change efforts might be considered first as a process of understanding the problem (identifying the needs and goals of systems change) before selecting a program or innovation (determining what will be implemented and how implementation and outcomes will be measured). Then, after planning, staff are trained to engage in the change effort (perhaps on a smaller scale at first before more widespread adoption) and data are analyzed to measure outcomes and impact (Dumka et al., 1995). Ecological theory guides teams to consider the organizational factors that may facilitate or prohibit progress toward anticipated goals (Meyers, et al., 2012).

Initiating the Systems Change Process as an Advocate

To begin systems change efforts, it is important for school psychologists to understand the importance of discrete steps that can lay the groundwork for successful systems change. Specifically, practitioners are encouraged to lead or contribute to a team, conduct a needs assessment, set preliminary goals, select the intervention or innovation to implement, generate specific and measurable outcome statements, construct a simple logic model to guide the systems change effort, and assist the team in piloting the intervention/systems change effort (Fixsen et al., 2005). In this paper, we review these components and present a case study to illustrate the application of this process in a school setting. Beginning, implementing, and sustaining a systems change effort is highly complex especially during times of increased stress and fewer resources. It is often very difficult and overwhelming to consider how, where, when, and with whom to begin this work. This paper will highlight the first two phases of exploration and installation.

Exploration Phase

The exploration phase should include elements such as establishing an effective leadership team with administrator support, conducting a needs assessment to identify current needs of the system, prioritizing which needs to focus on, exploring and selecting interventions to respond to these needs, developing a plan to pilot this intervention plan, and establishing procedures for incorporating stakeholder input (Fixsen et al., 2005). School psychologists can be instrumental in this process as they possess the training necessary to assess needs and collaborate with stakeholders to make plans for responding to needs identified.

Building an Effective Leadership Team

Often school psychologists are aware of stakeholder input and data that suggests there is a problem in their school or district. When schools lack a leadership team to engage in efforts around solving this problem or need, it is important to identify one or two individuals in the building who will be able to facilitate the formation of a leadership team. These leaders are instrumental in the process because they are able to recruit others who share a common vision around the problem and hope

to change the system (Algozzine et al., 2014). An example of a common vision could be: a leadership team may collectively decide that they wish to decrease the use of punitive and exclusionary discipline by adopting alternative approaches such as restorative practices.

In many cases, schools will often have existing teams such as a Student Support Team, Child Study Team, or Grade Level or Academic Content team, that are responsible for reviewing and problem solving around individual student concerns or planning for academic instruction; however, these teams may not be equipped to tackle larger systemic issues. This leadership team, tasked with the mission of tackling the system's problem or need should meet at least once per month. There needs to be clear endorsement of the systems change effort from leadership (school and district), as well as active administrator participation throughout the process (Domitrovich et al., 2008; Hershfeldt et al., 2012). Administrators can enable teams to function because they hold the administrative power to approve the time and resources necessary to participate in team activities during the school day. Administrative support, beliefs, and attitudes are examples of the most commonly cited barriers reported by school personnel. Kincaid and colleagues (2005) found that one common theme between the schools with both high and low levels of implementation of systems interventions was the presence of enablers (e.g., district support). In addition to administrator participation, the teams would benefit from having at least one teacher representative from each level to serve as a member. Teacher and staff participation can help build capacity because it provides opportunities for them to share their experiences and knowledge as well as increase buy-in with other staff through informal and formal conversations (Domitrovich et al., 2008; Thorsborne & Blood, 2013).

After the leadership team is formed, the members can begin a process of learning more specific information to operationally define needs to be able to set goals. Thorsborne and Blood (2013) describe fostering buy-in among the school community as attempting to capture the hearts and minds of stakeholders. Obtaining buy-in for the majority of a school community is important and complex. We know systematically gathering data about stakeholders' perspectives and experiences and sharing information obtained from needs assessments back with stakeholders can help facilitate buy-in (Turnbull et al., 2002). Although a needs assessment is strongly recommended to identify the specific problem and measurable goals, a formal needs assessment is not always necessary to proceed. It is only after a clear understanding of the problem, the school's specific needs, and goals that the leadership team is then able to successfully select possible programs or interventions that will directly target these needs. The leadership team then determines, with stakeholder input, what will be implemented and how implementation and outcomes will be measured. In addition, the team assists with the planning necessary to train additional staff to engage in the change effort. Finally, data are analyzed to measure outcomes and impact, and the team will assist with planning for schoolwide adoption (Dumka et al., 1995).

Teaming Structures

In terms of logistics of this leadership team, components of effective teams include an action plan to guide the short, medium, and long-term goals of the team (working backwards is often an effective strategy to use in developing an action plan), an agenda for each meeting, roles for each team meeting (e.g., time keeper, facilitator, note taker), and a consistent format for each meeting where progress toward the goals of the team are reviewed at each meeting (Bertram et al., 2015; Newton et al., 2011). There should be someone responsible for logistics (sending reminders, meeting location) and more than one facilitator that does not change, in case of staff absences, staff being preoccupied with other responsibilities, or turnover.

Needs Assessment (Problem Identification/Analysis)

The school psychologist can begin working with a leadership team to conduct a needs assessment to discern where to focus the systems-level intervention. As discussed previously, developing a representative team of school staff (administrator, teachers from different disciplines/grades, mental health staff such as school psychologists or counselors, behavior analysts, school staff such as custodians or office assistants, and parents/community members) that meets regularly and follows an agreed upon set of efficient team meeting procedures is critical to initiating a systems change process.

Needs assessments can be both formal or informal, depending on the nature of the systems change involved. The guiding question to inform a needs assessment should be: what data/information do we have and what data/information do we need to obtain before

we can decide how to intervene? More formal options targeting behavior and social-emotional needs systems change include the Tiered Fidelity Inventory (TFI; Algozzine et al., 2014), Benchmarks of Quality (BoQ; Kincaid et al., 2005), or School-wide Evaluation Tool (SET; Horner et al., 2004). In the case of considering individual classrooms, the Classroom Check-Up (Reinke et al., 2011) can serve as a formal needs assessment. Needs assessments do not necessarily need to involve formal assessment tools. Less formal needs assessments include data relevant to the identified problem. Review of existing data can consist of data drawn from a variety of sources including School-Wide Information System (SWIS), AIMSweb, Star, Office Disciplinary Referrals (ODRs), attendance, grades, academic benchmark data, standardized testing scores, suspensions and expulsions, behavioral health screening data, or school climate surveys (Eagle et al., 2015; Simonsen et al., 2008).

After the team completes and scores the needs assessment, the team should engage in a process of prioritizing needs. While a needs assessment can be tremendously helpful in identifying needs, results can be overwhelming for school teams due to the high number of needs identified. The data from the needs assessment guides the team in prioritizing where to focus for MTSS implementation. This part of the process can be considered the problem analysis stage where the team engages in a process of understanding and operationally defining the need(s). Typically, this stage of the process involves collecting some additional data to inform the operational definition of the problem and the setting of goals to respond to the problem (Simonsen et al., 2008). Data collection can include focus groups or interviews with stakeholders (e.g., teachers, parents, community members, students), additional surveys to explore specific questions, observations of the problem in different settings, or additional academic or social-emotional assessments with individuals or groups of students.

Stakeholder Input and Feedback

Seeking stakeholder (e.g., teachers, school staff, parents, community members, students, administrators) input is critical to inform the development of a plan especially related to social validity data: acceptability and feasibility of the intervention (Eagle et al., 2015; Maras et al., 2015; Merrell & Gueldner, 2010). Feedback can help make adaptations to the intervention, so it is more culturally and contextually relevant to the local community (Sugai et al., 2012; Walker et al., 2019).

Explore and Select the Intervention Based on Fit and Feasibility

Leadership should be knowledgeable about the systems change initiative as well as how to capitalize on staff resources (e.g., skills, personalities, time, knowledge, capacity, finances; Eagle et al., 2015). Eagle and colleagues (2015) outline the following financial resources that may be required to implement a systems framework: funds for professional development/training, curriculum or intervention materials (including visuals and reinforcers), data management systems if the team decides to utilize such a system (e.g., School-Wide Information System), any screening or progress monitoring materials selected, and potential coverage for staff engaging in activities outside of their typical responsibilities (Eagle et al., 2015). Time (for training, ongoing coaching, Tier 1 team meetings, intervention planning and implementation, and data entry and analysis) and space (to deliver intervention and for Tier 1 school leadership team meetings) are also critical resources to consider as the Tier 1 school leadership team is developing and implementing the initiative (Eagle et al., 2015).

Setting Goals

Defining operational outcomes and setting realistic goals for the systems change initiative should be major priorities of the plan development. Depending on what data source the team has utilized to identify their need, the goals and outcomes can be defined using these data sources (e.g., ODRs, attendance, academic or behavioral screening data) (Algozzine et al., 2014; Fallon et al., 2017). Goals should depend on the current data and be specific and realistic. Two examples of systems change goals would be (a) increasing the school attendance by 5% over a period of one school quarter and (b) decreasing ODRs by one to two per week over a period of one school quarter. Attendance should be defined specifically in this example according to the district's definition of attendance and the team should determine how students marked as tardy should be accounted for in the data. As part of this goal setting process and operationally defining how outcomes should be assessed, the team should develop a plan for ongoing monitoring of the plan's progress.

Once the leadership team has identified a possible intervention and initial plan for implementation

to respond to the needs of the system, the team needs to move to the installation phase. More detailed action planning is conducted to establish systems during this phase to problem solve around logistical challenges, ongoing training and coaching, and communication and feedback with stakeholders related to effectiveness and implementation fidelity.

Installation Phase

Logistics

There are a number of logistical factors to consider when developing and refining an action plan to target an identified need including (a) ensuring there is a structured and regular Tier 1 team meeting plan to guide implementation (Algozzine et al., 2014), (b) developing a plan for providing initial professional development and ongoing coaching support (Fallon et al., 2017; Maras et al., 2015), (c) scheduling and embedding the intervention into the school day to support students' generalization of skills taught (Maras et al., 2015; Merrell & Gueldner, 2010), (d) monitoring fidelity of intervention implementation, and (e) determining the most effective way to communicate consistently with stakeholders about the plan (Maras et al., 2015). Refer to Algozzine et al. (2014) for a Tier 1 School-wide Systems Checklist from the OSEP Technical Assistance Center on Positive Behavior Interventions and Supports. Additionally, it can be helpful to craft a simple logic model to inform the implementation of the program including inputs (what is needed for the program), outputs (activities and who is involved), and outcomes (short term, medium, and long; University of Wisconsin-Madison, 2021).

Monitoring Progress and Assessing Outcomes

Social validity and treatment integrity data should be collected throughout implementation (Sanetti & Kractochwill, 2009). Scheduling consistent times at Tier 1 team meetings to review the data, determining exactly what data needs to be gathered (or collected in the case of the plan requiring new data), deciding who is responsible for collecting and preparing the data to be shared with the Tier 1 team, and deciding the most efficient and clear way to present the data should be decided prior to plan implementation. The team should schedule in times throughout the year to review if the ongoing monitoring plan is effective, what changes should be made, and how the progress should be shared with stakeholders. The following case study will highlight one school psychologist's attempt to initiate systems change efforts guided by implementation science. The case study will be organized into the exploration and installation phases.

Case Study: Exploration Phase

Teaming. School psychologist A (SP) is increasingly frustrated with their Student Support Team at one of their elementary schools who seems to spend more time admiring problems and referring students to be evaluated than developing, implementing, and monitoring interventions. SP has spoken to their administrator who seems open to any intervention. SP wants to attempt to decrease student conflicts both in the classrooms and during less structured times of the school day such as recess and lunch. Although the administrator is interested in change occurring and has committed to attending herself and having some staff members attend a Tier 1 team school leadership meeting regularly, the administrator has not committed any additional resources to supporting systems change.

SP has noticed that there are two teachers (one specialist and one general education classroom teacher) who have expressed interest in incorporating more explicit instruction of social-emotional skills into their daily classroom cultures and routines. SP decides to connect further with these team members outside of the team meeting to assess their readiness for change by asking them questions regarding (a) level of training related to social-emotional skills instruction, (b) desire and capacity to receive additional training, (c) willingness to attempt to engage other school staff members in this type of systems change initiative, and (d) willingness to join the Tier 1 team. The SP has also begun to try to build relationships with other faculty members in the school to assess interest in and readiness for change. Additionally, the SP asks the administrators for other staff who may be ready to participate on this team. The principal suggests one of the paraprofessionals in a special education classroom for students with emotional and behavioral disorders, the physical education teacher, and two parents who have spoken to the principal about participating on a school-based team. In addition to recruiting these individuals, the SP seeks out one teacher who serves in a leadership role in the school, but the

SP is unsure of the teacher's readiness for change. To garner additional knowledge and support, SP has begun the process of seeking consultation with other school psychologists and exploring the possibility of seeking district level technical assistance with the project.

SP has also compiled a list of website resources that might be helpful in exploring evidence-based screening and progress monitoring tools as well as interventions to respond to the needs identified by the newly formed Tier 1 team: Collaborative for Academic, Social, and Emotional Learning (CASEL), What Works Clearinghouse (WWC), Intervention Central, Evidence-Based Intervention (EBI) Network, and National Registry of Effective Programs and Practices (NREPP). SP also has a connection with the local university and plans to engage in consultation with one of the university's school psychology faculty members with respect to intervention plan development and an evaluation plan to monitor effectiveness of the intervention. SP and the principal discussed a realistic timeline and acknowledged it could take a full school year to build capacity and create an action plan that outlines steps for initial implementation.

Needs Assessment. The Tier 1 team began a process of reviewing relevant data sources (e.g., school climate survey data from teachers and students and ODRs). School climate survey data completed by students indicated mean student ratings for the items assessing student safety were lower than other scales. The team began a process of reviewing school-level ODRs at the school wide level by time of day and location of referral. Data suggested that the majority of referrals were occurring at lunch and recess across all grades. They also seemed to be higher on Mondays. The team hypothesized this may be related to the composition of the staff that is present during those times as well as the students returning to the routine after the weekend. The team is aware of the limitations of ODRs, including how they over-identify male students of color (Bradshaw et al., 2010). The team knows they will use this data to focus on universal Tier 1 efforts and will need to continue to disaggregate data to explore the impact of their school discipline practices on different groups. Additionally, they will continue to explore different systems of assessing student needs including universal behavioral health screening. The team chose to use ODR data instead of school climate data to operationally define their problem/need since they decided school climate data would not allow them specific details needed to inform intervention (e.g., where is the problem happening, who is involved, when it is happening). Results from the ODR forms suggest the majority of the referrals at lunch and recess are related to conflicts between students, both physical and verbal aggression. They began a process of soliciting stakeholder feedback (e.g., staff supervising the cafeteria and recess, teachers, students, and parents) regarding the student conflicts at recess to inform the process of operationally defining the problem. Tier 1 team members asked questions about triggers and consequences of the conflicts, behavior during the conflict, staff responses that stakeholders found helpful as well as ineffective, setting events to the conflict (incidents or events that may have happened earlier that day that were more likely to result in a conflict occurring at lunch or recess), and interventions stakeholders thought may be helpful in decreasing ODRs at lunch and recess.

Setting Goals. Based on this data, the team operationally defined the problem as: An average of 12 ODRs per week related to aggressive behavior (e.g., hitting, punching, spitting, kicking, swearing, using pejorative language, pushing, cyber aggression, exclusion of other students) between students occurring during the three lunch and recess periods across grade levels. The SP consulted with the technology teacher at their school as well as her university consultant about the most effective ways to visualize the data to share with staff. The team asked for time at a staff meeting to share the data obtained with staff with the goal of fostering buy-in and commitment to the systems change effort. The team then set a goal to decrease the ODRs to an average of six ODRs per week after two school quarters after beginning implementation. Stakeholders identified the following student challenges related to the ODRs: difficulty interacting pro-socially with peers and difficulty coping with uncomfortable feelings related to peer conflicts. They identified staff needs related to difficulty preventing and responding to challenging behavior beyond the use of verbal redirection. Based on this operational definition of the problem and the identified goal, SP presented two options to the Tier 1 team: restorative practices (RP) and a social-emotional learning (SEL) curriculum. While both initiatives seemed worthwhile to the Tier 1 team, SP

and the administrator knew they only had the resources to prioritize one systems change plan at that time. The team selected SEL as their priority for intervention.

Exploring Interventions. As the leaders of the Tier 1 team, SP had worked with the administrator to review the CASEL website (2020) for resources related to SEL systems change including the phases of readiness, planning, and implementation to familiarize themselves with what was required of this type of systems change (Merrell & Gueldner, 2010). SP and the administrator guided the Tier 1 team through a process of reviewing relevant policies (state, district, and school) related to SEL and a number of SEL curricula to determine what might be the best for their school (see Merrell and Gueldner, 2010 for a Worksheet for Evaluating SEL Programs and a list of evidence-based curricula). SP also reminds the Tier 1 team during this process that research suggests SEL curricula should incorporate SAFE procedures: following a step-by-step training approach, active forms of learning, a focus on skill development, and explicit learning goals (Durlak et al., 2011; Taylor et al., 2017).

Stakeholder Input and Feedback. In their journey to utilize more racially and culturally responsive practices, SP knows that centering the work around building relationships and obtaining student and family voice are critical to this process (Carter et al., 2017). The team solicited feedback from stakeholders related to three curricula they thought would be relevant for their school (i.e., Second Step, Promoting Alternative Thinking Strategies, Strong Kids). They attended two grade level team meetings (one from the upper grades and one from the lower grades), attended a site council/parent teacher association meeting, and spoke to a small focus group of students and another small focus group with families/caregivers to seek feedback. This served the purposes of involving stakeholders, soliciting more buy-in, and assessing which staff members may be interested in serving in more of a leadership role on their grade level teams or in the school as a whole related to SEL. School psychologists can serve as consultants but teacher leaders may be in a better position to secure buy-in from other teachers if they can speak to the feasibility of the intervention (Domitrovich et al., 2008; Eagle et al., 2015).

Obstacles and Challenges. SP encounters a number of obstacles during the exploration phase, centered around teachers expressing feeling overwhelmed with finding the time during the school day to implement SEL and the energy to learn to teach another program. The Tier 1 team engaged in problem solving around this obstacle and decided to offer modeling of implementation of the SEL curriculum by a member of the Tier 1 team with the teacher present, with a gradual release to the teacher implementing with support (e.g., feedback, modeling) from the Tier 1 team member. Additionally, the Tier 1 team prioritized selecting a SEL curriculum with limited preparation involved and offered strategies to grade level team leads to increase engagement and support classroom management during implementation. The Tier 1 team decided to focus on one classroom from each grade to implement during the current school year due to their own capacity to support training and coaching of staff to implement and limited finances in purchasing intervention materials. They decide to try to add additional classes during the next school year.

Case Study: Installation Phase

Logistics and Teaming. SP continues to remind the administrator of the importance of scheduling SEL instruction into the master schedule for the next school year. SP also continues to engage with the administrator around budget and hiring discussions for the next school year. Some budget needs will include the need for staff who share this common vision to build capacity to support these efforts and time and resources to plan with the Tier 1 school leadership team around training for existing and new staff in implementing the SEL curricula (Maras et al., 2015). Additionally, SP continues to raise the ideas of how the Tier 1 team is going to support staff in embedding SEL into academics throughout the school day to support students' generalization of social-emotional skills, plans for sharing SEL language and skills with stakeholders including those supporting lunch and recess, ongoing coaching and technical support that will be required to support implementation, and how to monitor fidelity of implementation such as through observations of teacher implementation of the SEL curricula and self-report checklists (Merrell & Guelder, 2010).

Data-Based Decision Making. SP is also familiar with the limited research around tools for assessing students' progress in response to SEL instruction (Maras et al., 2015), so SP continues to review the research and discuss universal screening and SEL assessment tools with the Tier 1 team as they move forward with their ac-

tion plan. SP will continue to guide the team examining outcomes for students from marginalized groups to ensure that these efforts are helping to dismantle oppressive systems and foster more positive outcomes (Carter et al., 2017; Gregory et al., 2017). SP knows a systems change effort can take over five years to be implemented effectively but that the work needs to start now.

Conclusions and Next Steps

The multiple pandemics of racism and COVID-19 have shed even more light onto the importance of building capacity in schools to dismantle oppressive systems and implement public health approaches, such as MTSS and PBIS (Masonbrink & Hurley, 2020). Determining where to start and how to fit this work into our roles is complex and leaves many school psychologists feeling overwhelmed. Fortunately, implementation science can help ground our efforts by guiding schools in the process of forming leadership teams, embedding the work into existing teams, assessing the needs of a school, and exploring possible interventions based on fit and feasibility (Bertram et al., 2015; Fixsen et al., 2005). Taking these steps can help move the work forward in a stressed system with minimal resources. The installation phase typically introduces unanticipated challenges and requires additional resources beyond the exploration phase. Implementing a pilot of the intervention can be helpful at this point such as by focusing on one grade level, one lunch or recess period, or one classroom from each grade.

Our lessons learned from engaging in this work include the importance of (1) collaborating with champions of this work across our school, district, and community, (2) building off of existing materials (e.g., training materials, protocols, intervention materials) and systems that have already been developed locally and nationally, (3) consulting with university partners who often have experience with systems consultation based on current evidence-based practices, and (4) finding other schools or districts engaged in a similar effort to share strategies and problem solve. As an individual school psychologist, you are encouraged to document how many hours per week you are devoting to the systems change effort so you can advocate to your administrators with budgetary decision-making power for increased resources (e.g., school psychologist time, people, and time to train staff in implementation and engage in consultation with staff to problem solve related to implementation challenges) to allocate to this effort. If you are in a smaller district with limited access to supervision, it may be helpful to seek out a group of other school psychologists for group or peer supervision. Next steps for SP in the current case study include working with the leadership team to compile existing materials related to implementing and evaluating SEL (e.g., training materials, implementation fidelity checklists, social validity, strategies for embedding SEL throughout the day including visuals and language utilized by other schools, and options for universal behavioral screening that could be utilized in the future.

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Article

Towards the Identification of Systems-Level Consultation Competencies in School Psychology: Principals' Perspectives

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Increased practitioner engagement in systems-level consultation in P-12 school settings is a long-standing aspiration for the field of school psychology and a role that is critically important at a time when there exists a substantial societal and educational need. Yet, school psychologists' involvement in systems-level consultation remains infrequent due to factors such as the lack of clearly defined competencies and limited graduate training in this area of practice. This article shares data from a national survey conducted with school principals (N = 646) that explored principals' perceptions about the competencies that school psychologists need to be prepared for and engaged in systems-level consultation in schools. Findings indicate preliminary support for the 19 identified competency areas rated by principals in this study. Implications for practice and future research are discussed.

Key words: school psychologist, consultation, systems-level consultation, principal, training and development

School psychologist engagement in systems-level consultation has become increasingly critical due to the societal and educational implications of the COVID-19 pandemic, rising student mental health concerns, and need for more consistent use of evidence-based practices (National Association of School Psychologists [NASP], 2020a; Rosenfield, 2013; Ysseldyke et al., 2006). Systems-level consultation (SLC) is defined as an activity or series of activities that involve a school psychologist working with staff in a school building or district, and sometimes other educational stakeholders, to make changes and/or solve problems affecting students, staff, (i.e., teachers, administrators, other educators, non-professional staff), and other people (i.e., parents, community members) that are part of the school community (Meyers et al., 2009a). Through SLC, school psychologists can focus on systemic and organizational factors that are barriers to student learning and the overall effectiveness or well-being of the school as well as opportunities for improved practices, policies, and programs. For example, school psychologists can support the collection and utilization of school-wide data to inform instruction and service delivery; organize, implement, and evaluate intervention, problem solving, and referral systems; and support the integration of mental and behavioral health services into the school setting (Meyers et al., 2012; NASP, 2010, 2020b; Vaillancourt-Strobach & Cowan, 2016; Ysseldyke et al., 2006).

