Empirical

Ci3T Leadership Team Members' Perceived Facilitators and Barriers to Implementation

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Abstract

In this qualitative study we sought to understand the experiences of K-12 school personnel serving on Comprehensive, Integrated, Three-Tiered (Ci3T) leadership teams. We conducted 22 semi-structured interviews and five focus groups across three states and five school districts to determine team members' perceptions regarding facilitators and barriers to Ci3T implementation. We determined from common themes three priority areas for continued professional learning to support Ci3T implementation: (a)

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Ci3T onboarding and training for new team members, (b) communicating the vision of Ci3T to foster buy-in across stakeholders, and (c) providing Ci3T professional learning to faculty and staff. We discussed findings in terms of possible benefits to school leadership teams working within integrated tiered models and how results of this study may inform the creation of learning modules to support district and Ci3T leadership team members. We discuss limitations with future directions.

Keywords
Ci3T, elementary, tiered systems, school leadership, qualitative

Tiered systems offer schools and districts a systems-level approach for meeting students' academic, behavioral, and social-emotional needs, providing high-quality Tier 1 instruction for all students using research-based practices and programs (Lane et al., 2020). Teams use screening and other data (e.g., discipline, academic, treatment integrity) to monitor student access to—and benefit from—Tier 1. When Tier 1 is in place with integrity, students who need more receive Tier 2 and Tier 3 supports (e.g., targeted reading intervention, self-monitoring) in a continuum of increasing intensity (Lane et al., 2020; Sugai & Horner, 2002).

When a school or district decides to make a system-level shift, such as the adoption of a tiered system, leaders engage in extended professional learning (PL) to support the change (Fixsen et al., 2005). For example, a Comprehensive, Integrated, Three-Tiered (Ci3T) model of prevention (Lane et al., 2014) is one such tiered system, serving as a framework for organizing all district practices and initiatives within an integrated system. To make the shift to Ci3T, school leadership teams attend six PL sessions over a year to design procedures for teaching, reinforcing, and monitoring integrated across academic, behavior, and social domains (Lane et al., 2019). Additionally, with data and input from faculty and staff, teams establish roles and responsibilities for academic, behavior, and social domains, build a schoolwide expectation matrix, reactive plan, assessment schedule, and intervention grids depicting validated Tier 2 and 3 strategies, practices, and programs. The resulting Ci3T Implementation Manual with Tier 1, 2, and 3 components guides faculty and staff as they begin initial implementation. Successful implementation requires Ci3T Leadership Teams to have knowledge and confidence in guiding staff through the various implementation stages with district support (Menzies et al., 2020). Few studies have examined leadership team members' needs for supporting implementation, key people in driving success across implementation stages. We conducted this study to explore PL prioritized by school teams as they spearhead Ci3T implementation efforts in their schools.

Implementation Science

Implementation science serves as the conceptual foundation for the stages encountered as education systems engage in change (Fixsen et al., 2005). System change is complex, requiring ongoing PL, time to practice new schoolwide and classroom procedures, and time to adjust to change. Providing this PL and time competes with innate resistance to change, status quo inertia, and feelings of abandoning the familiar (Fixsen et al., 2005). Thus, moving through initial implementation toward full operation may require as much support and as many resources as the initial building year, if not more (McIntosh et al., 2013).

The full operation stage is usually reached in 2–4 years when everyone fulfills roles and responsibilities with ease because they developed associated skills and administrative supports are in place (Fixsen et al., 2005). Continued PL is needed to sustain new practices through implementation years as skilled staff and leaders leave and new community priorities arise (Charlton et al., 2020; Klingner et al., 2013). The Ci3T model of prevention focuses on enduring systemic change. Ci3T organizes district initiatives, integrating priorities to function as a unified system, supporting transparency and communication between stakeholders (e.g., administrators, staff, students, families). School leadership needs supports tailored for different stages of implementation (e.g., first year, second year, sustainability years) to ensure initial and continued success of all staff. Such supports include targeted PL to bolster team members' leadership capacity (knowledge, skills, attitude) to progress efficiently through implementation.