Caplan (1970) was one of the first individuals to describe organizational consultation as a model of service delivery, and the term *organizational school psychology*

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We have no known conflict of interest to disclose. We certify that we have complied with the APA ethical principles regarding research with human participants in the conduct of the research presented in this manuscript. Correspondence concerning this article should be addressed to Brandon J. Wood, University of Toledo, College of Health and Human Services, 2801 W. Bancroft St., Toledo OH 43606. Email: brandon.wood2@utoledo.edu.

emerged in the literature in 2014 (see Erchul & Sheridan). Organizational consultation, referred to as SLC here, grew out of several conceptual frameworks including Bronfenbrenner's (1977) ecological theory, which recognized the impact contextual and environmental factors have on organizational functioning and goal attainment. Since the inception of ecological theories in the educational arena, school psychology practitioners have been encouraged to view school problems from an organizational or systems perspective (Meyers et al., 2012). Initially, this focus was directed toward school improvement for all students while, later, renewed interest in school psychologists' participation in SLC ensued following the passing of the No Child Left Behind (NCLB, 2002) and Individuals with Disabilities Education Act (IDEA, 2004) in the early 2000s. These pieces of federal legislation affected the implementation of instruction, intervention, and assessment practices, which caused educators to wrestle with changes in the way students were being educated (Castillo & Curtis, 2014).

SLC has been and continues to be emphasized in school psychology's practice and training models (NASP, 2010, 2020b; Ysseldyke et al., 2006), and it is recognized as a way through which school psychologists can maximize their impact within the schools they serve (Ingraham, 2015). Despite this emphasis and recognition, along with longstanding, continual calls for their increased engagement over the past two decades, school psychologists report rarely engaging in SLC (Borgelt & Conoley, 1999; Castillo et al., 2012; Illback, 2014; Newman et al., 2018). In a survey of NASP members conducted by Castillo and colleagues (2012), school psychologists reported spending an average of 6% of their time engaged in SLC activities.

A number of factors are noted as contributing to the limited involvement of school psychologists in consultation services. For example, the significant amount of time school psychologists spend in special education assessment and decision-making activities (Castillo et al., 2012), a trend that has continued for decades and continues to be impacted by shortages and staffing challenges, limits the amount of time they have available to spend providing consultative services. Curtis and colleagues (2012) found a significant positive correlation between higher student-to-school psychologist ratios and increased school psychologist time spent in assessment and special education-related activities. This relationship is important to note because as school psychologists devote more time to these roles, they consult with less frequency and less confidence (Newman et al., 2015). Therefore, reducing the student-to-school psychologist ratio and subsequently their caseloads and time spent in assessment may have implications for school psychologist engagement in consultation.

Relatedly, the school building administrator is one of the most influential variables affecting school psychologists' role, function, and services in the school setting (Benson & Hughes, 1985; Gerken & Landau, 1979; Hartshorne & Johnson, 1985; Senft & Snider, 1980; Tindall, 1964). School principals' understanding of systems change processes, perception of school psychologists' SLC competencies, acceptance of and desire for consultation as a service provided by a school psychologist have been studied as factors that contribute to SLC engagement (Hylander, 2014; Nellis & Wood, 2021; Pauling & Cook, 2020). Further, Castillo and Curtis (2014) have suggested school principals may not be aware of, or perceive, school psychologists' expertise and knowledge of systems-change processes and strategies. Such perceptions may limit both the opportunities for engagement that principals extend to school psychologists and principals' approval of school psychologists' attempts to participate in systems-level change and SLC.

Additionally, a school psychologist's self-efficacy for consultation has been identified as a factor contributing to their limited engagement (Guiney et al., 2014; Newell & Coffee, 2015). Particularly relevant to engagement in SLC, self-efficacy is derived from one's training, experience, and professional development. One of the most cited barriers explaining minimal school psychologist engagement in SLC is an insufficient or inadequate amount of graduate trainee preparation to provide consultation in general and SLC specifically (Barrett et al., 2017; Rosenfield, 2013).

Approximately 40% of early career practitioners reported that they received no to minimal exposure to organizational/systems consultation in their training (Newman et al., 2015). Training-related challenges include an insufficient number of courses, limited depth of content covered, and little to no supervision of applied practice (Anton-La-Hart & Rosenfield, 2004; Barrett et al., 2017; Hazel et al., 2010; Newman et al., 2015). School psychology programs traditionally have one course in consultation, and those courses (a) are often taught by faculty members who have limited consultation experience, (b) pro-

vide few opportunities for trainees to receive supervised consultation practice in the field, and (c) primarily focus on client-centered consultation, where one consultant works with another individual (consultee) to engage in problem-solving process aimed at remedying a student (client) related concern (Barrett et al., 2017; Newman et al., 2015; Rosenfield, 2013). School psychology field-based experiences (e.g., practica, internship) tend to emphasize assessment, provide few applied experiences in consultation, and offer limited, if any, direct supervision for consultation services (Anton-LaHart & Rosenfield, 2004; Hazel et al., 2010; Kaniuka, 2009). Limited coursework and opportunities to engage in applied school-based experiences in consultation during graduate training is thought to affect the self-efficacy that school psychology graduates have about consultation. School psychology practitioners that have little knowledge about or experience with consultation may avoid opportunities for consultation (Guiney et al., 2014).

A lack of consensus across specialties regarding what it means to be a competent consultant may be another reason why an emphasis on consultation, especially at the systems-level, remains mostly neglected in school psychology training programs (Hazel et al., 2010; Newell et al., 2013). There is a recognized need for additional research focused on SLC, especially with respect to competency identification and development (Bramlett & Murphy, 1998; Castillo, 2020; Coleman & Hendricker, 2020; Illback & Pennington, 2008; Ingraham, 2015; Meyers et al., 2009b; Newell & Coffee, 2015). The identification of competencies most important for school psychologist involvement in SLC may assist school psychology graduate training programs in preparing future school psychologists to serve as effective systems-level consultants.

Five core competencies for the effective delivery of school consultation services have previously been identified in the school psychology literature. These five areas of competency include self-awareness, interpersonal and communication skills, knowledge of interventions, knowledge of systematic problem solving, and cultural competence. Self-awareness refers to "the ability to reflect on one's own skills and performance" (Guiney et al., 2014 p. 30) and requires the ability to explore one's own biases (Newell, 2012; Newell et al., 2010). Interpersonal and communication skills are among the most widely endorsed skills necessary for effective consultation. They include skills such as audience tuning, displaying a shared sense of reality, understanding the role of correspondence bias, active listening, and disseminating information clearly (Castillo & Curtis, 2014, Meyers et al., 2012, NASP, 2020b; Newell, 2012; Rosenfield, 2002; Rosenfield & Humphrey, 2012; Ysseldyke et al., 2006). Knowledge of interventions is thought to be important because consultants support others to make data-based decisions and select, implement, and monitor the effectiveness of interventions and programs. Having knowledge of interventions, programs, data collection and analysis methods, and being skilled in identifying and analyzing programs is also thought to be essential for effective consultative practice (Castillo & Curtis, 2014; Guiney et al., 2014; Rosenfield, 2002; Rosenfield & Humphrey, 2012). Cultural competence is thought to be important for engagement in consultation because without a clear understanding of diverse worldviews, sensitivity to international and multicultural issues, and self-awareness, today's school-based consultant may not be able to serve the wide range of students and schools that exists across the country (American Psychological Association, 2003; Ingraham, 2015). Diversity extends beyond international, cross-cultural, and individual differences to include the variance and intersection of factors such as socioeconomic status, acculturation status, ethnic identification, language differences, and ability (Sander et al., 2016). Consultative theoretical frameworks such as multicultural consultation (Ingraham, 2000, 2008) and cross-cultural consultation (Nastasi et al., 2004) expand on traditional models by articulating cultural elements that are important when providing consultation and are especially relevant in SLC when the cultural aspects of a school and community are an inherent focus (Meyers & Varjas, 2016).

In addition to these core competencies, Newell (2012) suggests it is also important that school-based consultants have knowledge of various consultation models and be skilled at utilizing the appropriate approach given the situation and task at hand. Working with an individual teacher regarding a student-level academic concern requires a different approach than working with a district team to address disproportionate disciplinary practices, for example. School psychologists need to be intentional in their application of the problem-solving process through a consultative approach.

The consultation competencies summarized above are relevant to all consultation models, includ-

ing SLC. However, given the complexities of working with teams and system-wide issues, SLC necessitates additional knowledge and skills. Such competencies have been identified in various professional resources including the NASP Practice Model (2010, 2020b) and the NASP Blueprint for Training and Practice (see Ysseldyke et al., 2006) as well as research articles.

While not considered a comprehensive or agreed upon set of SLC competencies, the literature (e.g., American Psychological Association, Society of Consulting Psychology, Education and Training Committee, Division 13, 2002; Castillo & Curtis, 2014; Forman et al., 2013; NASP, 2010; Ysseldyke et al., 2006) suggests that knowledge of organizational development and systems theory and systems-change frameworks is important. Additionally, skills such as assessing organizational readiness for change, evaluating program impact, convening stakeholders, facilitating teams, fostering consensus and shared accountability, and developing school improvement plans are critical in SLC. Implementation science offers a systems-change framework for creating and sustaining organizational capacity for change and innovation which articulates a set of change principles and implementation drivers (e.g., leadership) that create the conditions and infrastructure for change, innovation, and scaling (Fixsen et al., 2005). Jackson and colleagues (2018) note the relevance of implementation science to school improvement by highlighting that educators and school teams create the context within districts/buildings that enable systematic improvements by "purposefully making changes in district and school systems so that practices are used as designed and their effectiveness is sustained over time" (p. 1). Horner and colleagues (2017) draw attention to how contributions from the implementation science literature have impacted PBIS models, blueprints, and scaling.

Given the landscape of comparatively less focus on preparing school psychologists in consultation, it is no surprise that the literature suggests that the profession does a better job of preparing individuals to work with individual children than to work at a system level (Barrett et al., 2017; Gelzheiser, 2009; Gutkin & Conoley, 1990). It is particularly concerning that this has been a long-standing issue in the profession amidst a time when the need for systems-level involvement has been clearly documented and advocated. The link between graduate preparation, especially field experiences, and subsequent practice is clear both in terms of what roles the school psychologist actually assumes (Curtis et al., 2002; Rosenfield, 2013) and what school psychologists feel competent to do (Barrett et al., 2017; Newell & Coffee, 2015). Further, the lack of consensus about the competencies essential for the delivery of SLC limits the ability of school psychology graduate programs to expand and strengthen their preparation in this area.

Identifying relevant competencies should take into consideration the perspectives of key stakeholders (Castillo, 2020), which in the context of SLC includes school psychology practitioners, school psychology graduate educators, and school principals. This study, which seeks to better understand school principals' perspectives, is one of multiple ongoing studies focused on the perceptions of various educational stakeholder groups. School principals' perspectives are important because they have historically had significant influence in shaping the roles, functions, and responsibilities of their building-level school psychologist (Benson & Hughes, 1985; Hartshorne & Johnson, 1985; Senft & Snider, 1980). They also hold the "true power" in schools (Marks, 1995, p. 31) and are customarily charged with organizing and leading systems-level change initiatives, distributing leadership opportunities, and leveraging the expertise of various professionals to help guide decision making (Eagle et al., 2015; Waldron & McLeskey, 2010). Recently conducted survey research with principal respondents suggests school principals, as a consumer group of school psychological services, are generally interested in school psychologists greatly increasing the amount of time spent in SLC activities (Wood & Hampton, 2020). Surveyed school principals, on average, reported offering school psychologists two to three opportunities to be involved in SLC each school year (Nellis & Wood, 2021). Assuring that school psychologists are prepared to engage in SLC and to capitalize on principal interest and principal-provided SLC opportunities will likely be imperative to school psychologists' role expansion via this indirect model of service delivery.

Current Study

The current study, using survey methodology and principal respondents, sought to answer calls for research on SLC especially related to competency identification and development (Coleman & Hendricker, 2020; Ingraham, 2015; Meyers et al., 2009b; Newell

& Coffee, 2015; Ysseldyke et al., 2006). School principals play a critical role both in determining school psychologists' roles/responsibilities and influencing systems-level work of which SLC is a natural component. Exploring school principal perceptions of what competencies are most important for school psychologist engagement in SLC may (a) aid school psychology graduate programs in improving their training efforts and (b) contribute to SLC competency consensus building efforts informed by influential educational stakeholder groups. The aim of the current study was to explore school principal perceptions of the most important competencies needed for school psychologist involvement in SLC and answer the following questions:

1. What areas of SLC knowledge do principals believe are most important for school psychologist engagement in SLC?
2. What areas of SLC skill do principals believe are most important for school psychologist engagement in SLC?

Method

Data for the current study were collected as part of a larger study focused on principal perceptions of school psychologists' engagement in SLC (see Nellis & Wood, 2021).

Participants

Participants were 646 building-level principals from 32 states. It was a sample of convenience because we only distributed surveys to principals in states whose state department of education had principal email contact information available on their website or made it available to us upon request. The majority of participants were employed in public schools (n = 610, 94.6%) at the elementary level (n = 372, 57.6%), from the Midwest (n = 359, 56.0%), and reported at least a moderate degree of SLC knowledge (n = 448, 69.5%). Nearly half of all participants worked in schools with 1-400 students (n = 306, 47.4%). The most common level of principal experience was 1-5 years (n = 215, 33.3%) followed by 6-10 years (n = 178, 27.6%). A summary of participant characteristics can be found in Table 1.

Procedures and Data Collection

An invitation to complete the survey was individually emailed, using Qualtrics distribution, to all contact-accessible principals (N = 25,031). The recruitment email to all eligible principal participants explained the purpose of the study and included a link to the online survey. The initial page of the survey offered details about the study and participants consented to participate in the study by checking an agreement box before beginning survey items. Two rounds of recruitment occurred, with data collection spanning a total of six weeks. A second email to prospective participants was sent three weeks following the initial recruitment email. Respondents were not incentivized for survey completion. Participants were informed they could withdraw from the study at any time without penalty. Once participants completed the survey electronically, all data were exported into SPSS [Version 26] to allow for analysis and interpretation of study results. All completed surveys were compiled and stored on a secure electronic device with access restricted to the researchers. The final response rate was 2.56% of all those invited to participate.

Instrumentation and Measures

One instrument, an Online Qualtrics survey, was used for data collection. The survey contained an embedded informed consent that described the purpose of the study and provided a definition of SLC. SLC was defined for principal respondents as an activity or series of activities that involve a school psychologist working with staff in a school building or district and other stakeholders to make changes and/or solve problems affecting the students, staff (i.e., teachers, administrators, other educators, non-professional staff), and other groups (i.e., parents, community members) that are part of the school community (Meyers et al., 2009a). To inform survey item creation, we initially conducted a literature review to identify the most salient information related to the topic of study. A comprehensive and agreed upon set of SLC competencies was not immediately identified in the literature. Therefore, we examined the NASP (2010) practice and training (Ysseldyke et al., 2006) models in addition to published articles focused on school-based consultation.

Following this examination, we compiled a listing of both general consultation and SLC competencies, along with examples of SLC activities, and used this compilation to thematically identify the emergent areas of knowledge and skill thought to be necessary for school psychologist engagement in SLC. After we reached consensus on which SLC competencies to in-

Table 1
Characteristics of Respondents

Variable	*N*	%[a]
Students in school served		
1-400	306	47.4
401-800	252	39.0
801-1200	56	8.7
> 1200	32	5.0
School type (missing = 1)		
Public	610	94.6
Nonpublic	35	5.4
School level		
Elementary	372	57.6
Intermediate	121	18.7
Secondary	153	23.7
School setting		
Urban	84	13.0
Suburban	238	36.8
Rural	324	50.2
Geographic region (missing = 5)		
Northeast	53	8.3
Southeast	62	9.7
West	133	20.7
Southwest	34	5.3
Midwest	359	56.0
Years of principal experience		
1-5	215	33.3
6-10	178	27.6
11-15	122	18.9
16-20	73	11.3
> 20	58	9.0
SLC Knowledge (missing = 1)		
Not at all	44	6.8
Slightly	153	23.7
Moderately	352	54.6
Extremely	96	14.9

[a] Percentages are valid percents.

clude in our survey, we sought expert feedback on our competency items. The SLC competencies we identified were independently reviewed by three doctoral-level school psychologists with significant expertise in consultation and systems-level service delivery. We used their feedback to both revise and improve upon the clarity of our original SLC competency items. Additionally, and before survey finalization, we sought feedback from graduate students enrolled in a principal preparation program in an effort to ensure that survey definitions, knowledge and skill areas, and rating scales were clear and understandable. Their feed-

back indicated that the survey-provided definition of SLC and the survey's competency areas were clear. The initial use of a literature review, followed by expert and principal trainee feedback, is thought to help support the content validity of the survey, especially with respect to the SLC knowledge and skill items.

SLC Knowledge Importance Ratings

For each area of SLC knowledge (eight; see Table 2), principals were asked to rate how important each area is for school psychologists' participation in SLC using a 4-point scale (i.e., 1 = no importance, 2 = little importance, 3 = moderate importance, 4 = high importance). No SLC knowledge items were reverse coded.

SLC Skill Importance Ratings

For each area of SLC skill (11; see Table 3), principals were asked to rate how important each area is for school psychologists' participation in SLC using a 4-point scale (i.e., 1 = no importance, 2 = little importance, 3 = moderate importance, 4 = high importance). No SLC skill items were reverse coded.

Data Analysis

Both research questions were addressed using descriptive statistics. Mean ratings and standard deviations for both SLC knowledge areas and SLC skills were analyzed to identify those principals perceived to be most and least important. A mean SLC knowledge and a mean SLC skills composite score was also calculated. Additionally, Cronbach's alpha (α) was calculated as a measure of internal consistency for the items forming the SLC knowledge and the SLC skills composite.

All principal respondents, regardless of their self-reported SLC knowledge (i.e., not at all, slightly, moderately, extremely) were included in the data analysis for both research questions. The decision to retain all principal respondents for the purpose of data analyses was based on a series of paired-sample *t*-tests. Non-significant mean differences were found

Table 2
Principal SLC Knowledge Importance Ratings

Knowledge Area	*N*	*M*	*SD*
Legal and ethical considerations	645	3.79	0.49
Processes and strategies focused on problem identification and analysis, action planning, implementation, and outcome evaluation	642	3.65	0.56
Strategies and tools for conducting a needs assessment for a school	641	3.42	0.66
The process and strategies used to facilitate change	642	3.28	0.71
Strategies to building capacity for change among school staff and community	645	3.24	0.75
Understanding about educational stakeholders' roles and involvement in systems-change	644	3.20	0.77
Knowledge of theories such as ecological, systems, and organizational change	639	2.85	0.79
Knowledge of Implementation Science	582	2.85	0.83
Composite	559	3.29	0.47

Note. For mean ratings, 1 = no importance, 2 = little importance, 3 = moderate importance, 4 = high importance.

for both the SLC knowledge and SLC skill composite values when comparing principals reporting no knowledge about SLC to principals with slight, moderate, or extreme knowledge about SLC. Additionally, non-significant mean differences were found for both the SLC knowledge and SLC skill composite values when comparing principals reporting no or slight knowledge about SLC to principals reporting moderate or extreme knowledge about SLC. Further, there were no significant mean differences for any SLC competency (i.e., knowledge, skill) item rating associated with a principal's self-reported SLC knowledge.

Results

Knowledge Importance Ratings

For the areas of knowledge rated by principals, knowledge of "legal and ethical considerations" was found to be most important (M = 3.79, SD = 0.49) for school psychologist involvement in SLC. "Knowledge of theories such as ecological, systems, and organizational change" (M = 2.85, SD = 0.79) and "Knowledge of Implementation Science" (M = 2.85, SD = 0.83) were reported by principals to be least important for school psychologist involvement in SLC.

Table 3
Principal SLC Skill Importance Ratings

Skill Area	*N*	M	SD
Gathering and using information collected through a needs assessment	645	3.56	0.66
Evaluating the effectiveness of programs and interventions	645	3.54	0.65
Designing and monitoring the implementation of programs and interventions	646	3.48	0.71
Using technology for data management, team collaboration, and sharing of information	643	3.36	0.70
Working with adults and school teams to resolve conflict and tensions	644	3.34	0.79
Preparing and conducting professional development for school staff and families	639	3.17	0.79
Identifying priorities to be addressed in school improvement efforts or changes	646	3.13	0.79
Identifying and organizing key stakeholders to participate in school improvement efforts or changes	645	3.11	0.81
Identifying resources (e.g., materials, people, funds to support school improvement efforts or changes	644	3.03	0.87
Facilitating teams focused on school improvement efforts or changes	644	3.01	0.84
Developing school action or improvement plans	645	2.99	0.84
Composite	611	3.25	0.50

Note. For mean ratings, 1 = no importance, 2 = little importance, 3 = moderate importance, 4 = high importance.

Overall, principals provided a mean knowledge importance rating (i.e., SLC knowledge composite) of 3.29 with a standard deviation of 0.47; two knowledge areas had an overall mean rating within the high importance range (M > 3.5) and six knowledge areas had mean ratings within the moderate importance range ($2.5 \leq M \leq 3.5$). Cronbach's alpha for the eight SLC knowledge items was $\alpha = .83$ indicating good internal consistency. Table 2 provides a summary of principal ratings of importance for each knowledge area.

Skill Importance Ratings

For the areas of skill rated, principals reported the skill of "gathering and using information collected through a needs assessment" as most important (M = 3.56, SD = 0.66) for school psychologist involvement in SLC. "Developing school action or improvement plans" was rated by principals as the least important skill (M = 2.99, SD = 0.84) for school psychologist involvement in SLC. Overall, principals provided a mean skill importance rating (SLC skill composite) of 3.25 with a standard deviation of 0.50; two skill areas had an overall mean rating within the high importance range (M > 3.5) and nine skill areas had mean ratings within the moderate importance range ($2.5 \leq M \leq 3.5$). Cronbach's alpha for the 11 SLC skill items was $\alpha = .87$ indicating good internal consistency. Table 3 provides a summary of principal ratings of importance for each skill area.

Discussion

School psychologist engagement in SLC has become increasingly critical due to the myriad challenges faced by, and complexities observed within schools. SLC is emphasized in school psychology's latest practice and training models (NASP, 2020b; Ysseldyke et al., 2006), and, by engaging in SLC, school psychologists have the potential to maximize their impact (Ingraham, 2015). Despite this professional emphasis and acknowledgment, studies have routinely found school psychologists report rarely engaging in SLC (Borgelt & Conoley, 1999; Castillo et al., 2012; Illback, 2014; McNamara et al., 2019; Newman et al., 2018).

School psychology training-related challenges in the area of consultation, especially at the systems-level, are one of the most commonly cited barriers thought to explain minimal school psychologist engagement in SLC (Anton-LaHart & Rosenfield, 2004; Barrett et al., 2017; Hazel et al., 2010; Newell et al., 2013; Newman et al., 2015). School psychology graduate training programs typically require one consultation course that primarily emphasizes individual-level consultation and offers little to no applied field-based experience. An inadequate or insufficient degree of consultation preparedness is thought to negatively affect the self-efficacy practitioners have for consultation engagement (Guiney et al., 2014). Absent more effective and concentrated training efforts by school psychology preparatory programs, especially at the systems-level, practitioners with low self-efficacy for SLC may continue to reject or avoid opportunities for engagement.

One longstanding challenge in the field of school psychology in training future school psychologists to become competent, effective systems-level consultants is a lack of agreement or consensus about which competencies should be emphasized and taught in graduate-level courses. The current study sought to address this gap in the literature by exploring principal perspectives on which competencies they believe are most important for school psychologist engagement in SLC. Each systems-level knowledge (eight) and skill (11) area rated by principals in the current study fell within at least a moderate importance range. Of particular importance for SLC engagement, principals indicated a need for school psychologists to be most knowledgeable about legal/ethical considerations and the problem-solving framework. They also suggested school psychologists need to be most skillful in conducting needs assessments. These results suggest that the identified competencies are valued by and important to sampled principals. Since principals lead systems-change efforts and provide opportunities for school psychologists' involvement in SLC, this finding can help graduate educators focus training opportunities on the knowledge and skill areas that may lead to increased SLC engagement. Ensuring that school psychologists possess and can demonstrate these competencies in a way that is applicable to systems level issues is important as principals appear increasingly receptive to and interested in involving school psychologists in SLC and systems-change efforts (Nellis & Wood, 2021).

According to Nellis and Wood (2021) a principal's perception of the degree to which a school psy-

chologist possesses SLC competencies impacts engagement and opportunity. The results of the current study provide preliminary support for SLC-related competencies on which school psychology training may need to be focused. Two competencies that appear especially unique to SLC and valued by school principals include knowledge of implementation science and systems-change theories (e.g., ecological, systems, organizational) and team facilitation skills in the context of supporting systems-change or improvement efforts. Trainers may have to be creative in how they address these competencies, especially if field-based supervisors do not have systems-level roles or infrequently engage in SLC. Equipping school psychologists with knowledge and skill in these areas may increase their self-efficacy related to systems-level change activities as well as the odds of their facilitating, rather than simply participating in, systems-change processes.

Previous research has documented that school psychology practica and internship experiences are largely focused on assessment activities with few opportunities to provide consultation services in general and especially at the systems-level (Anton-LaHart & Rosenfield, 2004; Hazel et al., 2010; Kaniuka, 2009) and highlighted the critical need for applied practice of SLC knowledge and skill under supervision and guidance of a graduate educator or experienced practitioner. Such opportunities may involve using role play and simulated activities in courses; applied, interdisciplinary course assignments that involve school psychology graduate students working with students in other programs (e.g., special education, educational leadership) on projects with a systems-focus; faculty-led, school-based SLC work that provides observation, planning, and/or co-facilitation opportunities for graduate students. Involvement in such activities during practica and internship is an opportunity for school psychologists to show principals that they are learning about and gaining hands-on experience in competency areas that are important for SLC.

Limitations

Results of the current study should be viewed in light of a number of noteworthy limitations. First, the survey instrument used for data collection has not been validated. The instrument may not represent all systems-level competencies that are important for school psychologist engagement in SLC or include items that are sufficiently well defined as having a systems-level emphasis. For example, how is knowledge about ethical and legal decision making nuanced in the context of systems-level work that distinguishes it from student-level or general consultation services. Second, although the study was designed to collect responses from a diverse pool of principals, there existed little variability in principal respondents in key demographic areas (e.g., school setting, geographic region). A lack of variability in principal respondents and a low response rate is thought to restrict the generalizability of study findings. Third, competency areas, such as knowledge of implementation science and knowledge and skill associated with conducting a needs assessment, may not be sufficiently well-defined or described so that school principals were able to provide valid ratings. Fourth, the current study relied on self-reported data, which introduced the potential for non-response bias. Finally, principal respondents were asked to assess the knowledge and skills of their building's school psychologist, and some principals may have had limited or no experience collaborating with school psychologists in systems-level consultation activities, yet they still offered item ratings.

Future Directions for Research and Practice

Several future research directions logically follow the current study. Future research may focus on further development of SLC competencies. For example, is the set identified for this study sufficiently comprehensive and clear as to how each knowledge and skill area applies to systems-level processes and activities. Additionally, it is important that various respondent groups (e.g., school psychology trainers, school psychology practitioners, etc.) provide perspectives on the importance of SLC competencies and that group differences are explored. Additionally, it would be valuable to explore what level of SLC knowledge and skill is needed for entry into the profession and at what level of training (e.g., specialist or doctoral) these competencies are best aligned. This could inform graduate educators' efforts to strengthen training in this area while also acknowledging the need for continued professional development and practice opportunities once employed in the profession.

Future research on factors that appear to serve as facilitators and barriers to school psychologists' engage-

ment in SLC would also advance the profession. Identifying the specific systems-level roles for which school psychologists are uniquely suited and positioned to fulfill might help focus graduate training efforts and facilitate consensus across stakeholders about how school psychologists can best support school-wide innovation and change. Nellis and Wood (2021) reported that school psychologist accessibility, defined as the number of days per week in a school building, was a significant predictor of principal-provided opportunities for engagement in SLC, but not of actual engagement. Exploring the nature and degree of the influence of the school psychologist-school principal relationship on principal-provided SLC opportunities may provide additional insight into the facilitators and barriers to engagement.

The construct of self-efficacy for SLC among school psychology practitioners and graduate educators would also benefit from additional exploration. For example, what is the relationship between one's training, supervision, continuing professional development, and professional engagement in SLC. Recent studies have found principals reportedly desire increased school psychologist engagement in SLC, and the majority appear to be affording more SLC opportunities to school psychologists on an annual basis (Nellis & Wood, 2021). A school psychologist's training in and self-efficacy for SLC may be two factors that determine whether they accept or refuse SLC opportunities. Absent heightened training in SLC, which may lead to increased self-efficacy among practitioners, calls for school psychologists to expand their roles via SLC engagement may remain mostly unanswered or neglected by practitioners.

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Article

Exploring Social Validity in the Context of Universal Behavior Screening in Elementary Schools

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The current study investigated the impact of social validity related to the Student Risk Screening Scale-Internalizing and Externalizing (SRSS-IE) and universal behavior screening in schools. The perceptions of elementary school educators and staff were explored using quantitative and qualitative methods. Online survey data were collected from educators (N = 60) from one school district in a Southeastern state of the United States. Data were gathered across three components of social validity: acceptability, feasibility, and usability. Educators largely reported that the SRSS-IE was acceptable and feasible to administer; however, ratings regarding its usability were mixed. The second research question explored differences in school personnel's perceptions related to the three social validity components based on their professional roles within the school, the grade levels they taught, and their behavior screening experiences. The findings indicated no significant differences in Acceptability and Feasibility scores. However, significant differences were found in Usability scores based on the grade taught and primary role of school personnel. The third focus of the study centered around promoting buy-in of universal screening efforts by increasing schools' service capacity to provide services following screening through resource mapping. The study concluded with future research directions and implications for school psychologists.

Key words: social validity, universal behavior screening, SRSS-IE, and resource mapping

Approximately 13 percent of children nationwide experience some form of mental health difficulties each year, but only 50.6 percent of these children received treatment according to statistics from the Centers for Disease Control and Prevention's (CDC) National Health and Nutrition Examination Survey (Belfer, 2008; CDC, 2012; Perou et al., 2013). Early identification and intervention for at-risk children can minimize future impact of mental disorders as well as alleviate healthcare and social service costs (Greer et al., 2012). Further, timely intervention and prevention efforts can reduce barriers to student learning and provide a platform for educators to engage students in effective strategies that address educational as well as emotional and behavioral needs (Weist et al., 2007).

Since the early 2000s, the practice of school psychology has shifted toward a public health model in which early identification and prevention are dominant themes across the educational landscape (Dawson et al., 2004). Hence, districts are increasingly directing their resources and efforts to promote positive outcomes for all students at the systems level (Castillo & Curtis, 2014). In the last decade, multi-tiered system of supports (MTSS) emerged as a transformative framework that allows for an inclusive view of how academic and social-emotional learning is addressed along a continuum within the educational system (Castillo &

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Curtis, 2014). The MTSS framework comprises a tiered system that includes universal supports for all students (Tier 1), targeted interventions (Tier 2), and intensive interventions (Tier 3) (McIntosh & Goodman, 2016). The implementation of universal screening is at the heart of Tier 1 in the MTSS framework.

Universal behavior screening is one of the most frequently used and widely accepted methods of early identification in schools (Weist et al., 2007). Typically administered to all students, universal screeners are utilized as proactive tools to assess which and how many students may need social, emotional, and behavioral support (Weist et al., 2007). For example, screening data can potentially inform preventive consultation and provision of interventions for students experiencing emotional or behavioral difficulties. For this reason, it is vital that the information obtained from universal screening be accurate and indicative of current needs within the student population, and school psychologists have a vital role to play in assisting districts' interpretation of screening results and strategic planning (Daniels et al., 2016; Harrison et al., 2013; Knoff, 2014).

While there are no nationally adopted standards for behavioral screening in schools, building an infrastructure to support effective universal behavior screening involves several considerations. First, prior to instituting screening practices, school districts should engage in a self-assessment process to evaluate the availability of trained screening staff, the selection of an age-appropriate measure, logistical issues of time and costs, and the availability of mental health services and resources to support students identified by screening (Oakes et al., 2014; Weist et al., 2007). Specific timeline and step-by-step procedures in this readiness process are beyond the scope of this paper, however, it is recommended that districts invest fully in strategic planning before screening so they can proceed with efficient implementation and respond adequately to the information gleaned from screening data (Oakes et al., 2014; Weist et al., 2007). Second, universal screening requires substantial support and buy-in from school personnel. Thus, social validity (or acceptability) is an important concept to consider. Glover and Albers (2007) found that screening tools that are perceived to be socially valid are more likely to be adopted and utilized. Understanding the social validity of screeners may inform school psychologists' and administrators' efforts to increase buy-in among school personnel. In addition to gauging the social validity of the screening process, it is equally necessary to collaborate with schools to identify appropriate resources for students who are identified as at risk for social, emotional, and behavioral concerns via screening. Understanding available supports and interventions facilitates realization of universal behavior screening's core purpose: identifying student needs and linking identified students with appropriate resources for follow-up evaluations and treatment services within the school community (Glover & Albers, 2007; Levitt et al., 2007).

The Press to Address Social, Emotional, and Behavioral Difficulties in Schools

The high rates of unidentified and untreated children and adolescents experiencing social, emotional, and behavioral difficulties have resulted in increased educator interest in early detection of potential problems. In particular, screening of student behavioral concerns has been suggested as a meaningful step toward accomplishing this goal because early identification is essential to the provision of targeted interventions and services (Levitt et al., 2007). In the absence of universal screening, students with certain social and emotional challenges may go undetected for extended periods until they demonstrate a cumulative pattern of disruptive behaviors (Kim et al., 2014). It is not uncommon for school personnel to wait until students' behaviors become unmanageable before referring them for evaluation and services. Once referred, students may eventually receive a classification of Emotional Behavior Disorder (EBD) under the Individuals with Disabilities Education Act (IDEA), but the opportunity for prevention and early intervention often has been missed (Kim et al., 2014). While special education identification generally provides more access to services and supports, research suggests that students diagnosed with EBD are at an increased risk of absenteeism, suspension, expulsion, or dropout (Wagner et al., 2005).

Student social-emotional health status has also been repeatedly linked to academic outcomes. In their literature review, DeSocio and Hootman (2004) identified academic difficulties, disciplinary problems, and erratic attendance as common themes associated with emerging or existing social, emotional, and behavioral problems in children. Further, teachers tend to perceive students with aggressive behaviors as less interested in

school, less independent, more impulsive, and more likely to display undesirable classroom behaviors (Wentzel & Asher, 1995). Such challenges are further complicated when educators lack the training and resources to support students with behavioral and emotional difficulties (Walker et al., 2004). Finally, impaired mental health (e.g., depression or anxiety) can impact children's academic performance and learning outcomes due to poor concentration, lack of motivation, and poor self-concept. Too often, students experiencing mental health difficulties are perceived and inaccurately labeled as "lazy" or "disinterested" by school personnel and peers (AOTA's School Mental Health Work Group, 2012).

Students with internalizing behaviors also are less likely to be recognized as at risk by school personnel as they typically direct their behaviors inward and struggle in silence (Lane et al., 2012). Compared to students with externalizing or overt behaviors, these students are less likely to draw attention to themselves and thus are less prone to receive services and support (Bradshaw et al., 2008). In the absence of effective services, students suffering from internalizing disorders may experience diminished school connectedness and struggle to have meaningful interactions with peers and adults in their lives (Lane et al., 2012). Thus, school districts must utilize proactive and effective methods to consider all students and to identify and improve services for students who are at risk for both internalizing and externalizing behaviors (Oakes et al., 2014).

Although in various stages of implementation, many school districts have adopted MTSS to provide increasing levels of intervention based on identified needs for at-risk students (Castillo & Curtis, 2014; Weist et al., 2007). Within the MTSS framework, universal screening of all students represents an effective approach for identifying students' behavioral and emotional needs (Kim et al., 2014; Weist et al., 2007). Systematic screening identifies which students demonstrate early signs of social, emotional, and behavioral issues and provides information that informs decisions regarding interventions and strategies (Caldera et al., n.d.; Kim et al., 2014; Weist et al., 2007). Another benefit of universal screening is identifying students who struggle with internalizing symptoms who are often under-identified in systems that depend on teacher referral or disciplinary data (Bradshaw et al., 2008; Lane et al., 2012). Obtaining both externalizing and internalizing screening data also enables school personnel to individualize interventions to ameliorate negative outcomes for their student populations (Lane et al., 2012).

Social Validity and Resource Mapping to Support Implementation

Social Validity and Universal Behavior Screening

Accurate identification of students in need of specific social-emotional services requires using universal screening instruments that are contextually appropriate as well as socially valid. Wolf (1978) first introduced the concept of social validity to the field of applied behavior analysis. Since its introduction, the construct of social validity has been extended to school-based research and practices to demonstrate participants' attitudes toward new programs and interventions (Eckert & Hintze, 2000; Greer et al., 2012; Gresham & Lopez, 1996). Social validity is defined as the "degree of acceptance for the immediate variables associated with a procedure or program" (Carter, 2010, p. 2). Wolf (1978) characterized social validity as having three defining components: social significance (i.e., desirability deemed by society), social appropriateness (i.e., acceptability deemed by participants or consumers), and social importance (i.e., satisfaction deemed by participants or consumers).

Since teachers and other school personnel have influential roles in the screening process, it is critical to consider factors that influence their perception of social validity. A technically reliable and valid tool is less likely to be utilized if school personnel perceive it to be impractical to administer (Glover & Albers, 2007). Hence, school psychologists may be tasked with assisting school leadership teams in identifying instruments that are most appropriate for their student population as well as most acceptable to teachers and administrators within the school setting. More specifically, the social validity of an instrument as perceived by teachers and other stakeholders is an important consideration since it may have a direct influence on how much users value a recommended tool and its resulting scores. Because "treatments may be comparable in their demonstrated effectiveness but differ considerably in the extent to which they are considered acceptable" (Berger et al., 2016, p. 3259), it is arguably essential that special consideration be given to the social validity of screening tools in order to ensure accuracy of outcomes.

Based on various definitions used in recent research on the topic, this study focused on three key concepts generally found in operational definitions of social validity: acceptability, feasibility, and usability (Caldarella et al., n.d.; Greer et al., 2012; Wollersheim Shervey et al., 2017). According to Greer and colleagues (2012), acceptability considers whether the screener is perceived to be beneficial, relevant, and important. Similarly, Glover and Albers (2007) noted that stakeholders (e.g., those administering and interpreting the assessment) should perceive the benefits associated with the screener to outweigh the time and financial investment of its administration. Obtaining this aspect of buy-in from stakeholders may facilitate long-term adoption of an instrument and positively impact future provision of services for students (Glover & Albers, 2007). Another component of social validity refers to feasibility, defined as the potential for school personnel to incorporate an instrument or intervention into their set of tools and practices (Caldarella et al., n.d.; Greer et al., 2012). Feasibility, in this instance, may be viewed favorably if barriers such as cost, time, efficiency, and training associated with the instrument or intervention is perceived to be minimal (Caldarella et al., n.d.; Greer et al., 2012). Because universal screening is typically administered by school personnel with a wide range of assessment-related experiences and training, instructions and the language used in the screener should be concise and comprehensible to the users (Glover & Albers, 2007). Equally important considerations are the administration time and its compatibility with the school schedule (Glover & Albers, 2007). Finally, the most meaningful aspect of social validity refers to usability, described as the usefulness of information collected and the impact of this information on decision-making and interventions (Caldarella et al., n.d.; Greer et al., 2012; Wollersheim Shervey et al., 2017). School administrators and teachers should be able to interpret the screening information and understand associated implications. Data derived from screening efforts should be useful in guiding the decision-making process and in designing targeted intervention outcomes for identified students (Glover & Albers, 2007). Assessment of students should result in intervention planning and delivery of individualized services. Without intervention planning and delivery, the potential labeling of students identified through the screening process is a risk associated with school-based early social, emotional, and behavioral identification efforts (Glover & Albers, 2007; Levitt et al., 2007).

Resource Mapping and Universal Behavior Screening

Although there is a general consensus that universal behavior screening programs should be connected to accompanying resources and supports (e.g., follow-up evaluations and treatment services within the school and community), this may be an aspirational goal for many schools or school districts. While some schools have adequate staffing to provide services and support, others struggle to obtain appropriate resources for students with identified needs (Levitt et al., 2007). For these reasons, many schools are hesitant to move forward with universal behavior screening (Dever et al., 2012). As noted by Dever and colleagues (2012), inadequate service capacity is frequently presented as a barrier to universal screening implementation despite the growing demand for school administrators, staff, and school psychologists to meet students' diverse needs. One of the key ways to facilitate systems-level change is by expanding the problem-solving capacity of that system (Castillo & Curtis, 2014). Additionally, collaborative efforts in problem-solving and strategic planning are critical to systems-level change (Castillo & Curtis, 2014), and school psychologists can play a vital role in affecting that change as facilitators of resource mapping efforts.

As schools continue to face challenges in effectively meeting student social-emotional needs, resource mapping can be a valuable tool for determining existing resources in the schools and directing their application in response to student needs. Resource mapping is a process wherein schools inventory their existing resources and evaluate their capacity for responding to students' social, emotional, and behavioral problems (Adelman & Taylor, 2003; Crane & Skinner, 2003; Griffin & Farris, 2010). The general goal of any resource mapping effort is to assess what schools have to offer by identifying assets and available resources at different levels of support that can be used in alignment with current school needs, goals, and expected outcomes (Crane & Skinner 2003).

Once the initial mapping is complete, the focus turns to analyzing how the resources are currently being utilized. The essence of this work requires schools to analyze which resources are being used

with the greatest impact, which ones are redundant, the cost effectiveness of existing programs, opportunities for coordinating efforts, and gaps in addressing high-priority needs (Adelman & Taylor, 2003; Crane & Skinner, 2003; Griffin & Farris, 2010). By critically examining existing resources in the context of the school's objectives and current climate, immediate priorities can be established, and recommendations can be made for deploying and reassigning resources to achieve the greatest impact (Adelman & Taylor, 2003).

The benefits of resource mapping are numerous. Because the provision of student services depends on the responsiveness of key stakeholders and the social environments in which student assessments and support occur (Gutkin & Conoley, 1990), resource mapping efforts have a significant impact on soliciting buy-in from school districts. Harnessing buy-in, otherwise referred as "acceptability" (Nastasi & Truscott, 2000), from school personnel is vital to the success of preventative mental health efforts and the delivery of services in the schools. As a result of taking part in this mapping effort, schools can determine whether existing programs and resources are being utilized effectively to achieve expected outcomes. Further, resource mapping has the potential of improving alignment and coordination of resources as well as enhancing collaboration among stakeholders (Adelman & Taylor, 2003; Crane & Skinner, 2003; Griffin & Farris, 2010). The reallocation of resources as a result of mapping analysis may lead to better outcomes for students while minimizing cost demands at the school level (Adelman & Taylor, 2003; Crane & Skinner, 2003; Griffin & Farris, 2010). Most important to the expansion efforts of mental health services and the removal of barriers to universal screening, resource mapping provides schools with the means to uncover the resources they already have and to tap into others to better meet their student needs (Adelman & Taylor, 2003; Crane & Skinner, 2003; Griffin & Farris, 2010). By taking stock of identified resources and having a concrete plan of how to connect students to such resources, schools may be more encouraged to adopt universal behavior screening as a sustainable and well-received school-based practice (Dever et al., 2012).

Purpose of the Present Study

The present study was researcher-initiated, and findings from the study adds to the current literature on social validity of school-based universal behavior screening systems in three primary ways. Since social validity is related to educator buy-in, it is a critical aspect to the success of systems-level change. First, the study examined educators' perceptions on the social validity of the Student Risk Screening Scale – Internalizing and Externalizing (SRSS-IE), a universal screener used to identify students who are at risk for externalizing and internalizing behavior problems (Lane et al., 2012). As such, we explored whether SRSS-IE demonstrates adequate social validity in terms of acceptability, feasibility, and usability among school personnel at the elementary school level.

Second, we investigated the relationship between school personnel's perceptions of acceptability, feasibility, and usability of the SRSS-IE and (a) their primary roles in the school, (b) the grade levels they taught, and (c) their level of experience with screening. The foundation to the success of systems change hinges on the idea of mutual respect, shared responsibility, collaboration, and buy-in among school personnel of diverse roles and at all levels (Castillo & Curtis, 2014). As such, our primary goal is to understand how educator roles and experience levels were related to their perception of the screener and screening process. Due to limited research in this specific area of social validity, we did not have defined hypotheses about these variables' potential influence on educators' ratings of acceptability, feasibility, and usability.

Third, by facilitating a resource mapping exercise with the school district of interest, we aimed to understand how this consultative interaction might influence the social validity of screening implementation among school personnel. More specifically, we aimed to explore whether resource mapping would shape educators' perception of the screener's utility following the completion of screening procedures. This aspect of educator buy-in may be directly relevant to fostering positive student outcomes at the systems-level as the purpose of this mapping effort was to support the district's adoption and implementation of universal behavior screening by clearing potential post-screening barriers. Based on research literature and anecdotal information from this district, identifying social-emotional and behavioral resources is one of the leading challenges in supporting students once the screening process is completed. This type of barrier may have a significantly negative impact on instigating systems change. In response to the district's concerns and in the

interest of promoting a sustained universal behavior screening program, we set out to collaborate with the district's planning team in uncovering existing resources, identifying gaps and duplication of services, and crafting ways to build a comprehensive resource bank that enables students to access the services they need. By collecting resource mapping data, we were able to determine an overall count of existing resources at each tier and to obtain percentages of evidence-based supports available.

Method

This research study was determined to be exempt from full review by the University Institutional Review Board. All participants agreed to be part of the study voluntarily and completed an electronic consent waiver.

Participants

This current behavior screening study was part of a larger grant-funded project. Information from the online Social Validity Survey (SVS) was collected from 60 elementary school teachers and other personnel from one school district in a Southeastern state of the United States. All school personnel and teachers who were trained on the SRSS-IE implementation (as part of the larger grant-funded project) and had prior experience on rating students' externalizing and internalizing behaviors were recruited to participate. Participants were recruited via an email containing a description of the study, consent information, and an anonymous link to the SVS. The participants volunteered to be part of the current study. Of the 60 participants, 59 were female (98.3%) and 1 was male (1.7%). Approximately 67.8% of the participants reported being White, 27.1% Black, 1.7% Asian or Pacific Islander, 1.7% American Indian or Alaskan Native, and 1.7% multi-racial. The majority of the participants (80%) taught general education while 6.7% taught special education. Other participants (e.g., paraprofessionals, counselors, and administrative staff) constituted the remainder of the sample. The most typical grade level taught was fifth grade (21.7%). Approximately 20.0% of the responders taught Kindergarten, 6.7% first grade, 10.0% second grade, 13.3% third grade, 11.7% fourth grade, and 16.7% mixed grades or resource settings. With regard to universal behavior screening experience (defined as the number of times completing the SRSS-IE), 32.8% of participants reported using the SRSS-IE as a screener between 0-2 times, 36.2% 3-4 times, and 31.0 % 5 or more times. Detailed demographic information and professional background of sample are presented in Table 1.