Supports for tiered model implementation need to be accessible beyond the training year, and may be dependent on access to technical assistance (Charlton et al., 2020). Without direct consultation or systematic support, schools may struggle to engage in all aspects of the new schoolwide plan and eventually abandon what they worked so hard to build, which can hurt staff morale (Nese et al., 2016). To support schools following the Ci3T PL series, districts collaborate with researchers to schedule five PL sessions each implementation year. Topics are tailored to district needs based on implementation stage and local contexts (e.g., data collection, new Tier 2 interventions). Ci3T Leadership Teams also invite a researcher to monthly meetings for direct support and encourage staff to attend local/virtual PL sessions (e.g., Project EMPOWER; see ci3t.org/pl). Ci3T trainers and coaches are invited to monthly meetings where new Ci3T research is shared and attendees can ask school leaders or researchers implementation questions. Additionally, staff access materials on ci3t.org to support implementation such as videos, templates, tiered interventions, presentations, and more.

Beyond the above resources and synchronous supports, Ci3T Leadership Teams may benefit from systematic, on-demand PL resources for supporting implementation stages. On-demand resources, similar to the Ci3T PL series manualized training with linked online resources (Lane et al., 2019), could especially support districts prioritizing independent PL activities and teams in geographic regions distant from

university researchers. For PL to be most effective, it needs to be systematic, presented in a coherent sequence, ongoing, and tied to data representing actual needs of participants (Desimone, 2011). Therefore, it is typically insufficient to merely provide PL, it needs to be data-informed to promote contextually-relevant facilitators and minimize barriers (Lane et al., 2015; Oakes et al., 2021). On-demand resources for content across implementation stages can provide effective PL to enhance Ci3T Leadership Team members' knowledge and skills, enabling facilitators and addressing barriers to sustainability.

Enablers and Barriers to Implementation of Tiered Models

To provide relevant, data-informed PL, we must first understand what supports are needed by practitioners to implement a tiered model of prevention with fidelity. By identifying perceived facilitators and barriers to sustainability of three-tiered models such as Ci3T, we can create resources to support implementation fidelity. Two recent studies examined facilitators and barriers to implementation of positive behavioral interventions and supports (PBIS; the behavioral component of Ci3T). Both McIntosh et al. (2014) and Pinkelman et al. (2015) found administrator support and staff buy-in the most important facilitators; McIntosh et al. (2014) also identified fidelity of implementation and use of data while Pinkelman et al. (2015) identified consistency. Both research teams identified lack of resources such as time, money, and staffing as the most significant barrier; Pinkelman et al. (2015) also identified lack of staff buy-in. Buy-in can include the willingness of staff to take the initial step, start using common language, and switch from a reactive punishment perspective to a proactive prevention-based mentality.

More recently, Menzies et al., 2020 interviewed 18 elementary Ci3T Leadership Team members at the end of their second year of Ci3T implementation. One of three resulting themes was structural facilitators and barriers to systems change. Specifically, team members expressed (a) the use of data as facilitator of teacher buy-in to sustain Ci3T when they saw growth, (b) how instrumental administrative leadership was in motivating use of Ci3T practices, and (c) how lack of time to collaborate with colleagues and engage in PL about Ci3T was a barrier. These were in alignment with previous studies and we sought to extend findings by exploring Ci3T Leadership Team member PL needs specific to leading implementation efforts.

Purpose

We designed interviews and focus groups to learn from Ci3T Leadership Team member experiences and inform development of PL resources for leadership skills to enhance Ci3T implementation. We sought to understand Ci3T Leadership Team member perceived facilitators and barriers to implementation and prioritized PL needs. Identifying team priorities was an essential next step toward enhancing knowledge, skills, and attitudes to empower leadership of school- and district level PL efforts. Following identification of priorities, our long-term goal was to develop corresponding on-demand

resources to support Ci3T schools, ensuring PL would be available for use in a personalized approach. Our research aims were to explore (a) what Ci3T Leadership Team members reported as facilitating and impeding leadership of Ci3T implementation and (b) what PL needs they prioritized for leading Ci3T implementation efforts.