The resource mapping effort involved the collaboration of members of the state's Department of Education behavior screening team, the district's Positive Behavior Interventions and Supports (PBIS)/behavior screening coordinator, and district-level PBIS team members such as clinicians, school social workers, school counselors, and school psychologists. The second and third authors of this study facilitated the mapping process and assisted in identifying and creating a visual template of existing programs and resources for each level of need within the MTSS framework.

Instruments

Student Risk Screening Scale-Internalizing/Externalizing

The population of interest was teachers and school staff working directly with students in Kindergarten through fifth grade, thus the screening instrument selected for this study was based on the Student Risk Screening Scale - Internalizing and Externalizing (SRSS-IE) developed by Lane and colleagues (2012). Within the context of this project, the SRSS-IE was identified as an attractive screening tool due to its brevity, requiring teachers approximately 10-15 minutes to complete for a class of 25 students (Dever et al., 2012; Harrison et al., 2013). The SRSS-IE is a 12-item teacher rating scale developed to assess students' patterns of internalizing and externalizing behaviors (Lane et al., 2012) in Kindergarteners through sixth-graders. Each of the behavior items was categorized as either externalizing (e.g., physical aggression) or internalizing (e.g., sadness or depression). Modified from the original scale by Drummond (1994), the SRSS-IE included five additional items measuring internalizing behaviors. Previous studies investigating the utility of the SRSS-IE provided evidence to suggest that the addition of five items supported detection of students with internalizing problems at both the elementary and middle school levels (Lane et al., 2012; Lane et al., 2013). Classroom teachers rated their students for frequency of each of the 12 behaviors on a four-point Likert scale, ranging from 0 (never) to 3 (frequently). The scores for each behavioral category were summed

Table 1

Demographic Characteristics and Professional Background of the Sample

Characteristic	*n*	%
Gender		
Female	59	98.3
Male	1	1.7
Race/Ethnicity		
American Indian or Alaskan Native	1	1.7
Asian or Pacific Islander	1	1.7
Black or African American	16	27.1
Hispanic or Latino	0	0.0
White	40	67.8
Multiracial	1	1.7
Education		
High School diploma or equivalent (e.g., GED)	0	0.0
Some College but No Degree	1	1.7
Associate Degree	1	1.7
Bachelor's Degree	15	25.0
Master's Degree	22	36.7
Specialist Degree	18	30.0
Doctoral Degree	3	5.0
Professional Role		
Counselor	3	5.0
General Education Administrator	1	1.7
General Education Teacher	48	80.0
General Education Paraprofessional	0	0.0
Special Education Administrator	0	0.0
Special Education Teacher	4	6.7
Special Education Paraprofessional	1	1.7
Other (Mental Health Professionals)	3	5.0
Grade Taught		
Kindergarten	12	20.0
1st Grade	4	6.7
2nd Grade	6	10.0
3rd Grade	8	13.3
4th Grade	7	11.7
5th Grade	13	21.7
Other (Mixed Grades/Resource Classes)	10	16.7
SRSS-IE Screening Experience (# of times)		
0-2	19	32.8
3-4	21	36.2
5 or more	18	31.04

to produce a total externalizing scale score and a total internalizing scale score. Cut-off criteria were used to determine a student's risk level: "no indication of concern", "slightly raised", or "elevated". In previous research with teachers at the elementary school level, test-retest reliability coefficients of the SRSS-IE ranged from .56 to .80, and its internal consistency coefficients ranged from .78 to .86 (Harrison et al., 2013).

Social Validity Survey

The Social Validity Survey (SVS), developed by the first author, was used to measure the social validity of the SRSS-IE among teachers and school personnel. The first author developed the SVS based on the semi-structured interview for social validation created by Gresham and Lopez (1996). Questions were adapted to best reflect the purpose of the current study. As part of the content validation process, SVS items were reviewed by a panel of school psychology experts consisting of five researchers at a Southeastern Tier 1 research university and five school psychologists in several Southeastern school districts. Eight of the 10 school psychologists provided feedback which resulted in editing of various SVS items to best represent each component of social validity.

Prior to completing this rating form, participating educators had already completed the SRSS-IE for their own classrooms. The SVS consisted of statements that relate to the three operationalized constructs of social validity: acceptability, feasibility, and usability. Each SVS item was rated on a five-point Likert Scale, ranging from 1= Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, and 5 = Strongly Agree. Of the preliminary 12 items on the SVS, four measured acceptability, four measured feasibility, and four measured usability. School personnel were asked to rate their level of agreement to statements related to the SRSS-IE and screening process. The survey also included four open-ended questions asking participants about positive and negative aspects of the SRSS-IE and their satisfaction regarding follow-up actions in response to SRSS-IE data in their schools. Finally, the survey also contained six questions about participants' demographic and professional information. None of the questions required identifying information.

Higher scores for each component (or subscale) indicated greater perceived social validity. The Acceptability subscale evaluated whether teachers and school staff perceived the SRSS-IE to be an important and beneficial tool. A high mean rating indicated that school personnel generally perceived the SRSS-IE to be important and beneficial. The items on the Feasibility subscale measured school personnel's perception of the SRSS-IE in regard to time demands and the likelihood that they would use this tool in their professional work. A high average rating on this subscale suggested that educators generally perceived the SRSS-IE to be feasible to implement. Lastly, the items on the Usability subscale evaluated educator perception on the usefulness of the data collected using the SRSS-IE. Again, a high average rating indicated that school personnel generally viewed the SRSS-IE as impactful in their identification of student needs and decision-making process.

Data collected from the SVS were subjected to factor analysis since the Kaiser-Meyer-Olkin measure (KMO) of .62 indicated adequate sampling for EFA. A principal component analysis of the SVS rotated to varimax with Kaiser normalization resulted in item loadings from 0.43 to 0.87 on three factors accounting for 54.1% of the variance. All but one item loaded on one of the expected factors. The EFA results led to the removal of the non-loading item ("The SRSS-IE took a reasonable amount of time to complete for my entire class.") from the Feasibility subscale to arrive at the final 11-item survey (Figure 1) used for analyses of variance.

Procedure

Figure 2 illustrates the timeline of the project as it progressed from resource mapping procedures to the administration of the SVS.

Social Validity

As part of the grant project, educators in the participating district were required to complete universal behavior screening of students on their roster. Approximately 6 weeks after the start of the school year (early September), teachers completed the SRSS-IE for each student whose parent/guardian had provided passive consent. Approximately 242 educators, from 11 elementary schools within the same district, collectively provided screening ratings on 5,082 students in Kindergarten through fifth grade. To provide context for screening implementation, a district-level screening team oversaw the general timeline and process. Additionally, each school-level screening coordinator man-

Figure 1

Social Validity Survey

Please mark the number which best describes your agreement or disagreement with each statement.					
Survey Questions	1- Strongly Disagree	2- Disagree	3- Undecided	4- Agree	5- Strongly Agree
1. Identifying students with mental health challenges is important.					
2. Completing the SRSS-IE will positively impact my students' emotional or behavioral outcomes.					
3. It is important that the SRSS-IE has strong validity and reliability.					
4. The SRSS-IE is an effective tool for identifying emotionally or behaviorally at-risk students.					
5. The SRSS-IE was easy to complete.					
6. My school is likely to incorporate the SRSS-IE as part of the annual universal screening for all students.					
7. The SRSS-IE should be used more than once a year.					
8. The results from my screening will be used to identify students at risk.					
9. The results from my screening will be used to inform high-stake decisions for students at risk.					
10. The results from my screening will be used to develop effective interventions for students at risk.					
11. Using the SSRS-IE has expanded my knowledge and skills regarding how to use screening data to improve students' emotional or behavioral outcomes.					
Open-ended Questions					
1. Which aspects of the SRSS-IE do you like the most? Why?					
2. Which aspects of the SRSS-IE do you like the least? Why?					
3. Would you recommend the SRSS-IE to be used for mental health screening to other teachers? Why or why not?					
4. How satisfied are you with the follow-up outcome once SRSS-IE screenings are completed? Why?					
Multiple-choice Questions -Background Information					
5. What is your gender?					
6. Which race/ethnicity best describes you					
7. What is the highest level of school you have completed or the highest degree you have received?					
8. What is your role within your school system?					
9. What grade do you currently teach?					
10. How many times have you completed the SRSS-IE?					

Note. Survey Items #1, #3, #6, #7 (Acceptability Scale); Survey Items #4, #5, #8 (Feasibility Scale); Survey Items #2, #9, #10, #11 (Usability Scale)

Figure 2

Project Timeline

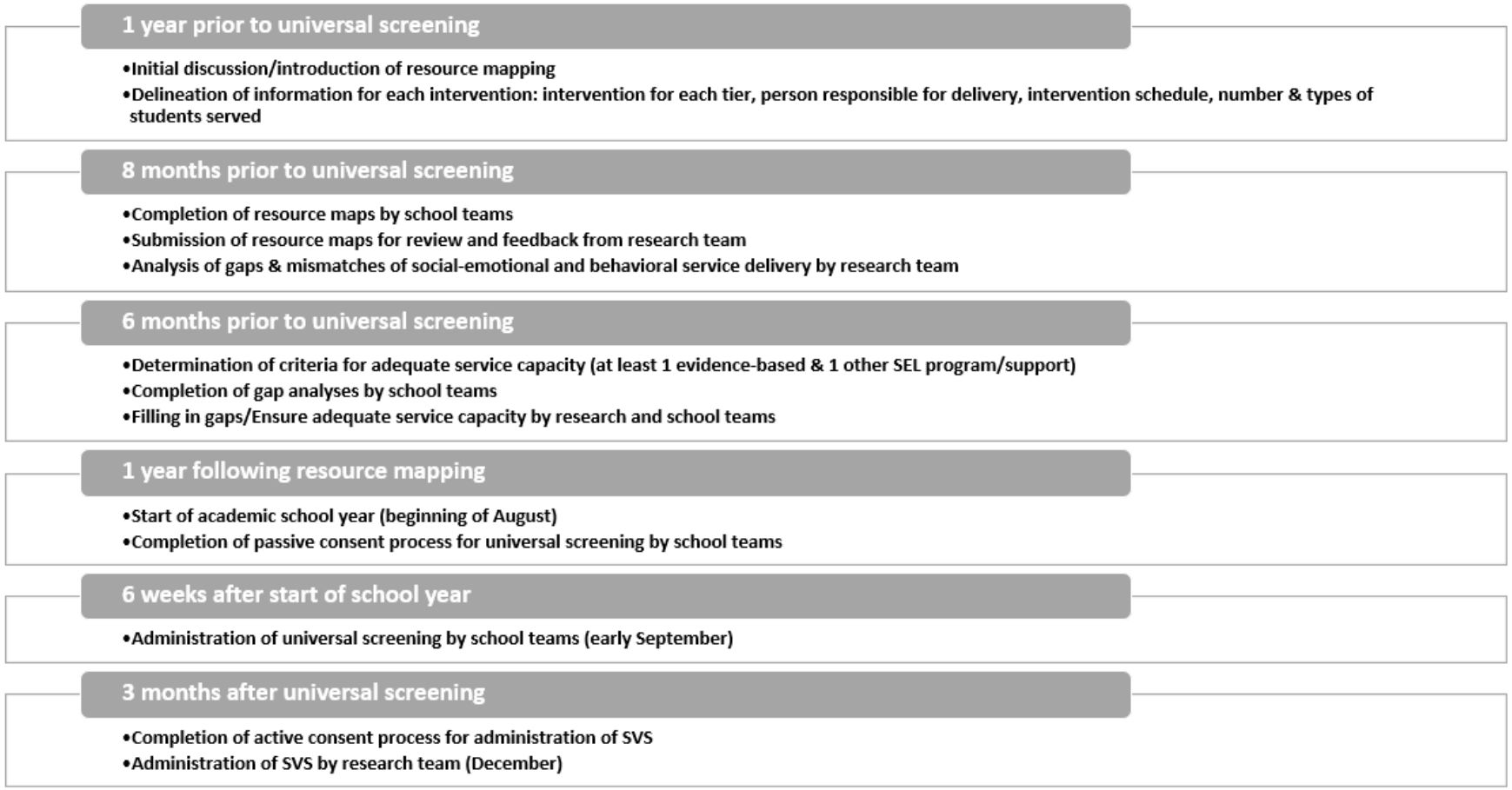

Table 2

Descriptive Statistics of Social Validity Subscales

		% of Responses						
Social Validity Subscales	Items	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	*M*	*SD*
Acceptability	4	0.00	1.67	18.33	55.00	25.00	3.94	0.64
Feasibility	3	1.67	3.33	21.67	43.33	30.00	3.96	0.96
Usability	4	3.33	13.33	33.33	30.00	20.00	3.48	1.01

aged the implementation at his/her building.

Informed consent was sought and guidelines relating to ethical treatment of participants were adhered to during all communications with school staff. A wait period between the screening time and the administration of the SVS was necessary to allow for schools to score, interpret, and respond to screening data. Approximately 3 months after completing the SRSS-IE for their classrooms, school personnel were asked to complete the researcher-designed SVS to provide perceptions related to the universal screener. The SVS was administered using Survey Monkey (https://www.surveymonkey.com), an online survey tool. The survey was disseminated to participating personnel in December, following the district's fall screening period. Each school's screening coordinator sent the link for the SVS survey to all personnel who completed the SRSS-IE during the Fall screening window. If they agreed to participate, participants were requested to complete the survey anonymously without remuneration. Of approximately 242 eligible school personnel , 60 (24.8%) responded and completed the survey.

Resource Mapping

As part of the readiness process that occurred a year prior to universal mental health screening, teams of educators at both state and district levels convened to discuss the importance of establishing resources for serving students following identification. The key emphasis in this process was ensuring that schools had a range of services and supports in place prior to implementation of the universal screening process. Although trained at the broader level, the district screening team was advised to conduct resource mapping with leaders from each participating school to identify social-emotional and behavioral supports at each tier within the MTSS framework. With consultative leadership from the second and third authors of this study and general guidance from members of the state department of education PBIS team, the district-level screening team was trained to follow a mapping process to identify social-emotional and behavioral supports for students with different levels of need.

Resources, programs, or curricula identified by schools were initially documented on a general mapping template, which was introduced to the teams by the second and third authors. The resource mapping template required school teams to delineate a variety of information for each intervention including the person responsible for intervention delivery, intervention schedule, eligibility criteria, and number and types of students served. During training sessions, school teams were given time to begin the resource mapping process so they could ask questions and get clarification about the process. In filling out the mapping template, school-based screening teams (composed of administrators, school counselors, and teachers) were instructed to consider which resources were currently provided for their students at each tier, how students accessed these resources, and how many students were served each of the resources. School teams completed their resource maps and submitted them to the research team for review and feedback.

Following completion of the initial resource mapping, the research team evaluated each schools' map to uncover gaps and mismatches in social-emotional and behavioral service delivery at all system tiers. Taking the current service capacity of participating schools into consideration, the second and third authors determined the criterion of meeting adequate service

capacity as providing at least one evidence-based SEL (social-emotional learning) support or curriculum and at least one other SEL support (either evidence-based or school-created/ homegrown) per tier under the MTSS model. The research team considered intervention programs evidence-based if they had been reviewed and listed on a clearinghouse or registry of research-validated programs (e.g., What Works Clearinghouse; National Center for Intensive Interventions; Blue Prints for Healthy Youth Development; The Collaborative for Academic, Social, and Emotional Learning). Using this criterion, the district and school-based screening team proceeded with gap analyses (i.e., identifying tiers with insufficient numbers of programs and supports). Once gaps were identified, the research team worked with schools to identify evidence-based strategies to fill gaps and build upon existing supports for students with different levels of need. Gaps in available school-based social, emotional, and behavioral resources needed to be filled prior to students being screened to ensure that schools had adequate supports in place before the screening began. As such, the universal screening process was contingent on the completion of the resource mapping procedure, filling resource/programming gaps, and ensuring adequate service capacity. Thereafter, school teams determined appropriate and timely procedures for disseminating their resource mapping documents to their school/district stakeholders.

Results

Social Validity

Descriptive Findings of Subscales

Descriptive statistics for the three social validity subscales are presented in Table 2. Our first research question was to explore whether the SRSS-IE maintained adequate social validity in terms of acceptability, feasibility, and usability among school personnel at the overall subscale level. In regard to acceptability, the majority of school personnel rated the SRSS-IE favorably as 80.0% of the respondents indicated they "agreed" or "strongly agreed" that the screener was beneficial, relevant, and important as a screening

Table 3

Means and Standard Deviations of Social Validity Subscales by Variables

	Social Validity Subscales								
	Acceptability			Feasibility			Usability		
	N	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*
SRSS-IE Experience									
0-2 Times	21	3.89	0.53	21	4.01	0.87	21	3.33	1.14
3-4 Times	21	3.82	0.81	21	3.66	0.95	21	3.48	1.05
5-> Times	18	4.17	0.47	18	4.27	1.03	18	3.65	0.79
Grade Taught									
K-2nd	22	3.89	0.48	22	3.93	0.79	22	3.26	0.87
3rd-5th	29	3.93	0.76	29	3.84	1.14	29	3.40	1.04
Other	9	4.16	0.56	9	4.45	0.57	9	4.24	0.95
Role									
Gen Ed	48	3.91	0.67	48	3.85	1.01	48	3.34	0.97
Spec Ed	5	3.95	0.38	5	4.35	0.63	5	3.34	1.16
Counselor	3	4.32	0.59	3	4.20	0.73	3	4.68	0.59
Other	4	4.10	0.64	4	4.74	0.29	4	4.42	0.41

Note. Grade Taught Other = Mixed Grades/Resource Classes; Role Other = Administrators/Mental Health Professionals.

instrument. Moreover, respondents were mainly positive about the feasibility of SRSS-IE administration. Approximately 73.33% of the respondents "agreed" or "strongly agreed" that they were likely to incorporate the screener into their set of tools and believed the screener was easy to complete. In terms of usability, responses were mixed. Fifty percent of respondents indicated they "agreed" or "strongly agreed" with the usability of screening results, but a large percentage (33.33%) indicated they were "undecided" on the SRSS-IE's usefulness for making high-stake decisions for students at risk, developing interventions, and improving students' outcomes.

Qualitative Findings

The SVS included four open-ended questions to collect informal qualitative data regarding school personnel's perception of the SRSS-IE and their general views of the universal screening process. Content analysis of responses included independent review and analysis of the data by the first author and a graduate researcher. These analyses were used to capture themes that emerged from the data set. Next, the researchers finalized general themes and subsequently coded each response based on the identified set of themes. Publications that address levels of interrater reliability (IRR) indicate that a range from 80% to 95% is recommended for establishing acceptable qualitative coding reliability (Creswell & Creswell, 2018). The researchers coded independently until 90% IRR was established.

Two questions inquired about which aspects of the SRSS-IE were most and least desirable. Out of 60 participants, 36 stated reasons why they liked the SRSS-IE. Results indicated that approximately 38.9% of participants appreciated the SRSS-IE's effectiveness of identifying students at risk, 33.3% noted its convenience and ease of administration, and 27.8% reported on its comprehensiveness of addressing both externalizing and internalizing symptoms. Thirty out of 60 participants also stated their reasons for rating the SRSS-IE unfavorably. About 40% of respondents mentioned lack of follow-up and interventions for students following screening. Additionally, 16.7% indicated having too many responsibilities and not enough time to administer universal screenings, while 13.3% reported limited knowledge of students as a barrier, especially during the fall screening window. Respondents explained that limited knowledge of students' behavior patterns could potentially result in inaccurate ratings. About 10% mentioned the complicated layout of the questions, and 6.7% of the respondents did not agree with the passive consent process adopted by the district. Finally, 10.0% were unsure or did not find anything wrong with the screening tool, and 3.3% indicated a belief that the universal screening should occur more often throughout the school year. When queried whether they would recommend the SRSS-IE as a behavior screening tool, 66.7% of the 39 respondents (to this question) replied yes, 15.4% said no, and the remaining 17.9% were undecided. Lastly, when asked to rate their level of satisfaction regarding follow-up supports and outcomes for students in the weeks and months after the screening, 7.1% of the 56 who responded to the question were very satisfied, 26.8% satisfied, 42.9% undecided, 12.5% dis-

Table 4

Intervention Resources Identified by District Elementary Schools

	Overall Total	Evidence-based		School-created/Other	
	n	*n*	%	*N*	%
Elementary Schools (N = 10)					
Tier 1	41	35	85.37	6	14.63
Tier 2	62	43	69.35	19	30.65
Tier 3	54	36	66.67	18	33.33

Table 5

Distinct Resource Types Identified by District Elementary Schools

	Resource Type Total	Evidence-based		School-created/Other	
	n	*n*	%	*n*	%
Elementary Schools (N = 10)					
Tier 1	16	11	68.75	5	31.25
Tier 2	32	23	74.19	9	28.13
Tier 3	26	20	76.92	6	23.08

satisfied, and 10.7% very dissatisfied.

Perceptions Based on Educator Role, Teaching Level, and Screening Experience

Our second research question explored differences among school personnel's ratings of acceptability, feasibility, and usability of the SRSS-IE based on (a) their primary roles in the school, (b) the grade levels they taught, and (c) level of experience with screening. In Table 3, the means and standard deviations for each social validity subscale categorized by variables of interest are reported.

The one-way analysis of variance (ANOVA) yielded no significant differences in Acceptability and Feasibility scores based on grade taught, previous experience with the SRSS-IE, or professional role.

Although there were no differences in Usability scores based on experience with the SRSS-IE, significant differences were found in Usability scores based on grade taught, $F(2,57) = 3.40$, $p = .040$, partial $\eta 2 = .106$, and based on professional role, $F(3,56) = 3.26$, $p = .028$, partial $\eta 2 = .148$. A post hoc analysis revealed the mean score rated for teachers who taught "Other" grades (e.g., multi-grade or resource classes) ($M = 4.24$) was significantly higher than the mean score rated by Kindergarten to second-grade teachers ($M = 3.26$), $p = .014$, and third through fifth-grade teachers ($M = 3.40$), $p = .028$. Significant differences were also found between the mean scores of general education teachers ($M = 3.34$) and the mean score of "Other" school personnel ($M = 4.42$), $p = 0.034$, and counselors ($M = 4.68$), $p = .022$.

Resource Mapping

The third aim of the study focused on enhancing buy-in of screening efforts by increasing schools' service capacity at the post-screening phase through resource mapping. Oftentimes, school personnel may not perceive universal screening to be useful since there may not be available resources to support at-risk students. Thus, having a clear understanding of currently available resources within their district might potentially support educators in their efforts to connect at-risk students to such resources and influence their perceptions of screening utility.

Resource mapping data were collected for all three tiers within the MTSS framework. Using a resource mapping template, schools listed evidence-based and school-created/other resources for all three tiers of support available to their students.

For all three tiers, overall totals of resources were derived by tallying the number of times a resource was listed, which included many duplicated interventions used across many schools. Table 4 provides a summary of the interventions identified by elementary, including subtotals for both evidence-based interventions and other interventions (e.g., those created by schools). Additionally, overall totals for distinct resource types (i.e., with duplicates counted as only one resource) and subtotals for evidence-based and school-created/other

resources were determined at each tier. Table 5 displays a summary of this information. In total, 41 Tier-1 resources were listed across the 10 elementary schools. Of the 41, 85.37% of them were evidence-based, while 14.63% were created by the schools. There were 16 distinct types of resources listed with 68.75% as evidence-based and 31.25% as school-created or other. Tier-1 evidence-based curricula included school-wide implementation of PBIS and social-emotional learning (e.g., Positive Action). For Tier 2, 62 resources were listed across the 10 schools. Of the resources at this tier, 69.35% of these were evidence-based and 30.65% were created by schools. There were 32 distinct types of resources with 74.19% as evidence-based and 28.13% as school-created or other. Examples of evidence-based interventions at the Tier-2 level were Mystery Motivator, Class Dojo, and the Skillstreaming curriculum. Lastly, data indicated a total of 54 Tier-3 resources across the 10 schools with 66.67% as evidence-based and 33.33% as school-created or other. Of the 26 distinct resource types for Tier 3, 76.92% were evidence-based and 23.08% were created by schools. Check-In/Check-Out (CICO), Social Stories, and Break Cards were listed as some of the evidence-based Tier-3 interventions.

While resource mapping did result in the identification of potential gaps in services, the process also helped school teams identify the existing resources within their context. For example, discussions of the interventions at each tier often included identification of school- and community-based programs that were being under-utilized in supporting students experiencing mental health challenges. In other cases, schools recognized previously successful programs that had been discontinued but could be re-initiated to diversify the intervention options at each tier. Overall, resource mapping was intended to help schools begin to conceptualize themselves as having existing assets that could help them meet the needs of students identified by the universal screening process.

Discussion

Social validity is an important aspect of school-based practices. Successful implementation of universal screening requires substantial buy-in from educators, and to achieve this goal, the social validity of the process and the screening tool must be considered. Screening instruments perceived to be socially valid are more likely to be accepted and utilized. Thus, it is important that educators' perceptions be evaluated to inform efforts to increase their buy-in and commitment. In addition to gauging social validity of universal screeners, it is equally essential to identify appropriate resources for students once screening is completed. The mission of implementing universal behavior screening is to identify student social, emotional, and behavioral problems and to provide identified students with appropriate supports and resources, including follow-up evaluations and services within the school or larger community.

The current study investigated the social validity of the SRSS-IE and more generally the universal behavior screening process in one district's elementary schools. The perceptions of educators were explored using quantitative and informal qualitative methods. Data were gathered across three components of social validity: acceptability, feasibility, and usability. In addition, resource mapping was incorporated with the aim of enhancing service capacity within the district. Identifying available social-emotional and behavioral resources is one of the leading challenges in supporting students once the screening process is completed. Through resource mapping, we collaborated with district and school-based teams to (a) document available resources at the school level, (b) identify service gaps, and (c) generate a comprehensive inventory of appropriate interventions and supports that fit the different levels of student needs. The primary aim was to promote a sustained school-based implementation of universal behavior screening by proactively addressing potential barriers at the post-screening phase.

The first research question focused on the social validity of the SRSS-IE in terms of acceptability, feasibility, and usability among educators and school personnel at the elementary school level. Generally, elementary school educators and staff agreed that the SRSS-IE was an important and beneficial tool for identifying students with internalizing and externalizing behaviors. Additionally, the majority of participants agreed that the screener was easy to administer, and they would incorporate the screener into their set of tools. Participant responses to open-ended survey items indicated that approximately two-thirds of the respondents would

recommend the SRSS-IE as a behavior screener. Respondents also reported on the effectiveness and comprehensiveness of the screener in addressing both externalizing and internalizing behaviors. Thus, based on the SRSS-IE's acceptability and feasibility findings, this instrument appeared to be well-received by school personnel and would be an appropriate screener for evaluating student internalizing and externalizing behaviors. Conversely, educators' responses were less supportive in terms of the usability aspect of the screening data. Qualitative data suggested that information obtained from the screening procedure was not consistently used to inform decision-making nor to develop interventions specific to students' identified needs. Further, about 23% of educators who responded indicated they were "very unsatisfied" or "unsatisfied" with follow-up outcomes for students after screenings were completed, while over 40% were "undecided" on this item. Overall, the survey results suggested school personnel regarded the screener as an acceptable and feasible instrument, but their perceptions of its utility for the purpose of guiding next steps once screening was completed were mixed.

For mental health professionals and screening teams, screening results should provide important information for directing attention to those students identified at risk by the screening. The mixed findings regarding the SRSS-IE's utility may indicate a need for professional development on data interpretation and data-based decision-making to ensure timely follow-up procedures and responsiveness to identified students. Additionally, our experiences with facilitating the resource mapping process suggest that it may be beneficial to involve classroom teachers in the resource mapping effort as part of the preparatory steps prior to universal screening. During the resource-mapping activity, the district-level screening team was advised to conduct resource mapping at the school level. Nonetheless, survey results indicated that some teachers cited a lack of follow-up and interventions for students after screening was completed, which prompted us to believe that not all teachers were made aware of available resources within the district. Thus, it would be prudent for future resource mapping activities to include and engage all school personnel. Educators' active participation and input during resource mapping may directly relate to improved student outcomes since having first-hand knowledge of available resources in their schools may enable teachers to have direct involvement with connecting their at-risk students to appropriate resources and interventional support. Investing in professional development around pre- and post-screening action steps might help increase the perceived utility of the obtained data and, consequently, the overall social validity of the screening process.

Without clear and consistent procedures for the employment of screening results, school personnel may not deem the screening practice worthy of the time and effort expended. School personnel are often inundated with many responsibilities, and an essential part of increasing educator buy-in is making use of the screening information they provided. For example, screening information can be utilized to facilitate discussions with parents and school-based mental health professionals. Additionally, MTSS teams can use the information to allocate resources, develop intervention plans, and connect students with available resources. Equally important is ensuring that teachers and staff receive timely feedback on screening results and participate in the development of intervention plans for their students. We anticipate that experiencing the myriad ways in which screening data can benefit students and schools may heighten the perceived utility of the SRSS-IE and make universal screening a more transparent process among educators.

The second research question explored differences in school personnel's perceptions related to acceptability, feasibility, and usability based on their primary roles within the school, the grade levels they taught, and their mental health screening experiences. The findings indicated no significant differences in Acceptability and Feasibility scores based on these variables of interest. However, significant differences were found in Usability scores based on the grade taught. It appears that staff who taught resource classes or classes with multiple grades perceived the SRSS-IE to have greater utility than staff who taught single-grade classes from Kindergarten through fifth grade. In this particular district, resource classes and multi-grade classrooms are structured to provide more intensive, specialized instruction for students receiving special education. It is possible that these teachers work with a larger number of students with academic or behavioral challenges, leading them to perceive that the screening results are

useful in the developing plans to address their students' needs. For example, the screening information may be used to modify classroom environments to prevent potential behaviors, to plan for strategies or techniques to proactively address problems, and to respond effectively to unexpected situations (e.g., students with physical aggression). It is also possible that more attention and post-screening follow-up are directed to classrooms in which students demonstrate more significant behavioral and social-emotional needs, and teachers who lead these classrooms are more likely to see evidence of screening data utilized to benefit their students. Additionally, significant differences were found in Usability scores based on the primary role of the staff. Counselors and other school personnel (administrators and mental health professionals) perceived the SRSS-IE to have greater utility than general education teachers. Counselors and other mental health professionals (e.g., school psychologists or social workers) may have a larger role in addressing mental health issues, raising mental health awareness, and working directly with students with behavioral problems. As such, they may be directly involved in evaluating screening results and using these data to inform their practice. Similarly, because they are tasked with coordinating responses to disciplinary issues, administrators may interface closely with students with behavioral problems. Screening data may serve to inform on prevention efforts, allocation of resources in their building, and implementation of disciplinary policies and initiatives. Lastly, this group of personnel (administrators, counselors, and mental health professionals) served on the screening team that received resource mapping training from the second and third authors. It is possible that their participation in the resource mapping exercises might have been associated with their perceived utility of the SRSS-IE and the universal screening process. Although more research is needed to establish a direct connection between resource mapping and perception of screening utility, school districts may consider including resource mapping in their training for educators during the installation and initial implementation phases of screening programs if they wish to potentially enhance the usability aspect of the SRSS-IE and other universal screening tools.

The third focus of the study relates to promoting buy-in of screening efforts by increasing schools' service capacity at the post-screening phase through resource mapping. Resource mapping data were collected at all three MTSS tiers. The majority of elementary schools indicated identical programs or interventions. In other words, the same resources and programs were used among buildings, suggesting an overlapping of resources and programs shared among schools. Further, identical resources were indicated across different tiers of support. For example, schools sometimes indicated the same or similar interventions were used at Tier 2 and at Tier 3. Some schools described adapting interventions to fit the level of intervention intensity for students at different tiers, while others did not specify how the interventions were differentiated.

Resource mapping efforts were implemented to encourage educator buy-in and commitment by addressing and alleviating concerns regarding schools' potential capacity for serving identified students following screening. Based on resource mapping data, resources at the elementary school level appeared to be abundant and varied. As such, schools with these resources have the potential to expand and refine their provision of social-emotional and behavioral services. Most crucial to these efforts was the removal of potential barriers to universal screening by providing schools with the means to uncover existing resources and to align them to identified areas of needs for their student population. Even more critical is ensuring that school personnel and teaching staff who have direct roles in supporting at-risk students are engaged in resource-mapping activities at their schools. By having an inventory of identified resources and establishing a definitive approach of how to link students to such resources, schools may be more encouraged to adopt universal behavior screening as a sustainable and well-received school-wide practice.

Limitations and Future Research

This study was one of the first to examine the social validity of universal behavior screening in schools, yet the study was not without limitations. First, this study had a relatively small convenience sample size consisting of the elementary school personnel. While the study provided information from educators with varying roles and who work with multiple grade levels, the sample was likely confounded with characteristics specific to the sample and may not general-

ize to other populations of educators and school staff. Further, the demographics of the participants did not necessarily reflect those of the general population within the district, thus findings were potentially skewed. Second, the sample of participants used in this study was recruited from one school district, which may limit the generalizability of results to a broader range of educators from other school districts. Third, some respondents did not answer all of the qualitative survey questions, which limited our capacity to provide collective perspectives of all participants in the study. Fourth, the survey used to collect data in this study was developed by the first author. Although the developmental process adhered to integral practices for content validation, the survey did not undergo an external validation process. A final limitation to consider is the possibility of teacher bias when answering the SVS items. For example, teachers working under a supportive and proactive administration may feel differently about the screening process compared to those who work under administrators who place less importance on universal behavior screening. Further, the referral process for intervention services may vary school to school, thus school personnel's ratings for the usability domain may be influenced by the type of process their schools have in place.

Future research could explore social validity of behavior screening practices at the middle and high school levels. Studies may be expanded to include all districts that participate in universal behavior screening within the state or region. Finally, although the current study gathered data to gain social validity perspectives of participants, outcome measures were not collected. Future research may include outcome measures related to referral rates at the post-screening phase, mental health status of identified students, students' academic and behavior outcomes, and a comparative exploration of student outcomes at both screening windows (fall and spring).

Implications for School Psychologists

Given the importance of social validity to successful implementation of universal behavior screening as part of instigating change at the systems-level, school psychologists can assist by promoting educator buy-in and commitment in several ways. School psychologists may be asked to train new staff members or members with limited experience with screening or other forms of assessment. This training might focus on administering the screener, clarifying ambiguous wordings, and providing information on developmentally appropriate emotional and behavioral expectations for students in the younger age groups. Another potential barrier relates to educators' knowledge of internalizing behaviors in children. Most teachers can easily recognize externalizing behaviors such as physical or verbal aggression. Internalizing behaviors, however, can be more difficult to detect. School psychologists can cultivate educators' knowledge by sharing information on behaviors or characteristics associated with depression or anxiety and discussing ways to identify internalizing symptoms in school-age children.

For situations in which there is less of an emphasis on or support for proactive behavior screening, school psychologists can foster awareness of the direct association between social-emotional health and academic achievement among school administrators and teachers. Additionally, screening information can be used to inform professional development opportunities for staff at a particular grade level or across the entire school. School psychologists can collaborate with administrators and teachers to assist with resource mapping at the district and/or school level prior to the screening process and align existing resources with identified student needs following the completion of screening efforts. In addition, school psychologists can facilitate staff understanding of their screening data and assist with transforming this information into concrete actionable steps that will benefit their students.

Conclusion

The present study can inform school psychologists' practices by highlighting the concept of social validity and its impact on universal behavior screening at the systems level. Early identification is crucial in developing preventative measures for all students and targeted interventions for children and youth struggling with social, emotional, and behavioral issues. The provision of mental health services in the schools require tremendous support and buy-in from school personnel. Recommendations for increasing staff buy-in for behavior screening may help to enhance the quality and accuracy of screening data. Other suggestions include assistin school districts to maximize use of their screening data

in ways that directly impact outcomes for students. We hope this investigation spurs on further research on social validity in school-based practices that can inform school psychologists in their role of promoting the expansion of mental health and behavioral services for all students.

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Article

Development and Implementation of a Rural School-Based Mental Health System: An Illustration of Implementation Frameworks

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Schools have started to develop multi-tiered systems of support (MTSS) to address student mental health needs. As part of this effort, schools have integrated positive behavior interventions and supports (PBIS) with expanded school mental health systems to create an MTSS addressing a variety of behavioral and mental health needs of students. Developing, implementing, and institutionalizing systems-level reforms in schools is difficult work that can take many years, but implementation science research has developed strategies to support implementing evidence-based strategies in schools. The purpose of this paper is to describe the development and implementation of a school-based mental health (SBMH) multi-tiered system of support in collaboration with a small rural school district in the Midwest. The process of development and implementation will be described within the context of two implementation frameworks. Successes and challenges of the development and implementation process will be discussed.

Key words: systems change, school-based mental health, multi-tiered systems of support, implementation science

Approximately one in five K-12 students meet the criteria for a diagnosable mental illness in the United States, and these rates are rising (Hawke et al., 2020; Merikangas et al., 2010; Whitney & Peterson, 2019). Unfortunately, the accessibility of services is not keeping up with the rising need. Many students lack access to mental health providers, and this is especially pervasive in rural areas (Gamm et al., 2003; Merikangas et al., 2010; Wilger, 2015). When students come to school struggling with mental health difficulties, they are less likely to benefit from academic instruction (Rones & Hoagwood, 2000; Suldo et al., 2014; Wentzel, 1993). Schools are in a unique position to address student mental health by providing students with access to a range of intervention opportunities including prevention and early intervention services in addition to more intensive, individualized mental health treatment (National Association of School Psychologists, 2015). Further, when mental health services are offered in a school building, students and their families perceive less stigma (Vernberg et al., 2008) resulting in greater possibility of seeking mental health care in the future (Aisbett et al., 2007; Lipson et al., 2019).

Unfortunately, schools tend to address mental health difficulties only once they become severe, and the student is eligible for special education services (Forness et al., 2012; Wagner et al., 2005), but this trend is changing. Schools are more broadly applying multi-tiered systems of support (MTSS) and have begun to integrate positive behavior interventions and supports (PBIS) with expanded school mental health systems to create an interconnected MTSS framework for addressing a variety of behavioral and mental health needs of students (Eber et al., 2019). While the trend is moving toward developing comprehensive systems to address student social, emotional, behavioral, and mental health, the path to implementation of high quality, evidence-based school mental health systems is challenging (Eiraldi et al., 2015; Weist et al., 2019).

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Implementation Science in the Context of SBMH

Development and implementation of reformed or new educational systems is difficult and requires a collaboration between both external experts and school district personnel (Adelman & Taylor, 2003; Fullan, 2000). In the early stages of contemplating and planning systems-level change, stakeholders work together to develop the new system in preparation for the next step, initial implementation (Fullan, 2016). This phase typically occurs over two to three years and includes educators' first attempts at implementation. During initial implementation, data is gathered that can be used to inform early changes to the system that will refine the system and its implementation. Nastasi et al. (2004) refer to this as formative research, and while this phase may be completed prior to initial implementation during the development and preparation phases, it can be also completed during the first years of implementation. Formative research used in this way helps to improve the system and build capacity during early initial implementation. As implementation continues and problems are continually solved (Stollar et al., 2006), stakeholders gradually build capacity within the system and begin institutionalizing the reform (Adelman & Taylor, 2003). This process of development, implementation, and institutionalization will likely continue several years requiring a continuous focus on problem solving and implementation integrity (Fullan, 2000; Stollar et al., 2006).

Changing systems to incorporate evidence-based practices has proven to be difficult across many fields, including education. Many implementation efforts fail and have little impact on those receiving services (Damschroder et al., 2009; Powell et al., 2014). However, researchers have come to consensus on effective strategies to enhance implementation of evidence-based practices. Cook et al. (2019) completed a systematic review and analysis of the school implementation literature to determine strategies needed for effective implementation of evidence-based practices. They verified 75 practices that fall within nine categories of implementation strategies, and suggested their taxonomy may be useful in determining barriers to evidence-based practice implementation within schools. The nine categories include (a) use of data-based decision-making and regular problem solving, (b) provide high quality technical assistance, (c) adapt to school and community needs, values, and culture, (d) develop relationships with stakeholders and collaborators, (e) provide high quality training to implementers and stakeholders, (f) support implementers, (g) communicate with families, students, and others receiving services, and (h) employ creative funding solutions.

Lyon & Bruns (2019) further contextualized this work placing it specifically within the field of evidence-based school mental health practice implementation. They suggested four levels – Outer, Inner, Individual, Intervention - in which implementation strategies should be directed (see Figure 1). The outer setting is the wider economic and socio-political context in which the evidence-based practice is to be implemented. This could include community perceptions, state and county laws, and available funding for school-based mental health initiatives. Implementation strategies that might address the outer setting include participation in policy change advocacy at the local or state level (Cook et al., 2019); for example, advocating for schools to utilize the NASP practice model broadening the use of school psychologists as mental health providers or advocating for expanded funding for school-mental health initiatives. The inner setting is the immediate setting of the evidence-based practice implementation. This could be an individual school building or entire district depending on the scope of the implementation. Focusing implementation strategies towards the inner setting is necessary for implementation success. Implementation strategies aimed to enhance the inner setting include conducting regular meetings to inform and train various stakeholders within the system and developing relationships with a variety of stakeholder groups (Cook et al., 2019). The third level, the individual, includes school-mental health service providers, such as school psychologists. Implementation strategies that support the individual include enhancing provider buy-in and well-being and supporting ongoing training for providers (Cook et al., 2019). Finally, implementation strategies must focus on the intervention itself to ensure proper alignment with the providers, the recipient of the mental health services, and the culture and climate of the school and community (Doll et al., 2017; Lyon & Bruns, 2019; Nastasi et al., 2004). Implementation strategies aimed specifically at improving intervention effectiveness include clear expectations on using the new evidence-based intervention and involving students and families as the intervention is developed

(Cook et al., 2019). School mental health systems are complex, and utilizing these frameworks throughout development and initial implementation may lead to improved fidelity and effectiveness of evidence-based school-based mental health systems (SBMH).

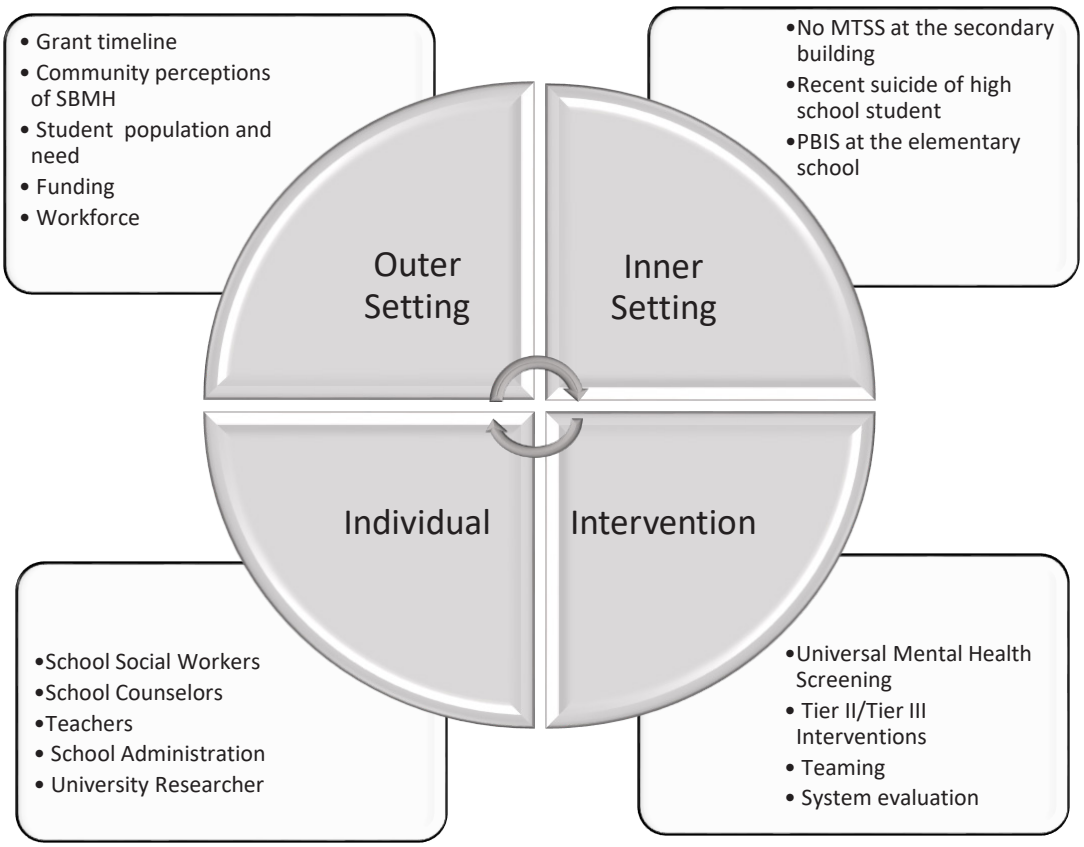
The purpose of this paper is to describe the development and implementation of a SBMH multi-tiered system of support in collaboration with a small rural school district in the Midwest. The process of development and implementation will be discussed within the frameworks (Cook et al., 2019; Lyon & Bruns, 2019) cited above (see Figure 1). This school district serves 568 students in kindergarten through grade 12. The district has one campus that houses an elementary school (K – 6th grade) and a secondary school (7th -12th grades). Within the student population, 95% of students are White, 51% are male, 14% of students have been identified as students with a disability, and approximately 38% of students are eligible for free or reduced-price lunch. The closest city is 75 miles from this small rural community.

The Outer Setting

To begin development of the school based mental health multi-tiered system of support (SBMH-MTSS), a mental health team was formed. The team included the school superintendent (who also served as the elementary principal), the high school principal, a partnering school social worker from the regional education agency, elementary and secondary school counselors, the secondary at-risk teacher, and the university researcher (this author). The partnering regional education agency special education director joined the initial planning meetings but was not a member of the regular school mental health team. The regional education agency is a cooperative agency that serves 39 public and private school districts. The agency hires special

Figure 1

Focus of District Systems Change Across Settings



education support professionals, including school psychologists, school social workers, and special education consultants, to provide special education services to schools. Each special education support professional is assigned to one or more school districts to conduct special education evaluations and support general and special education teachers in providing high quality, effective special education programming to students. The agency also supports rural districts with general education curriculum support and systems consultation. The partnering university is a regional comprehensive university 120 miles from the rural school district and has a large educator preparation program. This university graduates approximately 500 teachers, 15 school librarians, 10 school psychologists, 35 school counselors, 5 school social workers, 56 school principals, and 15 superintendents each year. The team discussed the addition of a district parent on the mental health team, but members were concerned about the sensitive nature of the conversations and confidentiality of the data collected and discussed. Several of the team members are parents of students in the school, which the team determined was sufficient parental representation.