Method

Participants and Setting

Interview participants were 21 educators from 15 elementary schools in five districts in three U.S. regions (i.e., Northeast, Midwest, Northwest). Interview participants were primarily female (n = 18, 85.71%) and White (n = 20, 100% of respondents for this item). They averaged 44.81 (SD = 10.84) years old with 18.55 (SD = 7.64) years of experience. Districts participated in *Enhancing Ci3T: Building Professional Capacity for High-Fidelity Implementation to Support Students' Educational Outcomes* (Project ENHANCE), an Institute of Education Sciences funded project (grant no. R324N190002), part of the Integrated-MTSS Research Network. Participating schools implemented Ci3T for 1–7 years (M = 2.89, SD = 2.00). Educators interviewed served as a Ci3T Leadership Team member for an average of 2.47 years (SD = 1.12). See Tables 1 and 2 for district and participant characteristics.

Focus group participants were 16 educators from 13 elementary schools in the same five districts and regions. Focus group participants were primarily female (n = 15, 93.75%) and White (n = 14, 93.33%), averaged 46.71 (SD = 8.64) years old with 15.94 (SD = 8.76) years of experience. Participating schools implemented Ci3T for 1–7 years (M = 3.20; SD = 1.86) and focus group participants served as a Ci3T Leadership Team member for an average of 2.79 (SD = 1.89) years. Interview and focus group participant sex, ethnicity, race, and certification were representative of faculty and staff demographics at district elementary schools implementing Ci3T by chi square (χ^2) tests. In contrast, our participants on average were statistically significantly older by 4.09 years, t (1288) = −2.02, p = .0437, and more experienced by 3.70 years, t (1370) = −2.23, p = .0260, compared to district elementary faculty and staff.

Procedures

The lead institution reviewed and approved the current study with interagency agreements signed by co-principal investigator (co-PI) institutions, then five partner districts approved. Project staff met with school principals and district leaders in person or via technology to explain the overall purpose and discuss a participation timeline. Prior to consenting, project staff shared study information with Ci3T Leadership Team members at a Ci3T implementation support session. We used purposive sampling to invite 1–3 team members from each school to consenting meetings via Zoom. During consenting meetings, we explained the purpose of the project, answered questions, and obtained consent online using Qualtrics. If they

Table 1. District Characteristics.

Variable	District				
	Northeast	Midwest			Northwest
	D1[a]	D2	D3	D4	D5
Schools *N*	5	21	27	9	8
Elementary *N*	5	14	18	7	5
District enrollment *N*	1,540	11,879	13,004	6313	3016
Attendance rate %	—	95.0	95.0	94.7	80.2[b]
State assessment % (ELA/M)[b]	16.00/31.33	43.88/37.71	25.32/24.78	47.10/41.84	36.6/34.8
Race/ethnicity %					
Asian	1.11	—	—	—	0.30
Alaska Native	—	—	—	—	0.10
Black	1.38	6.3	17.1	4.7	0.30
Hispanic	3.15	10.8	33.4	8.0	87.80
Other	—	16.5	14.7	12.9	—
White	91.71	66.5	34.8	74.4	11.10
Multi-racial	2.65	—	—	—	0.40
Economically disadvantaged %	74.58	33.61	78.55	30.7	83.4
English Learners %	0.83	6.23	11.97	2.23	42.7
Students with disabilities %	17.34	14.83	21.83	14.87	14.6
Locale[c]	Town: Distant	City: Small	City: Midsize	Rural: Fringe	Town: Distant

Note. Source = state school report card data 2019–2020, excepted as noted. *N* represents all students enrolled over the course of the 2019–2020 academic year. State assessment percentage reported for students scoring in Level 3 (at expectations) and Level 4 (above expectations) for Midwest districts, met standards for Northwest district. D = district; ELA = English language arts; M = math; – (dash) = data not available.

[a]For Northeast district, only participating schools' aggregated data are reported; see Common, Common et al., 2021.

[b]Source = state school report card data 2018–2019 (e.g., assessment data for 2019–2020 not available due to COVID-19).