An aspect of the outer setting (Lyon & Bruns, 2019) was the pressure of a grant and its timeline. The university researcher received a grant (anonymous private donor) to develop and implement a SBMH-MTSS in this small rural school district. The grant proposal included a challenging timeline with development occurring the summer before initial implementation beginning the upcoming Fall. In seeking a district collaborator for this project, the university researcher along with the regional education agency special education director chose this district due to their motivation to bring mental health systems to their district, their prior openness for learning, and their demonstrated skill leading MTSS implementation. Further details are described below, but it is important to note that the grant timeline pushed this work forward quickly.

The outer setting (Lyon & Bruns, 2019) was explored with the team during the initial planning meetings. Conversations began with the university researcher asking questions about community and family perceptions of the school's role in supporting student mental health. Were families going to accept this non-traditional role of the school? While most families are supportive of schools taking a leading role in addressing student mental health (Reardon et al., 2017; Searcey van Vulpen et al., 2018), there are some communities and families that may be hesitant. Understanding community culture, including family and community support for school-based mental health screening and intervention, informs the process of development and initial implementation (Nastasi et al., 2004). If the families or community were hesitant about this role, the team may have chosen to slow implementation in order to build buy-in within these stakeholder groups. During this conversation, the superintendent shared that the school community had experienced a student death by suicide the previous year. This death by suicide was shocking for many and was the reason the district was interested in partnering with the university and regional education agency to develop a SBMH-MTSS. Further, it was also the reason the school team wanted to focus their efforts on the secondary school (grades 7 through 12) in early implementation and expand to the elementary school once they felt comfortable with the system at the secondary school. Further detail on this decision is described in a subsequent section.

The student population is typical of small rural communities within this state. The students and families served by this school district are mostly White, middle-class families, but 38% of the district's students live in families of low socio-economic status. This is typical of rural areas. Robinson et al. (2017) found that, compared to children in urban areas, children in rural areas more often lack access to community resources and live in a family experiencing financial difficulties. Poverty is correlated with mental illness, and students who live in poverty are more likely to experience behavioral difficulties in school (Achilles et al., 2007; Hodgkinson et al., 2017, Knifton & Inglis, 2020). According to school personnel and based on universal mental health screening data, students in this school district struggle with depression, anxiety, anger, attention issues, and have experienced trauma from divorce and substance abuse. While many secondary students feel connected to at least one adult at school, there is a population of students who report having no relationships with the adults at school as evidenced by responses on student surveys administered by the school. As the team discussed the characteristics of their student population, it became clear that building relationships between secondary school staff and students would need to be a key part of their SBMH-MTSS.

While the superintendent and other school lead-

ers were interested in bringing mental health supports into their school building, they had no funds to support hiring experts to facilitate the development and implementation of a system or for hiring school-based mental health providers. Often rural school districts have access to fewer mental health providers compared to urban school districts (Demissie & Brener, 2017; Foster et al., 2005). Due to the lack of access to mental health providers and limited funds to hire necessary experts, the school district chose to partner with this university researcher and the regional education agency to solve both the funding and access issues. The university researcher provided expertise in systems consultation and problem solving and also provided dedicated grant funding. The regional education agency provided expertise in systems consultation and access to school social workers to provide intensive school-based mental health intervention.

School social workers rather than school psychologists were accessible to the school district due to a national school psychologist shortage (Walcott et al., 2018), which is even more pronounced in rural areas (Clopton & Knesting, 2006; Goforth et al., 2017). The National Association of School Psychologists recommends a school psychologist to student ratio of 1:500 for school psychologists to provide comprehensive services to students, families, and school staff (NASP, n.d.). Within the area that houses this school district, the school psychologist to student ratio is 1:3000, and the school social worker to student ratio is 1:1500. Given the shortage, the regional education agency could not spare the time of a school psychologist to provide mental health interventions to the students at this school, and rather, chose to provide a school social worker.

Since the first year of implementation of the SBMH-MTSS, the outer setting has changed very little. Families and community members are overwhelmingly supportive of the system. Less than 10 families opt out of the universal mental health screening (see The Intervention section below) at each administration, families typically provide consent for their student(s) to receive services through the school unless they are already involved with a community provider, and families have provided positive feedback to district personnel. The student population has not changed over the last four years, but the pandemic did change how school personnel delivered services during the time school was shut down, which was only the last few months of the 2019-2020 academic year. Students were face to face with masks during the 2020-2021 academic year, and the team and system were able to resume as usual. Finally, the school psychologist shortage continues, and school social workers are more readily available to provide intensive mental health services to students.

The Inner Setting

The inner setting is the immediate setting of implementation (Lyon & Bruns, 2019). During the initial planning meeting, the team collaboratively completed needs assessment activities (e.g., resource inventory, discussion of existing school data and programs) to help the researcher and regional education agency personnel understand existing systems and mental health supports available to students in both the elementary and secondary schools. Based on those activities, it was determined that, while the elementary school had MTSS in place for both academics and behavior (i.e., PBIS), the secondary building was struggling to implement MTSS for both academic and behavioral needs. The team decided to begin development and implementation in the secondary school only and scale up to the elementary school at a later time. It may have been easier to develop the system for the elementary school given the basic structures of MTSS were in place; however, the secondary building was struggling to meet the needs of their students and needed support. Further, the mental health of the adolescent population was a primary focus due to the recent suicide. The needs assessment also revealed that the secondary school had a peer mentoring program, a loosely developed Check In/Check Out program, and an at-risk teacher. The team identified these resources as existing Tier II interventions. The secondary building did not have PBIS in place and did not provide any universal behavioral or mental health supports to students. Special education was the only support available for students with intense behavioral and/or mental health needs.

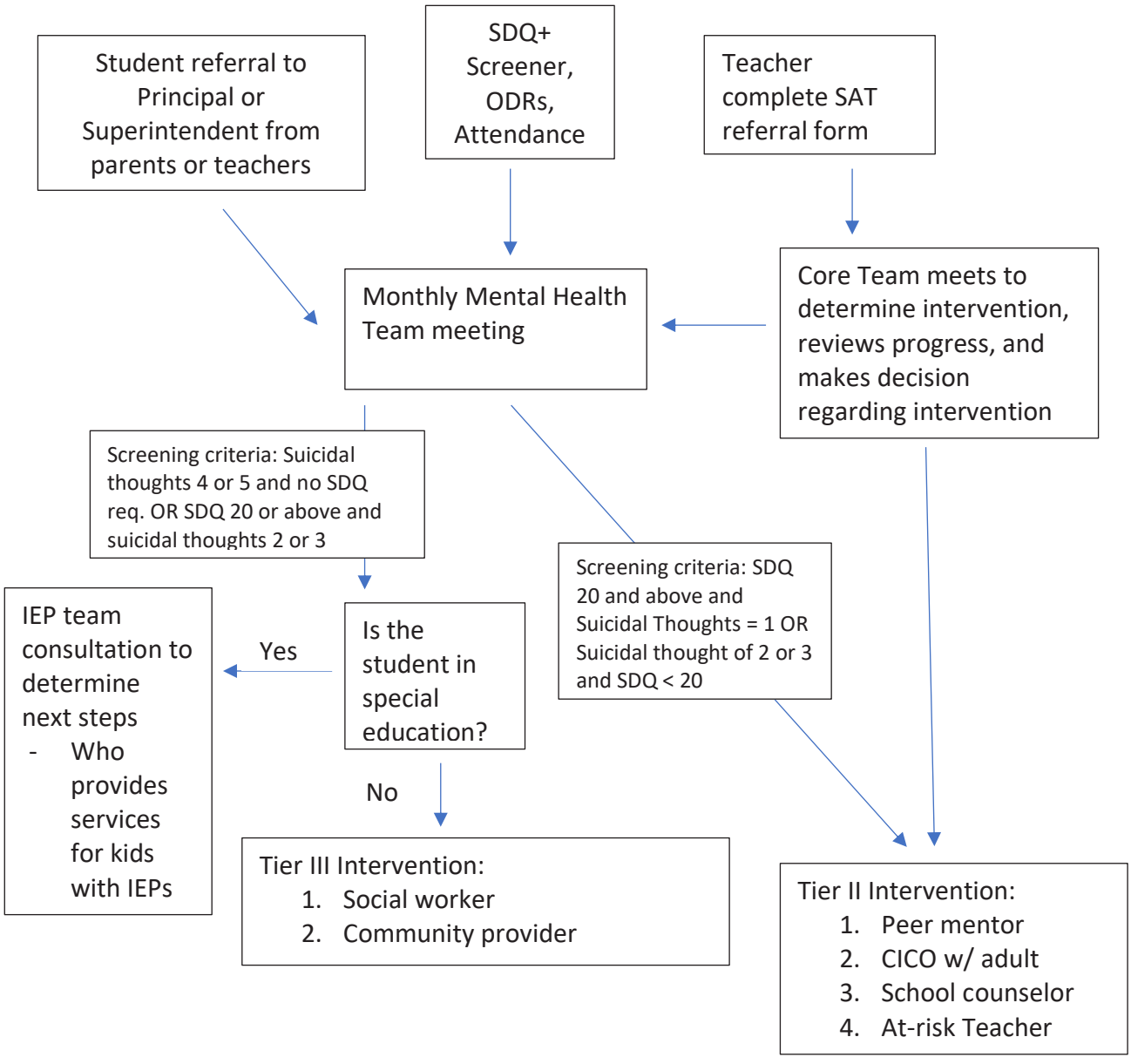
After the team decided to begin developing and implementing the SBMH-MTSS within the secondary school, they determined the first steps would be to (a) develop the foundational skills and structures for successful MTSS (i.e., teaming, universal data collection, a system for data-based decision making) and (b) focus on organizing Tier III interventions for students with the most intensive mental health needs. Once these were in place, the next phase would include de-

velopment of additional Tier II interventions (other than those already available) and introduce universal (Tier I) supports. Schools are often encouraged to begin MTSS implementation with Tier I or universal supports. When Tier I supports are in place, some mental and behavioral health difficulties can be remediated before requiring targeted (Tier II) or intensive (Tier III) services, and interventionists providing Tier II and Tier III supports are less likely to be overwhelmed (Freeman et al., 2016; Horner et al., 2010). However, the team chose to begin with Tier III interventions to address the serious mental health difficulties observed within their student body. These small tests of implementation and refinement can support quality implementation (Cook et al., 2019), and the team thought they would be more successful working in small increments.

Since initial implementation, the secondary building has initiated some universal supports for all students. Advisory period was introduced during the second year of implementation. This time was to be

Figure 2

Decision-making Flow Chart for the Secondary Building SBMH-MTSS



used for teaching social-emotional and employability skills, and it was a time for teachers and staff to build positive relationships with students. During the third year of implementation, the secondary building leaders developed a problem-solving team that would address both academic and behavioral difficulties and would connect with the mental health team when necessary. Figure 2 illustrates the decision-making process used by the team including how the problem-solving team intersects with the mental health team. After four years of implementation, universal supports continue to be difficult at the secondary building. There is no systemic curriculum or list of skills taught during the advisory period, and our team continues to discuss potential universal mental health curricula and feasibility of implementation. Members of the mental health team feel that the advisory period has supported student-teacher relationships and improved the climate of the school. School-wide data suggests that, for students who live in families of low socio-economic status, adult-student relationships improved from spring 2018 to spring 2019 (Iowa Department of Education, n.d.). Spring 2020 data was not collected due to the pandemic, and Spring 2021 data are not yet available. The school's problem-solving team continues to improve their system of supporting students academically and behaviorally. This team refers students to the mental health team when more intensive mental and behavioral supports are needed.

The elementary school has started implementation of the SBMH-MTSS. During year 3 of implementation, the SBMH-MTSS was scaled up to the elementary school. The intervention looks the same at both schools, with a few changes to meet the needs of the younger students (see below in the Intervention section). Because elementary staff were consistently implementing MTSS for academics and behavior, this scale up was fairly easy. The elementary counselor added a social and emotional learning curriculum to the universal level supports already in place as part of PBIS. Tier II interventions include Check in/Check out and small groups delivered by the school counselor and matched to the needs of the students (e.g., social skills, anxiety).

The Individual

Lyon and Bruns (2019) defined the individual level of influence as the personnel who implement the intervention and suggested this is typically the mental health provider. Implementation strategies that support the individual include training, sharing resources, improving buy-in, and developing practice teams (Cook et al., 2019). In the development and implementation of a SBMH-MTSS, the individual refers to the school social workers who are providing direct mental health services to students, but also the school counselors, administrators, and teachers. Fortunately, buy-in existed among the mental health team members as they all expressed agreement that this work was needed and were excited to be part of development and implementation of the system. The school counselor felt confident in her ability to provide targeted mental health interventions, but she was, however, a little concerned about the time needed to follow-up with students, call parents, and provide regular check-ins with students requiring Tier II supports. Fortunately, the superintendent and secondary school principal felt they could support the school counselor by making the mental health work a priority.

The mental health team required training in data-based decision making and analyzing mental health screening data. Rather than provide workshop style professional development, the university researcher created regular meeting agendas, led mental health team meetings, analyzed mental health screening data, and modeled data-based decision making. School personnel chose to get started with initial implementation within months of the first planning meetings, and the university researcher agreed that she could provide immersive training and coaching to the team as they began to implement the system.

The school social worker was trained in evidence-based practices (e.g., cognitive behavioral therapy, functional assessment and interventions) and felt comfortable using the screening data, existing school data (attendance, behavior referrals, academic data), and interviews with school staff to determine need for further assessment and subsequent interventions. She did, however, require training in progress monitoring mental health interventions. The university researcher provided training (two 1-hour meetings over Zoom) and resources to support the school social worker. In addition, she received training and support for progress monitoring through the regional education agency. For example, the agency met with a group of school social workers to discuss expectations for monthly progress monitoring

and types of progress monitoring, and to provide template spreadsheets to support regular data collection.

The secondary school staff needed training in several areas. First, the school staff was asked to administer the universal mental health screener (described below) and needed training on procedures. Procedures were written by the university researcher, vetted by the mental health team, and distributed to the secondary teachers prior to the first screening administration to allow time for questions. While the broader school staff were not involved in the mental health team's decision-making, it was important for them to learn the process and understand their role in referring students who they observed needing mental health supports. This step was missed during the first year of implementation but was remedied the following year. It is likely the team was so deeply focused on the new procedures of monthly meetings, universal mental health screening, and data-based decision-making that they overlooked formally informing the staff about the system and their role within the system.

Building capacity within the individual continues to be a focus even though the system has been in place for four years. There is staff turnover – the school counselor was new three years ago, the secondary school principal was new two years ago, a dean of students was hired and added to the team, an additional school social worker was added, and there has been teacher turnover as well. Existing members of the mental health team quickly train new members on the system and specific procedures for the meetings, but generally, new members learn through observation and modeling. New teachers are provided an overview of the system during new staff training and are provided universal mental health screening administration instructions prior to their first administration. Additionally, the team continues to improve their focus on the data and staying solution-focused during meetings. For example, in a recent meeting, the dean of students and a school social worker reminded other team members to focus on the data and on variables that can be controlled at school rather than lengthy discussions about home life and what occurred in the past. While this information is important to help the team understand some of the reasons for the student's difficulties, spending too much time on these unalterable variables limits time the team can spend solving problems and supporting students.

Cook et al. (2019) discuss the importance of "early adopters" and implementation "champions" (p. 24). The district superintendent was an early adopter and has modeled buy-in and excitement for this work throughout development and implementation. Her continued support and leadership have carried other members of the team and school staff through resistance and doubt. She is a champion of this work, and the dean of students has also achieved champion status through his taking over leadership of the mental health team; supporting staff members with data collection, organization, and analysis; and collaborating with team and staff members to improve practice. The university researcher was initially leading the monthly mental health team meetings, and now this role has transitioned to the dean of students. As the team plans for sustainability, this is an important step towards independence.

The Intervention

The fourth level of influence at which implementation strategies should be directed is the intervention. In the context of a systems-level change, the intervention is not just one evidence-based curriculum or intervention delivered to students. In this context, the intervention includes all the detailed elements of the SBMH-MTSS. The team began developing the structure of the SBMH-MTSS by selecting a universal mental health screening measure to identify students struggling with mental health difficulties. At this point, the secondary school was not recording student office referrals or any other behavior or mental health data. The only quantitative data available were attendance, credits earned, and grades. The team collaboratively chose the Strengths and Difficulties Questionnaire (SDQ; Goodman et al., 1998) with the addition of two items from the Center for Epidemiology Depression Scale-Revised (CEDS-R; Eaton et al., 2004). The SDQ was chosen because it assessed prosocial skills as well as emotional and behavior difficulties; however, because it did not specifically assess suicide risk, items assessing suicide risk from the CEDS-R were added. Universal screening data collection was planned three times during the school year (September, January, April), and after each screening, the team would meet to analyze the data and match intervention resources with student needs. Criteria for offering students Tier II and Tier III services

were determined based on the scoring recommendations and normative sample data of each of the measures.

The issue of parent consent for screening was discussed at length during initial planning meetings. Active, written consent from families is the most difficult to obtain, but the clearest method of confirming family consent for screening. Passive consent or opt-out consent refers to consent in which parents return the consent only if they do not want their student to participate. This type of consent can lead to miscommunication about family intent. The Protection of Pupil Rights Amendment (PPRA; 20 U.S.C. § 1232h; 34 CFR Part 98) requires written parent consent before public school personnel ask minor students about personal information, such as political views, religious views, and "mental and psychological problems of the student or the student's family" (20 U.S.C. § 1232h). There are different interpretations of this law. Some have interpreted this law to mean that a strong opt out consent process is enough to meet the intent of the law (Chartier et al., 2008; McGuire & Flynn, 2003), while others maintain a stricter interpretation of the law (Daggett, 2008). Others have used the Individuals with Disabilities Education Act (§ 34 C.F.R. 300.300[d][2][ii]) to support their interpretation that universal screening done as part of regular school activities does not require written parental consent (Chafouleas et al., 2010). However, it is not clear if mental health is or should be a typical domain of school assessment and part of regular school activities. The team discussed the difficulties of active, written consent and potential bias in the sample of students whose consent would be returned to school. Opt-out consent was chosen, but the superintendent wanted to check with the district lawyer and the state department of education before finalizing this decision. In a personal communication with a state Department of Education attorney, she acknowledged that federal guidance permits the use of passive consent. The team decided consent forms would be sent before each administration to allow families to make different decisions at each administration.

The team decided to use the school's 1:1 computing system to support screening administration and scoring. Items from the SDQ and CESD-R were put into Qualtrics, and students accessed the screener using a unique password. Qualtrics also allowed the university researcher to open and close the screener during specific administration opportunity windows. The screener was administered by teachers during a specified class period. On the day of the screening, the university researcher scored the data, analyzed it based on the determined criteria, and created suggestions about which students may benefit from further assessment, Tier II, or Tier III interventions. Due to the sensitive nature of the suicide risk questions, any student who indicated frequent and recent suicidal thoughts was located the day of the screening for an immediate conversation with the school counselor and a phone call to family. This immediate access to the data was important to school leaders, as they were concerned that a student may act on suicidal thoughts before the team could meet. The School Mental Health Screening Playbook (Center for School Mental Health, 2018) is an excellent resource for schools considering universal mental health screening. This playbook outlines the steps for successful universal mental health screening, and emphasizes the need to immediately follow-up with students who report high-risk suicidal thoughts and self-harm.

Universal mental health screening must be paired with a process of matching students with needed interventions (Romer et al., 2020). Since the team decided to begin with the development of Tier III interventions, the focus of the post-screening meetings was on allocating Tier III interventions to students with the most intense need. Tier III interventions were defined as direct, individual mental health interventions provided by a school social worker. The school social worker was an employee of the regional education agency, and she was scheduled to be in the school one day a week to meet with students and attend team meetings. Her typical role was supporting special education students and teachers, but this partnership and grant funding allowed the district to purchase one day of her time to provide mental health interventions to students in this district. Other SBMH models encourage partnerships with community mental health agencies (Eber et al., 2019); however, in this rural area there are few community providers with whom to partner. School-based mental health providers (e.g., school social workers or school psychologists) are more readily available to schools simply because they are already serving students in schools. Prioritizing the mental health roles of school-based professionals is an outer-setting issue (as described above) caused by a number of variables, in-

cluding funding and work-force shortages (NASP, n.d.).

The mental health team meets within five days of each screening administration to determine which students need Tier III interventions and which students would benefit from Tier II interventions. The team considers attendance, grades, and individual staff perspectives along with the screening data. Parents of students who will be offered Tier II or Tier III interventions are notified of available services and consent is requested. Students with disabilities who receive special education services can also receive mental health services through this system, but the individualized education plan (IEP) team must be consulted before any services are added to the IEP; therefore, the student can receive individual mental health intervention as part of their special education program or as part of their general education program. The team meets monthly to follow-up on Tier II and Tier III services and discuss any new referrals that may come from school staff or parents.

Finally, each summer the mental health team meets to review screening data from a systems perspective, review student progress monitoring data, and discuss implementation fidelity. While much of these data have yet to be summatively analyzed, a formative look at these data allows the team to make small changes to the system and identify areas in need of improvement. During this meeting, the team reviews the previous year's goals and sets goals for the upcoming academic year. This focus on formative research (Nastasi et al., 2004) supports continuous improvement of the system.

This intervention has been refined and scaled up over the years, but the foundational structures (i.e., data collection, teaming, tiered supports, and data-based decision making) have remained in place without alteration for the four years of implementation. The biggest change in the system was scaling up the SBMH-MTSS at the elementary school. The elementary students are screened three times a year using the Social, Academic, and Emotional Behavior Risk Screener (SAEBRS; Kilgus et al., 2013). There is not a separate mental health team for the elementary school. Instead, the existing team analyzes both the elementary and secondary data on the same day. Tier III interventions are defined in the same way for the elementary school, and Tier II interventions, as previously discussed, are provided by the school counselor. The criteria for Tier II and Tier III services are based on the normative data of the SAEBRS.

The last three summers the team has used The School Health Assessment and Performance Evaluation System (SHAPE) from the Center for School Mental Health to measure implementation fidelity to best practices for school mental health systems. The team collaboratively rates the school's practices on each of the SHAPE items. Three years of data collection suggests that the SBMH-MTSS has grown in its capacity to serve the district's students, and the mental health team and school staff continue to improve their implementation of best practices. The school's implementation fidelity success has regularly been in the area of universal mental health screening procedures. The district is consistently implementing best practices in this area. The school's implementation fidelity challenge continues to be sharing information on impact with a variety of stakeholders, including families. Last year, the team planned to connect with the parent-teacher organization to share details of the system and positive impacts the system is having on students, but all extra time was appropriated to COVID mitigation strategies. The team plans to connect with the parent group this year and plans to reach out to the school board to share similar information. Further, there are implementation integrity differences across the two school buildings. Notably, the elementary school implements Tier I with a high degree of fidelity, but the secondary building continues to struggle with this aspect of the system. This experience is not unique. While there is a lack of research on MTSS in high schools, some researchers have suggested that implementation of MTSS in bigger, more complex systems, like high schools, is more difficult (Bradshaw et al., 2015).