[c]Source = National Center for Education Statistics, Common Core Data 2019–2020.

Table 2. Participant Characteristics.

Variable/Level	Interviews % (*n*)	Focus Groups % (*n*)	Total % (*n*)
Invited to overall study (% of all team members)	—	—	45.06 (114)
Consented to overall study (% of invited to overall)	—	—	40.35 (46)
Invited (% of consented to overall)[a]	65.22 (30)	78.26 (36)	—
Participated (% of invited to interview or focus group)	70.00 (21)	44.44 (16)	56.06 (37)
U. S. Regions represented	100 (3)	100 (3)	100 (3)
Districts represented	100 (5)	100 (5)	100 (5)
Elementary schools represented	75.00 (15)	65.00 (13)	100 (20)
Gender			
Male	14.29 (3)	6.25 (1)	10.81 (4)
Female	85.71 (18)	93.75 (15)	89.19 (33)
Hispanic, Latino, or Spanish origin	0 (0)	14.29 (2)	5.71 (2)
Race			
White	100 (20)	93.33 (14)	97.14 (34)
Decline	0 (0)	6.67 (1)	2.86 (1)
Age *M* (*SD*)	44.81 (10.84)	46.71 (8.64)	45.57 (9.93)
Years of experience *M* (*SD*)	18.55 (7.64)	15.94 (8.76)	17.39 (8.14)
Role			
Administrator, building	28.57 (6)	12.50 (2)	21.62 (8)
General education teacher	14.29 (3)	12.50 (2)	13.51 (5)
Special education teacher	9.52 (2)	18.75 (3)	13.51 (5)
Specialist teacher/related service provider (e.g., school psychologist, counselor)	23.81 (5)	50.00 (8)	35.14 (13)
Student support staff (e.g., academic/behavior coach)	9.52 (2)	0 (0)	5.41 (2)
Administrator, district	14.29 (3)	6.25 (1)	10.81 (4)

(continued)

Table 2. (continued)

Variable/Level	Interviews % (*n*)	Focus Groups % (*n*)	Total % (*n*)
Years of school Ci3T implementation *M* (*SD*)	2.89 (2.00)	3.20 (1.86)	3.03 (1.91)
Years on Ci3T leadership team *M* (*SD*)	2.47 (1.12)	2.79 (1.89)	2.61 (1.50)
First year	17.65 (3)	28.57 (4)	22.58 (7)
Second year	41.18 (7)	28.57 (4)	35.48 (11)
Third year	25.53 (4)	14.29 (2)	19.35 (6)
Fourth year	11.76 (2)	14.29 (2)	12.90 (4)
Fifth year	5.88 (1)	0 (0)	3.23 (1)
Sixth year	0 (0)	7.14 (1)	3.23 (1)
Seventh year	0 (0)	7.14 (1)	3.23 (1)
Course in classroom management	90.48 (19)	81.25 (13)	86.49 (32)
PD in academic screening	85.71 (18)	62.50 (10)	75.68 (28)
PD in behavior screening	80.95 (17)	62.50 (10)	72.79 (27)
Familiarity with Ci3T *M* (*SD*)	4.15 (0.75)	3.94 (0.77)	4.06 (0.75)
Use of resources *M* (*SD*)			
ci3t.org	3.46 (1.12)	3.25 (1.06)	3.46 (1.12)
Other websites (e.g., pbis.org, state websites)	3.05 (1.13)	3.00 (1.37)	3.05 (1.13)
Ci3T interactive eBook	2.11 (1.29)	1.69 (0.87)	2.11 (1.29)
Preservice training related to Ci3T	1.76 (1.21)	1.38 (0.89)	1.76 (1.21)
District-provided Ci3T professional learning	4.22 (0.95)	4.13 (1.09)	4.22 (0.95)
Ci3T research staff-led professional learning	3.46 (1.54)	3.31 (1.54)	3.46 (1.54)
Social media	1.69 (1.67)	1.27 (0.59)	1.69 (1.17)
Other	2.71 (1.89)	2.25 (1.89)	2.71 (1.89)

Note. Data are reported for those who completed each item. Familiarity with Ci3T and Use of resources scale 1 = *not at all* to 5 = *a great deal.*
[a]Total exceeds 100% because when invited to but not available for a focus group, participants were then also invited to complete an interview. Two focus groups were held after COVID-19 school disruptions accounting for fewer schools being represented.

agreed to participate, they provided demographic information and received an email with the consent form. We invited 114 team members (45.06% of all team members); 46 (40.35%) agreed to participate.