Conclusions and Looking Forward

Implementation science has been studied extensively, and while there are several frameworks, the necessary elements are similar and have been studied across a diversity of fields, including education and specifically SBMH (Cook et al., 2019; Horner et al., 2014; Lyon & Bruns, 2019; Weist et al., 2019). The SBMH-MTSS developed and implemented for this small rural school district in the Midwest provides an application and integration of two frameworks of implementation success (Cook et al., 2019; Lyon & Bruns, 2019). During the development and early im-

plementation of the SBMH-MTSS, the mental health team addressed the four levels in which implementation strategies should be directed (Lyon & Bruns, 2019) and utilized several of the strategies suggested by Cook et al. (2019). The team addressed the outer setting by forming partnerships with external collaborators, including external educational partners and university partners (Cook et al., 2019). These partnerships were and continue to be key to successful implementation of this district's SBMH-MTSS. As the district and, specifically, the mental health team begin to discuss sustainability absent strong involvement of the university and regional education agency, they will need to define long-term partnerships with both of these collaborators and potentially discuss gradual fading of involvement as capacity within the team is solidified over time. The team will also need to be flexible if the outer setting changes with time. More school-based or community-based mental health providers may come available, which may require a shift in how Tier III interventions are delivered. Telehealth availability may also impact delivery of Tier III services. Further, the student population and needs of students may change over time, which may direct the team to adjust the focus of universal mental health screening and/or the available universal, targeted, and intensive interventions.

The inner setting, which started out as one school building and transitioned to an entire school district, was addressed through starting small and scaling up the intervention. The elementary school staff had MTSS knowledge, skills, and structures already in place, but the secondary school did not, which prompted the team to direct full attention to developing the SBMH-MTSS to support secondary students. This decision made early implementation difficult, but because of strong buy-in and early adopters, many of the early challenges were overcome. The secondary school continues to struggle with implementation of universal supports for mental health, but some structures have been implemented. Advisory period is available when a social and emotional curriculum is ready to be taught. Adult-student relationships are improving among the most vulnerable students, and a problem-solving team is beginning to address difficulties across a range of student difficulties. Small successes are motivation for continued focus on improvement of the full range of services offered within a SBMH-MTSS.

Many individuals within this system-level intervention are champions, with the superintendent and dean of students emerging as leaders who model and guide mental health team members and school staff through challenges and resistance. The decision to jump into implementation prior to delivering related professional development was risky. Strong buy-in from team members and robust prior training (in-service and university level training) of team members likely mitigated the risks. Cook and colleagues (2019) suggested that training be conducted continuously rather than one-and-done workshop style and that learning be collaborative and dynamic. Training and support of mental health team members occurred at every team meeting through modeling, observation, and immediate feedback. The learning that occurred among team members was fast, and this method of professional development likely resulted in a swift pace of capacity building. It also, at times, resulted in resistance which was addressed through slowing down, empathetic listening, and addressing concerns and needs as quickly as possible. The university researcher allocated approximately four hours a week to this project, which resulted in accessibility for mental health team member questions and any needed training or support. As discussions of sustainability continue, developing revised partnerships with the university and other external collaborators may be needed to allow for access to training and support. It is likely there will be staff turnover in the coming years for which the mental health team needs to plan. If the school superintendent or dean or students or school counselor would choose to leave, how would that impact the mental health team? Could the system continue unphased without support? Is the system institutionalized enough to support a staff change of that magnitude? How can the team prepare for and mitigate any obstacles that may arise from staff turnover? These are necessary conversations that have yet to occur.

This comprehensive, systems-level intervention is currently being implemented with a high degree of fidelity across both school buildings as indicated by collaborative self-report scores on the SHAPE. Our universal mental health screening practices regularly meet the indicators of best practice, but our communication with external stakeholders continues to be a challenge. Further, the elementary school implements Tier I with a high level of fidelity, but the secondary

school is still working on this element. The pandemic added to these already existing challenges; however, our system was sturdy enough to survive the months away from school and regular practice. Thankfully, the team continued moving forward rather than having to re-learn practices already in place before the pandemic. The team must continue to improve communication with families, the school board, and other stakeholders. In addition, strengthening communication with students is a goal for the team. Last year, team members met with the student council to discuss the SBMH-MTSS and gather feedback about the system. Students provided positive feedback, but communication must continue so the team can be responsive to the thoughts and feedback of the student body.

While this district has experienced many successes in the development and implementation of their SBMH-MTSS, there is much work yet to be accomplished. This year the team's goals focus on improving Tier II progress monitoring, improving communication with stakeholders, and preparing for sustainability. Funding is another issue that will need to be discussed, and since this is a largely outer setting issue of which the school district has little control, a solution-focused and creative conversation will be needed. Even though there are challenges ahead, the mental health team and school staff continue to concentrate on successes and a focus on supporting students. The following quote from the superintendent illustrates this focus: "[The system is] very effective because we are able to connect with all of our parents and students and ensure that everyone is getting the support that they need."

Reforming school systems is difficult work that requires an organized approach to addressing both systemic and individual needs. Development of the SBMH-MTSS in one rural school district illustrates how the Lyon and Bruns (2019) and Cook et al. (2019) frameworks may be helpful in approaching school-based mental health systems development. Utilization of these frameworks should be replicated to ensure the frameworks are useful across a variety of districts and school buildings. Illustrating the development and implementation of SBMH-MTSS across a variety of settings may be helpful for school leaders as they take on this challenge.

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Article

Statewide Recognition System for Promoting Implementation Fidelity of Multi-Tiered System of Supports in Schools

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Many states have developed recognition systems in education for promoting the implementation of multi-tiered systems of supports (MTSS) or a multi-tiered Positive Behavioral Interventions and Supports (PBIS) framework in schools. This article describes Michigan's state-wide recognition system targeting behavior and reading outcomes and subsequent school performance for awarded and non-awarded. The results indicate that a high percentage of schools receiving a recognition award in Year 1 were also recognized in Year 2. Non-awarded schools with an awarded peer model school in the same district improved their performance the subsequent year relative to schools without a peer model. The discussion highlights what remains known and unknown about the use of state recognition systems for promoting evidence-based practices in schools.

Key words: MTSS, PBIS recognition, implementation fidelity

A multi-tiered system of supports (MTSS) is designed to meet the academic and behavioral needs of all students through the use of a continuum of instructional and behavioral supports and targeted, evidence-based interventions of increasing intensity matched to student need. MTSS features include: (a) universal screening, (b) data-based decision making and problem solving, (c) continuous progress monitoring, (d) a continuum of evidence-based practices, and (e) a focus on fidelity of implementation (McIntosh & Goodman, 2016). Historically, the tiered framework was known as Response to Intervention (RTI) when the focus was on academic outcomes and Positive Behavioral Interventions and Supports (PBIS) when the focus was on social-emotional and behavioral outcomes. MTSS represents an integration of RTI and PBIS. Central to MTSS, RTI, and PBIS is the school-wide systemic support for the use of data-based decision making to match students to evidence-based interventions and supports for the purposes of prevention and early intervention.

Research indicates that an integrated MTSS framework, when implemented with fidelity, holds promise for addressing several key outcomes, including increased student achievement and reduced disciplinary actions (Ervin et al., 2006; McIntosh et al., 2006). These findings build on research supporting the impact of RTI for improving reading achievement (VanDerHeyden et al., 2007) and the

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early detection and intervention of students at risk for reading problems (Al Otaiba & Torgeson, 2007). Significantly, the cost of implementing a tiered system of interventions to address reading concerns has been shown to yield substantial fiscal and social savings associated with fewer students requiring more intensive reading interventions (Morrison, Hawkins, & Collins, 2020). The research base for PBIS provides evidence of increased students' social-emotional competence behaviors and reduced disciplinary actions (Barrett et al., 2008; Bradshaw et al., 2010; Bradshaw et al., 2012; Cook et al., 2015), increased student attendance (Freeman et al., 2016; Pas & Bradshaw, 2012), increased student achievement (Pas & Bradshaw, 2012), increased positive student perceptions of school climate and culture (Bradshaw et al., 2009), and a reduction in high school dropout rates (Swain-Bradway et al., 2017).

Tiered frameworks are reliant upon adult implementers equipped to gather, monitor, and respond to data to promote positive outcomes for students (Kratochwill et al., 2007). A review of the barriers teachers encounter in implementing evidence-based interventions within an MTSS framework at three levels: Intervention level, implementer level, and the organizational level (Collier-Meek et al., 2018) highlights the challenges of MTSS implementation fidelity. To address these barriers, successful implementation of MTSS at the school level relies on school districts having the capacity in terms of leadership, organizational environment, and the means to develop competence for high-fidelity practices (Ward et al., 2017).

Implementation Fidelity

Fidelity of implementation is critically important for attaining the desired outcomes of any evidence-based program. Implementation fidelity is the degree to which a set of activities designed to put into practice a program of known dimensions is completed as intended (Fixsen et al., 2005). According to implementation science as advanced by the National Implementation Research Network (Fixsen et al., 2005; Fixsen et al., 2013), evidence-based programs require evidence-based implementation in order to achieve the desired impact.

There is ample evidence to suggest that achieving predetermined implementation thresholds for MTSS (PBIS and/or RTI) is critical for demonstrating positive outcomes (Benner et al., 2010; Freeman et al., 2016; Simonson et al., 2012; Sugai & Horner, 2008; VanDerHeyden et al., 2016). Noltemeyer and associates (2019) analyzed PBIS implementation fidelity at Tier 1 in 153 Ohio elementary, middle, and high schools in relation to the schools' discipline outcomes. Each school was categorized as a "higher" or "lower" implementing school using the SWPBIS Tiered Fidelity Inventory (TFI; Algozzine et al., 2014). The two groups were formed using the TFI's criterion for implementation fidelity of a score 70% of the possible points for Tier 1. Schools with higher implementation fidelity (n = 77) were found to have a significantly lower number of out-of-school suspensions per 100 students than schools with lower implementation fidelity (n = 76) when accounting for demographic covariates (i.e., percentage of economically disadvantaged students, percentage of ethnic and racial minority students, the chronic absenteeism rate, and the percentage of teachers rated accomplished in the teacher evaluation system). Systematic monitoring of MTSS implementation fidelity is essential given that far too often implementation fidelity lags and only the surface manifestations of an MTSS framework (e.g., sorting students into tiers based on universal screening data) are in place grafted on top of long-standing practices and routines (Hall, 2018; Kilpatrick, 2015; Morrison, Newman, & Erickson, 2020).

Recognition Systems

A promising systemic approach to bolstering MTSS implementation fidelity is the use of recognition systems. Recognition systems have their roots in PBIS by making the expected practices explicit in the recognition criteria and providing positive reinforcement in the form of attention contingent on successful implementation. Based on social cognitive theory (Bandura, 2001), social recognition has predictive value as the positive reactions of others become predictors of personal, positive consequences (Stajkovic & Luthans, 2003). As such, individuals are likely to engage in behaviors that receive social recognition. Social recognition can include informative content that is useful for the direct improvement of performance along with the opportunity to plan courses of action, anticipate likely consequences, and set performance goals (Stajkovic & Luthans, 2003). For schools in a recognition system, recognized schools may receive reinforcement and informative content to promote sustainability while unrecognized schools are provided informative content, model schools to emulate, and the opportunity for ac-

tion planning, although the value of recognition systems for schools has not been examined empirically. A statewide system for recognition has the additional benefits of reinforcing desirable practices in schools, providing a means of monitoring implementation at the state level, providing a system that is consistent across schools from the student level to the state level, and affirming the state's commitment to the MTSS framework to support future sustainability (Noltemeyer et al., 2017). In their comprehensive review of 12 state PBIS recognition systems, Noltemeyer and associates (2017) found that most of the recognition systems used a combination of implementation fidelity and student outcome data to evaluate school-level performance. The School-wide PBIS Tiered Fidelity Inventory (TFI, Algozzine et al., 2014) was the most commonly used measure for assessing PBIS implementation fidelity.

Although statewide recognition systems have proliferated over the past decade (Noltemeyer et al., 2017), these systems focus on PBIS implementation, rather than on an integrated MTSS framework that includes both academic and behavioral outcomes. Most states' Department of Education recognize "effective schools" for their academic achievement, however this designation is typically based on outcomes (i.e., state test scores) rather than on implementation data. The statewide recognition system described in this article was unique in that it focused on implementation data for an integrated MTSS model targeting behavior and reading interventions and supports, rather than just PBIS efforts. This recognition system provided awards at three levels (i.e., gold, silver, and bronze) annually for schools that met the specified criteria based on measures of adult implementation and student outcomes. The award criteria are presented in the Appendix.

Despite the adoption of statewide recognition systems, very little is known about recognition systems and subsequent school performance. For example, a primary risk of recognition systems is that schools, once awarded, are unable to sustain their recognition status, calling into question the legitimacy of the initial award. More research is needed that examines both behavioral and academic outcomes among a large, diverse sample of schools that were awarded and on schools that did not receive an award, but resided in a school district with an awarded peer model school. The purpose of this article is to explore the gaps in the research literature regarding statewide recognition systems and subsequent year award status by focusing on three evaluation questions:

1. Were the schools receiving a recognition award (i.e., gold, silver, or bronze) in Year 1 also recognized in Year 2 in the same area, reading or behavior?
2. Did non-awarded schools with an awarded peer model school in the district in Year 1 im prove their performance the subsequent year?
3. Was there any association between the percentage of awarded schools and the district's capacity for implementing MTSS?

Method

Statewide MTSS Initiative and Recognition System Context

Michigan's MiMTSS Technical Assistance Center, previously Michigan's Integrated Behavior and Learning Support Initiative (MIBLSI), is an intensive technical assistance program for the implementation of an integrated reading and behavior multi-tier system of support model that focuses on research-based practices in reading, behavior and implementation science to ensure sustainability over time and scalability across schools within local school districts (www.mimtsstac.org). A description of the professional learning sequence, consultation, and technical assistance targeting state-wide, regional, and district, and school systems is provided in Russell and Harms (2016).

MiMTSS Technical Assistance Center's state-level recognition system for MTSS implementation was designed for use beginning in the 2017-2018 school year (Year 1). The recognition system provided awards at three levels (i.e., gold, silver, and bronze) for schools that met the specified criteria based on measures of adult implementation and student outcomes (see Appendix). To earn recognition at a bronze level in behavior or reading, the school needed to meet or exceed the criterion score for implementation fidelity at Tier 1 in either behavior or reading, respectively. To earn recognition at a silver level in behavior or reading, the school needed to meet or exceed the criterion score for implementation fidelity at Tier 1 and meet at least one student outcome criteria for behavior (e.g., below the 75th percentile in office discipline rates) or reading (e.g., greater than 80% of students at or above benchmark on universal screener), respectively. To earn gold-level recognition, the school needed to meet or exceed the criterion score

for implementation fidelity on the Total Score (Tier 1, 2, & 3) and meet at least one student outcome criteria for behavior or reading, respectively. A description of the implementation fidelity measures and student outcomes measures featured in the MiMTSS recognition system is provided in the following section.

Table 1

Demographic Characteristics of the Schools

	City	Suburban	Rural	Town	Total
Elementary Schools					
Number of Schools	179	212	128	78	597
Mean Enrollment Count	387	427	333	374	388
Mean Percentage by Race/Ethnicity					
American Indian	0.3%	0.3%	1.7%	1.5%	0.8%
Asian or Pacific Islander	1.8%	2.9%	0.7%	0.7%	1.8%
Black or African	57.1%	15.8%	2.8%	2.7%	23.7%
Hispanic	17.3%	8.4%	8.0%	7.2%	10.9%
Multi-Racial	5.6%	6.9%	4.1%	4.5%	5.6%
White	17.9%	65.6%	82.7%	83.4%	57.2%
Mean Percentage by Subgroup					
English Learner	10.2%	6.2%	2.3%	1.8%	6.0%
Student with Disability	15.7%	13.0%	12.9%	13.5%	13.9%
Economic Disadvantage	80.9%	54.2%	57.7%	58.8%	63.6%
Secondary Schools					
Number of Schools	108	148	169	89	514
Mean Enrollment Count	447	717	333	395	482
Mean Percentage by Race/Ethnicity					
American Indian	0.3%	0.4%	2.1%	1.8%	1.2%
Asian or Pacific Islander	1.7%	2.4%	0.6%	0.7%	1.4%
Black or African	50.5%	18.6%	3.3%	4.0%	17.7%
Hispanic	18.1%	7.3%	7.5%	7.5%	9.7%
Multi-Racial	4.4%	5.2%	3.1%	3.7%	4.1%
White	25.0%	66.0%	83.4%	82.4%	65.9%
Mean Percentage by Subgroup					
English Learner	9.5%	3.5%	1.3%	1.1%	3.6%
Student with Disability	18.6%	13.5%	11.1%	9.9%	13.2%
Economic Disadvantage	74.3%	52.9%	55.3%	54.8%	58.4%

Sample

Elementary schools

The sample of elementary schools included 597 public and community schools that served students in the grade level configurations of K-6, K-8, 5-6, 3-8, or 4-7 and had fidelity and/or student outcome data entered into Michigan's MTSS data system for the 2017-18 school year. Schools that served students in grades K-12, K-9, and 3-12 were not included in the sample of elementary schools. Key demographics for the elementary schools in the sample are presented in Table 1.

Among this sample, 214 schools received a recognition award for the implementation of PBIS in Year 1. There were 122 schools that were not recognized but resided in the same district with an elementary school recognized in Year 1 (data from 2017-18). This category of schools was named "with peer model" schools. There were 261 schools that were not recognized for their high-fidelity implementation of a behavioral system of support and not in a school district with a recognized elementary school.

Among this same sample, 25 schools received a recognition award for the implementation of MTSS in the area of reading in Year 1. The sample included 29 schools that were not recognized but resided in the same district with an awarded peer model. There were 543 schools that did not meet the criteria for recognition for high-fidelity implementation of a reading system of supports that did not reside in a school district with a recognized elementary school. Fewer schools met the criteria for recognition in reading because the implementation measure, the Reading-Tiered Fidelity Inventory, does not have the widespread use that the School-wide PBIS

Table 2

Number of Schools Receiving and Not Receiving a Recognition Award in Year 1

	Behavior Recognition	Reading Recognition
Elementary Schools		
Awarded Schools	214	25
Gold	14	1
Silver	48	6
Bronze	152	18
Not Awarded/With Peer Model in District	122	29
Not Awarded/No Peer Model	261	543
Secondary Schools		
Awarded Schools	91	*
Gold	7	*
Silver	29	*
Bronze	55	*
Not Awarded/With Peer Model in District	61	*
Not Awarded/No Peer Model	359	*

Note: Less than 10 secondary schools met the criteria for recognition in reading in Year 1, the first year in which a reading recognition award was offered at the secondary school level.

Tiered Fidelity Inventory has within Michigan. Table 2 provides a summary of the award status groupings. District Capacity Assessment data were reported for 65 of the 181 school districts in the elementary school sample.

Secondary schools

The sample of secondary schools included 514 public and community schools that served students in the grade level configurations of 9-12, 7-8, 4-12, and 4-8. The secondary schools sample included vocational schools and alternative schools supporting students with significant behavioral needs. Key demographics for the secondary schools in the sample are presented in Table 1.

Among the secondary school sample, 91 schools received a recognition award for the implementation of PBIS in Year 1. There were 61 schools that were not recognized but resided in the same district with a secondary school recognized in Year 1. There were 359 schools not recognized that were not in a school district with a recognized secondary school (see Table 2).

In this first year of offering a recognition award for reading outcomes, only 6 secondary schools met the criteria for recognition in Year 1. As in the elementary school sample, fewer schools met the criteria for recognition in reading because the Reading-Tiered Fidelity Inventory does not yet have widespread use within Michigan. Given this small sample size, an analysis of the influence of recognition for reading outcomes was not completed at the secondary school level. District Capacity Assessment data were reported for 61 of the 167 school districts in the secondary school sample.

Implementation Fidelity Measures

Two building-level implementation fidelity measures were used to assess systems support for MTSS in behavior and in reading, respectively. The implementation fidelity measures were completed as self-assessments by school leadership teams. Initially, an external consultant supported the facilitation of the fidelity measures, until the school or district's own staff could complete the training process (i.e., observing the standard administration followed by debriefing, training, and the opportunity to administer the tool with an expert observer providing feedback) to demonstrate their ability to administer the fidelity measures following the standard protocol.

School-wide PBIS Tiered Fidelity Inventory (SWPBIS TFI; Algozzine et al., 2014)

The SWPBIS TFI was designed to measure the extent to which Positive Behavioral Interventions and Supports (PBIS) core features are in place within a school at each tier: Tier I (Universal PBIS: Whole school universal prevention), Tier II (Targeted PBIS: Secondary, small group prevention), and Tier III (Intensive PBIS: Tertiary, individual support prevention). Research provides support for the reliability of the SWPBIS TFI across the three tiers with regard to test-retest reliability (.98; .99; .99) and inter-rater agreement (.95; .96; .89) (McIntosh et al., 2017). Internal consistency was 0.96 for the overall measure and 0.87 for the Tier 1 scale. Correlations between the SWPBIS TFI and other PBIS implementation measures were found to be significant with validity coefficients of .95, .93, and .91 (McIntosh et al., 2017). The SWPBIS TFI was also judged to be technically adequate with regard to usability (12 of 14 items on the usability survey had a percentage of agreement at or above 80% agreement) (McIntosh et al., 2017).

The SWPBIS TFI provides a total score, 3 scale scores (Tier I, II, III), and 10 subscale scores (Tier I Teams, Tier I Implementation, Tier I Evaluation, Tier II Teams, Tier II Interventions, Tier II Evaluation, Tier III Teams, Tier III Resources, Tier III Support Plan, Tier III Evaluation). Michigan's MTSS Recognition System used only the Tier I scale score from the SWPBIS TFI as the initiative's professional learning scope and sequence prioritizes an effective Tier I as a foundation for a strong MTSS infrastructure. The criteria for implementation fidelity established by the developers of the SWPBIS TFI of 70% of the possible points was adopted for Michigan's MTSS Recognition System.

Reading-Tiered Fidelity Inventory (R-TFI; St. Martin et al., 2015; St. Martin et al., 2015)

The R-TFI was designed to parallel the structure of the SWPBIS TFI with a focus on the presence or absence of evidence-based practices in reading instruction, including the use of a continuum of intervention support to meet the needs of struggling readers, and a data-driven evaluation process for ensuring positive student outcomes. An elementary (53 items) and secondary-level (44 items) edition are available. Each measure provides a total score, three scale scores (Tier

1, 2, 3) and 12 subscale scores (Tier 1 Teams, Tier 1 Implementation, Tier 1 Resources, Tier 1 Evaluation, Tier 2 Teams, Tier 2 Intervention Implementation, Tier 2 Resources, Tier 2 Evaluation, Tier 3 Teams, Tier 3 Intervention Implementation, Tier 3 Resources, Tier 3 Evaluation). The R-TFI demonstrates internal consistency reliability with Cronbach's alphas in the excellent to good range for the Total Score ($\alpha = 0.94$), Tier 1 ($\alpha = 0.92$), Tier 2 ($\alpha = 0.89$), and Tier 3 ($\alpha = 0.88$). In terms of construct validity, all of the items loaded highly onto their scales. For the overall fit, the analysis yielded a root mean squared error of approximately .035 and a fit index of 0.84, indicating adequate construct validity (St. Martin et al., 2015).

Michigan's MTSS Recognition System used only the Tier I scale score from the R-TFI, reflecting the initiative's priority on an effective Tier I as a foundation for a strong MTSS infrastructure. The criteria for implementation fidelity established by the developers of the R-TFI of 80% of the possible points was adopted for Michigan's MTSS Recognition System.

Capacity Measure

A measure of district capacity was used to describe the association between the district's efforts to support MTSS implementation and the percentage of district schools recognized. The District Capacity Assessment was completed as a self-assessment by the district implementation team with the facilitation of an external consultant from the MiMTSS Technical Assistance Center. Given that this was a district-level measure, the DCA scores were applied to all of the schools within that district.