Next, we purposively selected participants for either an individual interview or a focus group. We balanced years of experience as a Ci3T Leadership Team member and roles (e.g., teachers, administrators, support staff), first forming focus groups. Participants not selected, unavailable, or unreachable were invited to schedule a one-on-one interview with a research team member. Project staff emailed invitations with follow-up emails and phone calls before inviting an alternate (up to three additional contacts after initial invitation). A research team member who was not involved in Ci3T PL conducted interviews. Of those consented, we contacted 30 (65.22%) and 21 (70.00%) completed an interview between February and April 2020 using remote meeting technology, with some conducted after schools closed in March due to COVID-19. The average interview length was 19 min (range = 9–39 min). Ci3T Leadership Team members who completed an interview received a $10 gift card to thank them for their time.

We conducted five focus groups, one per participating district, in spring 2020 from February to March, concurrently with interviews. A PI who did not provide Ci3T PL conducted three Midwest focus groups and one Northwest focus group in person (audio recorded), then one in the Northeast using Zoom in March due to COVID-19 following revised IRB safety protocols. We used purposive sampling to balance years of experience and role, inviting 36 people with 16 completing a focus group (44.44%). Invitation procedures were the same as for interviews, and we thanked participants with a $50 gift card. Audio files were securely saved and transcribed for analysis. The average length of focus groups was 56 min (range = 39–67 min).

Measures

We drafted eight interview questions and shared them with ENHANCE advisory board members, Ci3T district and school team leaders for feedback. We used semi-structured interviewing techniques (Seidman, 2006) to ensure main topics were introduced while encouraging participants to share what was of greatest concern or interest, starting with two warm-up questions to build rapport. Questions included how interviewees saw the team's role at their school site and the most important aspects of their role on the team, received and desired PL, team processes and structures implemented and desired to facilitate Ci3T implementation, barriers to Ci3T implementation, and barriers to data collection, sharing, and use.

We developed eight semi-structured focus group questions with input from ENHANCE advisory board members, district and school leaders, as well as exisiting literature on barriers and facilitators to systems change (e.g., McIntosh et al., 2014; Menzies et al., 2020; Pinkelman et al., 2015). As with interviews, the intent of focus groups was to gain insight into the experiences of Ci3T Leadership Team members with

regard to facilitators and barriers to Ci3T implementation and PL needs. We began with three warm-up questions to build rapport. Questions included how participants explained the purpose and role of their Ci3T Leadership Team to others, how Ci3T has impacted student outcomes, if they would recommend a colleague join the team, what challenges and associated supports they experienced as a Ci3T Leadership Team member, what PL they desired, how important external supports have been to Ci3T success, and what advice they would give to current and new principals about improving Ci3T implementation.

Design and Data Analytic Plan

We analyzed participant demographic data descriptively (see Table 2) and analyzed interview and focus group data qualitatively using constant comparative methodology (Glaser et al., 1967). We used this method to maintain participant views while finding patterns and presenting themes for review (Maykut & Morehouse, 1994). After transcribing, we integrated responses into one document for interviews, one for focus groups, and independently coded similar units and grouped units into themes using techniques outlined by Brantlinger et al. (2005) and Braun and Clarke (2012). We had no prior hypotheses, setting out to learn how Ci3T Leadership Team members perceived Ci3T in their contexts through an inductive approach, with our aim of exploring their perceived facilitators, barriers, and PL needs as Ci3T implementation leaders. Within each of these three categories of inquiry (i.e., facilitators, barriers, PL needs), two members of the research team first divided interview and focus group data into discrete units and independently coded them based on key words or phrases that appeared in participant responses. Results of this initial round of coding were then used to group responses believed to have similar meaning together. These initial groupings were refined as units were added and compared, simultaneously coding and analyzing, in two subsequent rounds of analysis by the two independent members of the research team (Lincoln & Guba, 1985). After project staff reviewed and confirmed independently determined themes, PIs not involved in Ci3T PL reviewed data for reliability of analysis and finalized themes.