District Capacity Assessment (DCA; Ward et al., 2015)

The development of the DCA was based on the work of the National Implementation Research Network in recognition of the importance of district support for the full and effective use of innovations in the schools. The tool was designed to assess a district's capacity for implementing an effective innovation according to the implementation drivers of leadership, organizational environment, and competency. The Leadership scale includes two subscales: Leadership and Planning. The Competency scale includes four subscales: Performance Assessment, Selection, Training, and Coaching. Three subscales compose the Organization scale: Decision Support Data System, Facilitative Administration, and Systems Intervention. The DCA is completed by a district implementation team as a self-assessment and product review with the facilitation of an external consultant twice a year, in October/November to set action agendas, and again in February/March, for monitoring and planning. The 27 items are scored along a three-point scale as fully in place (a score of 2), partially in place (a score of 1), or not in place (a score of 0). The DCA Total Score has strong internal consistency with a Cronbach's alpha coefficient of .91 (Russell et al., 2016). The three subscales also have adequate internal consistency: Leadership ($\alpha = .79$), Staff Competency ($\alpha = .79$), and Organizational Systems ($\alpha = .81$). Data from the October/November administration of the DCA was used in this analysis.

Student Outcome Measures

Student-level outcomes directly impacted by the high-fidelity implementation of MTSS were central to Michigan's recognition system. A description of each of these measures is provided in this section.

Discipline Referrals

A discipline referral is "an event in which (a) a student engages in a behavior that violated a rule/social norm in the school, (b) a problem behavior was observed by a member of the school staff, and (c) the event resulted in a consequence" (Sugai et al., 2000, p. 96). Research supports the use of discipline referrals to identify students in need of more intensive positive behavioral interventions and supports and as an outcome to evaluate school-wide MTSS implementation (e.g., Irvin et al., 2004; McIntosh et al., 2010; Predy et al., 2014; Sugai et al., 2000). The PBISapps organization reports the annual national median and percentiles for discipline referrals at the school level by grade range for schools that have entered discipline referral data into the School-wide Information System (accessible via pbisapps.org). Annual rates of discipline referrals are calculated as the number of major discipline referrals per 100 students per day.

Student Risk Screening Scale- Internalizing and Externalizing (SRSS-IE; Drummond, 1994; Lane & Menzies, 2009)

The SRSS-IE is a behavioral screening tool in which the classroom teacher provides a rating for each student on twelve behavioral descriptors. The SRSS-

IE is formatted as a matrix. The first column of the matrix is used to list students' names. Seven externalizing behavioral descriptors appear across the top of the rating form: (a) steal; (b) lie, cheat, sneak; (c) behavior problems; (d) peer rejection; (e) low academic achievement, (f) negative attitude; and (g) aggressive behavior. Five internalizing behavioral descriptors are listed next: (a) emotionally flat; (b) shy; withdrawn; (c) sad; depressed; (d) anxious; and (e) lonely. The secondary school version includes peer rejection on the Internalizing Scale which is summed from ratings on the Externalizing Scale. Teacher ratings are gathered on three measurement occasions per school year (Fall, Winter, and Spring). On these occasions, the classroom teacher rates each student on all 12 items based on the behaviors they have observed. Every student is assigned a rating, ranging from 0= "Never" to 3= "Frequently," for each of the 12 descriptors. The ratings are summed for each student to yield an externalizing total score ranging from 0-21 and an internalizing total score ranging from 0-15 (elementary) or 0-18 (secondary). Research supports the use of the SRSS as a reliable and valid tool for universal screening at the elementary school level (Menzies & Lane, 2012; Oakes et al., 2010), middle school level (Lane et al., 2007), and high school level (Lane et al., 2008).

Acadience Reading K-6

Acadience Reading K-6 (formerly known as DIBELS Next®) is a set of curriculum-based measures for reading that serve as indicators of critical skills for early literacy. Research supports the technical adequacy of the Acadience Reading K-6 measures for the purposes of universal screening, progress monitoring, and evaluating intervention effectiveness (Good et al., 2004).

School-wide Overall Engagement Indicator

An Early Warning System (EWS) was used as a universal screener for students in middle and high school who are at risk for school dropout based on the system developed by the American Institutes for Research and the Massachusetts Department of Elementary and Secondary Education (2013a, 2013b). Student records are flagged based on the following indicators: Attendance (days missed), behavior (suspension/expulsion count), course performance (failed courses, GPA), and incoming risk (e.g., previous Overall Engagement Indicator from the previous school year's last term or an identified universal screener). The flagged indicators are summed to yield an Overall Engagement Indicator. The process of reviewing student records and applying the EWS is conducted in the first 20 days of school and at the end of each term. Research supports the technical adequacy of the EWS for the purposes of universal screening for behavior and academic concerns (American Institutes for Research and the Massachusetts Department of Elementary and Secondary Education, 2013a, 2013b; Cook et al., 2011; Johnson & Semmelroth, 2010).

Study Procedures

Michigan's MTSS Recognition System was developed by the MiMTSS Technical Assistance Center in keeping with recommended practices for reinforcing PBIS implementation efforts at a systems level (Noltemeyer et al., 2017). Schools were awarded based on the criteria established according to the implementation and student outcome measures and assessment schedule required of schools working in partnership with the MiMTSS Technical Assistance Center (see Appendix). A letter from the Center's Director to each district's superintendent served to announce the school awards and a list of the awarded schools was posted on the Center's website and displayed at the statewide annual conference. Many districts announced the award on their own district and school webpages.

The study was conducted following the second year of Michigan's MTSS Recognition System. The second and third authors constitute the Research and Evaluation Team of the MiMTSS Technical Assistance Center and had a leading role in designing and installing the recognition system. The first author serves as a consultant providing external evaluation support to the Center. Data gathered from Year 1 (2017-2018) and Year 2 (2018-2019) were compared to answer the evaluation questions. Peer models were selected for the purposes of the evaluative study from the data set based on being an awarded school in the same district as a non-awarded school.

Data Analysis

Descriptive statistics were used to cross-tabulate each school's award status in two consecutive school years, 2017-2018 and 2018-2019. Schools were categorized as (a) awarded, (b) not awarded, but having

a peer model, or (c) not awarded with no peer model in Year 1. Schools were categorized as awarded or not awarded in Year 2. Cross-tabulations were run separately for the behavior award and the reading award for the elementary schools and for the secondary schools. Chi-square tests were conducted to determine whether the difference between the observed frequencies and the expected frequencies were statistically significant. To account for the influence of the school district, a correlation was calculated to describe the association between the DCA (Winter, Year 2) and the percentage of awarded schools within the district in Year 2.

Results

The results describe the award status outcomes in Year 2 for schools in each of the three categories in Year 1: (a) awarded, (b) not awarded, but having a peer model, or (c) not awarded with no peer model. The results are simply descriptive and not intended to imply causation. Next the influence of each districts' capacity to support MTSS implementation was accounted for by determining the relationship between the district's DCA score in Year 2 and the percentage of schools awarded that same year.

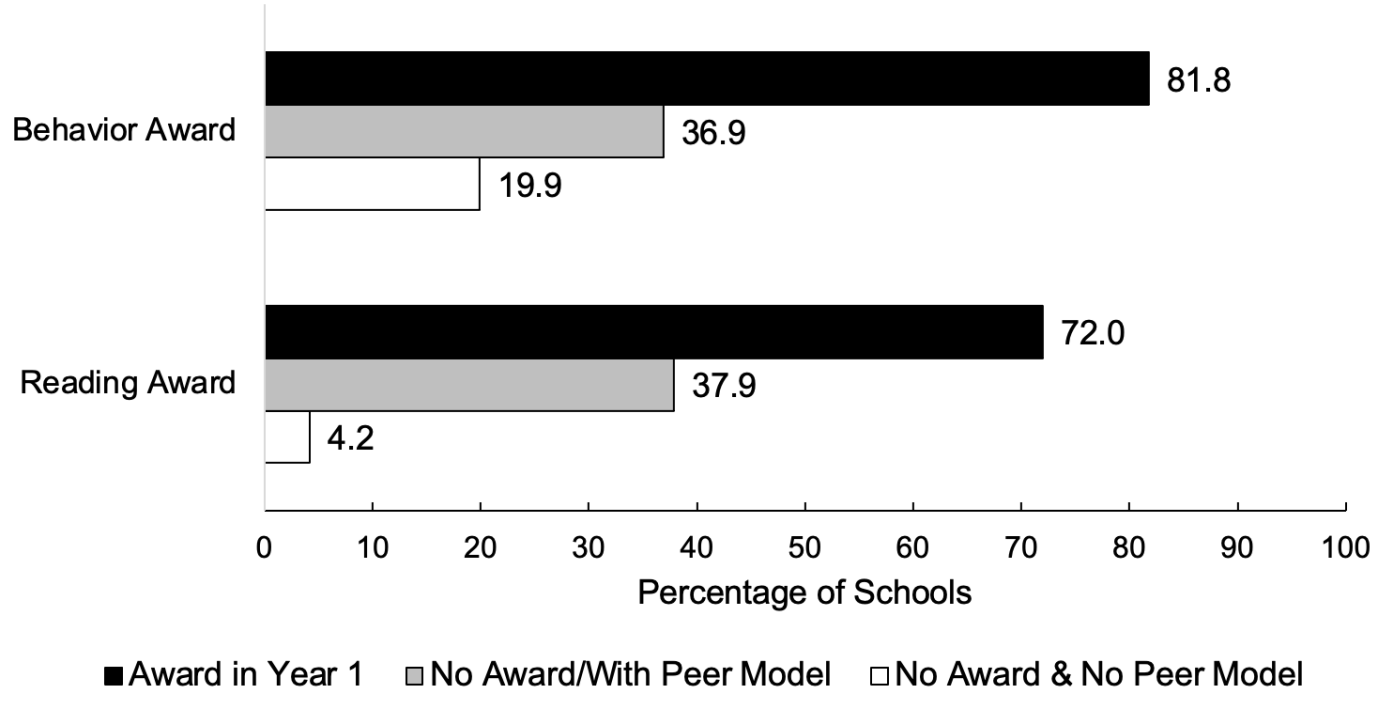
Sustaining Award Status in Year 2

At both the elementary school and the secondary school levels, a high percentage of schools receiving a recognition award in Year 1 sustained their implementation so as to be recognized in Year 2 in the same area, reading or behavior. Among the 214 elementary schools receiving a recognition award in behavior in Year 1, 175 (81.8%) of the schools received the behavior award again in Year 2. An additional 97 elementary schools that did not meet the criteria for recognition for their behavior support implementation and outcomes in Year 1 did receive the behavior award in Year 2 (see Figure 1). Among the 25 elementary schools receiving a recognition award in reading in Year 1, 18 (72.0%) of the schools also earned recognition in reading in Year 2. An additional 34 schools not awarded for reading MTSS in Year 1 did receive the reading award in Year 2.

At the secondary school level, 69 (75.8%) of

Figure 1

Percentage of Elementary Schools Receiving a Behavior or Reading Award in Year 2



the 91 schools receiving a recognition award for their behavioral implementation and outcomes in Year 1 earned the behavior award again in Year 2 (see Figure 2). Among the six secondary schools receiving a recognition award in reading in Year 1, five (83.0%) of the schools also earned recognition in reading in Year 2. One additional non-awarded school subsequently received the reading award in Year 2.

Award Status for Schools with an In-District Peer Model

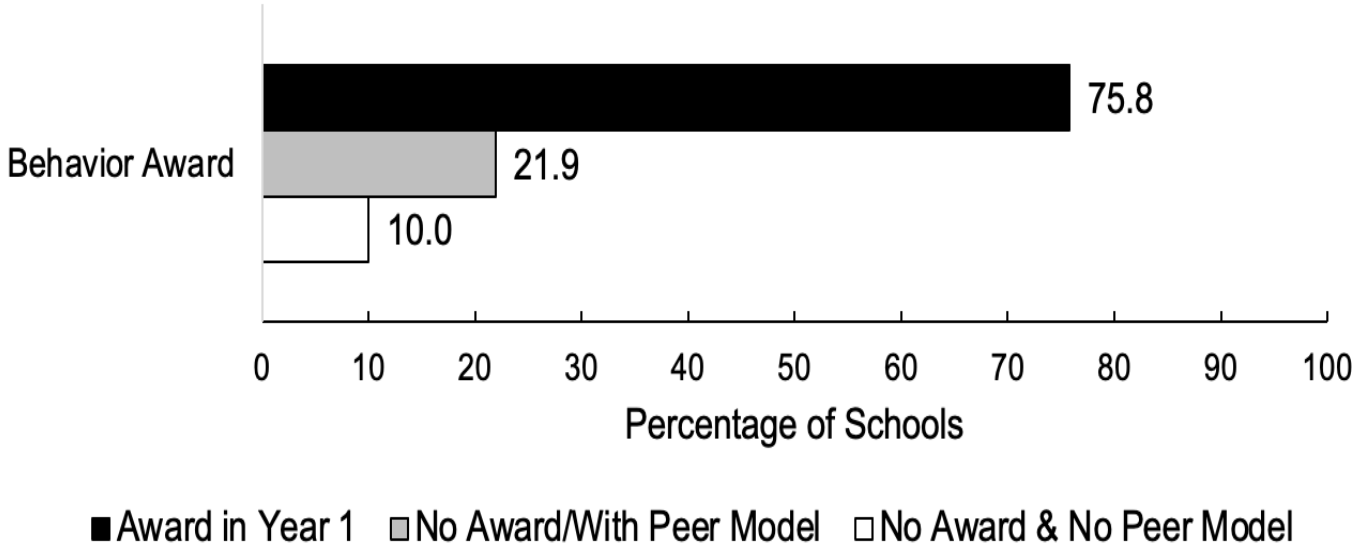
Non-awarded schools with an awarded peer model improved their performance the subsequent year. Among the 122 non-awarded elementary schools residing in the same district as a peer model receiving a behavior recognition award in Year 1, 45 (36.9%) of the non-awarded schools earned the behavior award in Year 2 (see Figure 1). In contrast, only 52 (19.9%) of the 261 non-awarded elementary schools with no peer model in Year 1 received the behavior award in Year 2. The difference between the observed frequencies and the expected frequencies was statistically significant, X2 (2, N = 597) = 186.03, p = 000.

Among the 29 elementary schools not awarded but residing in the same district as a peer model receiving a recognition award in reading in Year 1, 11 (37.9%) of the schools earned recognition in reading in Year 2. By way of comparison, only 23 (4.2%) of the 543 non-awarded elementary schools with no peer model in Year 1 earned recognition for their reading support implementation and outcomes in Year 2. The difference between the observed and expected frequencies was statistically significant, X2 (2, N = 597) = 170.75, p = 000.

Among the secondary schools not awarded but residing in the same district as a secondary school receiving a recognition award in behavior in Year 1, 14 (21.9%) of the 64 non-awarded schools earned the behavior award in Year 2 (see Figure 2). In contrast, only 36 (10.0%) of the 359 non-awarded secondary schools with no peer model in Year 1 received the behavior award in Year 2. The difference between the observed and expected frequencies was statistically significant, X2 (2, N = 514) = 176.72, p = 000.

Figure 2

Percentage of Secondary Schools Receiving a Behavior Award in Year 2



Association between District Capacity and Award Status

To account for the influence of the school district, the association between the percentage of awarded schools within each district in Year 2 and the DCA score from Winter of Year 2 was examined. Among the 62 school districts with DCA scores in the elementary school sample, the number of elementary schools ranged from 1-10 schools. A positive, moderate relationship was found between the DCA score and the percentage of awarded elementary schools within the district for the behavior award, $r = 0.627$ ($p = .000$) and for the reading award, $r = 0.520$ ($p = .000$). These correlation coefficients suggest districts with a higher DCA score had a higher percentage of elementary schools awarded.

Among the 61 school districts with DCA scores in the secondary school sample, the number of secondary schools ranged from 1-8 schools. A positive, weak relationship was found between the DCA score and the percentage of awarded secondary schools within the district for the behavior award, $r = 0.204$ ($p = .115$) and for the reading award, $r = 0.285$ ($p = .026$). These correlation coefficients suggest districts with a higher DCA score had a higher percentage of secondary schools awarded.

Discussion

The purpose of this article is to describe a statewide recognition system for MTSS implementation and examine how awarded schools and non-awarded schools performed in the year subsequent to the award. The results indicate that a high percentage of schools receiving a recognition award in Year 1 sustained their implementation so as to be recognized in Year 2. This finding was consistent for both the behavior and reading awards at the elementary school level and for the behavior award at the secondary school level. Furthermore, at both the elementary and the secondary school levels, non-awarded schools with an awarded peer model improved their performance the subsequent year relative to schools without an awarded peer model.

Although this study provides some initial findings regarding the award status of schools over a two-year period, the most pressing question remains unanswered: Does a statewide recognition system provide a positive consequence that has a reinforcing value to educators in schools? Specific to this study, did the recognition of explicit practices and outcomes increase the likelihood that these high-fidelity practices would be sustained over time relative to the implementation practices of educators in schools that were not awarded? This question is important as it addresses a primary concern with recognition systems that once recognized, schools are unable to sustain their award status suggesting that the award was insufficiently reinforcing to the educators in the awarded school or that the award criteria were poorly defined and/or applied in a manner that was not reliable, valid, useful, and fair.

Evidence that recognition systems for MTSS implementation in behavior and reading may have a reinforcing value for schools not awarded but in the same school district with an awarded school serving the same grade level band is an important pursuit for future research as it would affirm that recognition systems do indeed provide peer models for schools to emulate. The results of this study, however, do not provide a causal explanation for a hypothesized effect of peer recognition as other factors may have contributed to the performance of the schools. For example, the improved performance for schools with a peer model likely also represents the school district's investment in building the capacity for MTSS implementation and promoting implementation achievements. There was a positive, moderate relationship of statistical significance between a district's capacity to implement MTSS and the percentage of schools awarded for behavior and reading at the elementary school level and a positive, weak relationship of statistical significance for behavior and reading at the secondary school level.

The results of this study are consistent with previous survey research on educators' perceptions on recognition for their job performance that suggests that educators in elementary and middle school settings perceive recognition to be desirable and useful for encouraging work performance (Lindsay et al., 2002). In the words of one of the survey respondents, "When you know your hard work is appreciated and recognized, you want to continue to improve your work performance. I think that the opposite happens when your work is not recognized" (Lindsay et al., 2002, p. 198). Recognition systems also provide performance feedback in terms of practices to maintain and practices to be targeted for improvement specific to a school. The

provision of performance feedback to teachers from a consultant who is external to a school has been shown to be effective in supporting teachers' implementation of academic and behavioral interventions and supports within an MTSS framework (e.g., Noell et al., 1997, 2000, 2005; Sanetti & Collier-Meek, 2015).

The results of this study are also consistent with what is known about the effectiveness of recognition systems in organizations extending beyond education, for which there is ample evidence that providing consequences for employee performance is one of the most powerful ways to enhance that performance (Nelson, 2016; Podsakoff et al., 1982). The organizational and business management research literature indicates that most employees like to be recognized (Brun & Dugas, 2008) and that formal recognition awards based on a planned and agreed-on criteria and incentives are particularly effective for reinforcing a pattern of defined behaviors (Nelson, 2016). Recognition systems that promote task clarification in the form of explicitly stated expectations for practice and specified criteria for reinforcement provide an antecedent as well as a consequence (Crowell et al., 1988).

The Known Unknowns: Limitations and Future Research

Although the results of this study indicate support for the notion that public recognition can reinforce implementation fidelity over time, there remain many unknowns in how state recognition systems operate to promote implementation. The limitations of this study warrant discussion. First, the design of this descriptive research study was not intended to suggest a causal effect of recognition. As such, the results should be interpreted with caution as schools' subsequent performance are likely affected by many factors in addition to the statewide recognition system. For example, it may simply be that higher-performing schools tend to remain high performing in subsequent years, given that training, coaching and consultation have supported the competent use of high-fidelity practices. The results of this study suggest a moderate, positive relationship between the district's capacity to implement MTSS and the percentage of elementary schools awarded and a positive, weak relationship between district capacity and the percentage of secondary schools awarded. Many districts have goals to improve MTSS implementation across their entire district over time. Thus, it remains unknown whether recognition results, as seen in this study, merely reflect the natural progress of district-wide efforts to scale and improve MTSS implementation. In this study, the influence of the district's capacity to implement MTSS was found to be moderate at the elementary school level and weak at the secondary school level. Future research should examine the relative benefits of vicarious reinforcement and district capacity building on increases in MTSS fidelity of implementation.

A second limitation was that the study did not measure the degree to which educators and administrators were aware of the recognition status of other schools in their district, although district leaders were encouraged to publicize the award and anecdotal information suggests that most leaders did acknowledged the award through existing district communication channels. A primary premise of recognition systems is that schools will seek to improve their MTSS implementation fidelity after having another school in their district receive public recognition. It is unknown from this study and in use in the field the extent to which educators and administrators are aware of the award status of the peer models. A qualitative study of teachers' perceptions of state-recognition systems is needed to understand the perceived value of recognition awards to promote the implementation of MTSS.

Implications for Practice in School Psychology

The results of this study, although preliminary, present important implications for promoting the implementation and sustainability of MTSS at the state, regional, district, and school levels. Explicitly stated expectations for practice and specified criteria for reinforcement are intended to provide schools with a blueprint for advancing their MTSS implementation efforts. At the state (or district) level, public recognition of schools' achievements aims to empower educational leaders to invest in the capacity needed systemically to support MTSS implementation fidelity to improve academic, social-emotional, and behavioral outcomes.

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Appendix

School Criteria for Recognition

Level of Recognition	Reading	Behavior
Bronze: Tier 1 Fidelity	R-TFI Tier 1 Score $\geq$ 80%	SWPBIS Tier 1 Score $\geq$ 70%
Silver: Tier 1 Fidelity + Outcomes	R-TFI Tier 1 Score $\geq$ 80% and at least one of the following criteria: 1. $\geq$ 80% of students at or above benchmark per spring school-wide Acadience Reading K-6 composite 2. $\geq$ 10% annual increase in % of students at or above benchmark per spring school-wide Acadience Reading K-6 composite 3. $\geq$ 80% of students zero flags per end of year school-wide Overall Engagement Indicator 4. $\geq$ 10% annual increase in % of students with zero flags per end of the year school-wide Overall Engagement Indicator	SWPBIS Tier 1 Score $\geq$ 70% and at least one of the following criteria: 1. $\leq$ National 75th Percentile for major ODR/100/day rate 2. $\geq$ 80% SRSS Low Risk in spring on both the internalizing and externalizing scales 3. $\geq$ 10% annual increase in spring SRSS Low Risk on both the internalizing and externalizing scales
Gold: Total Score Fidelity + Outcomes	R-TFI Total Score $\geq$ 80% and at least one of the following criteria: 1. $\geq$ 80% of students at or above benchmark per spring school-wide Acadience Reading K-6 composite 2. $\geq$ 10% annual increase in % of students at or above benchmark per spring school-wide Acadience Reading K-6 composite 3. $\geq$ 80% of students zero flags per end of year school-wide Overall Engagement Indicator 4. $\geq$ 10% annual increase in % of students with zero flags per end of the year school-wide Overall Engagement Indicator	SWPBIS Total Score $\geq$ 70% and at least one of the following criteria: 4. $\leq$ National Median for major ODR/100/day rate 5. $\geq$ 80% SRSS Low Risk in spring on both the internalizing and externalizing scales 6. $\geq$ 10% annual increase in spring SRSS Low Risk on both the internalizing and externalizing scales