Results

We organized results from the thematic analysis of individual interviews and focus groups into emergent themes from across questions. Facilitators to Ci3T implementation included professional learning, system structures that enabled efficient use of time, communication, data sharing, and onboarding. Conversely, perceived barriers to Ci3T implementation seemed to mirror these, including lack of time and difficulties accessing and using data, plus themes of lack of buy-in and low administrator support.

Factors that Facilitate Ci3T Implementation

Professional learning. When asked what PL was most beneficial to support their role on the Ci3T Leadership Team, interviewees indicated university-sponsored Ci3T PL was helpful, as was ci3t.org and the interactive eBook. One participant indicated a desire for in-person university PL and coaching be available for remote attendance (e.g., Zoom). A few mentioned it was helpful when multiple school teams attended PL and shared ideas for refinement. For example, one participant noted, "I think just being able to meet and discuss things that we're implementing in our schools, and just kind of bouncing ideas off each other is usually what I find to be the most beneficial." Some participants, however, mentioned feeling frustrated due to rapid PL pacing and amount of work.

Focus group participants similarly reflected on PL benefiting Ci3T implementation. They noted team trainings supported their ability to address specific student behavior issues, teach and address logistics around Tier 1 reinforcement, how to structure the leadership team and manage meetings efficiently, and provided salient reminders to refer to the Ci3T Implementation Manual. One focus group participant shared, "I went to some of the same topics over and over again, that's how it sinks in… the more you hear – honestly, the more we can keep bringing it back in front of people, it will sink in. And that's literally what happened to me. It's just constantly having it put back in front of me." Other participants shared when they provided or connected staff with additional training and support, as well as received it themselves (e.g., university liaison attended team meetings, consistent team attendance at university-sponsored PL), everyone was able to better explain the overall purpose of Ci3T, which increased buy-in.

Process, structure, and system. When asked about the processes, structures, or systems in place to facilitate Ci3T implementation, our analysis indicated themes of structure and frequency of team meetings, efficient use of time, communication, data sharing, and onboarding/staff turnover. Regarding structure, team members discussed highly-structured Ci3T Leadership Teams, having team members on committees to help guide, and having those members share back with the Ci3T Leadership Team. For example, one interviewee shared, "And so when we come back … with our Ci3T team, we're coming back together and we're sharing concerns, or celebrations, or good things that are going on within those three subcommittees. And then we're able to be kind of the leaders of that work…" One focus group participant shared their successful structure for efficient use of time, using small group "breakouts" to accomplish multiple tasks then coming back together as a full Ci3T Leadership Team. The most common meeting frequency reported was monthly, with a couple teams finding success meeting weekly or every other week. Some team members mentioned meeting for 1 hr or 1.5 hr, while others reported scheduling monthly half-day meetings or shorter meetings twice per month.

Time. Focus group participants reported efficient use of time was a facilitator to successful Ci3T implementation. For example, one group shared the efficiency of designating time at staff meetings to collect data (e.g., social validity and treatment integrity surveys) and share data (e.g., implementation reports): "We make sure that there is time during a staff meeting rather than asking teachers to do that on time outside of school. We carve out that time."

Communication. Participants viewed good communication with staff and families as a facilitator to successful Ci3T implementation. This included sharing Ci3T information and providing PL at staff meetings, through email, and through a weekly newsletter. For some interviewees, this communication came from the district or an administrator, while other Ci3T Leadership Team members reported fostering an iterative approach to include staff feedback. For example:

> We might take to the staff and say, here's the direction. Here's something that we need to get accomplished. What's your thoughts on it? … we usually divide our staff into small groups … and prior to the meeting, we're like, okay, this is the part of the plan we really want you to go through. We want you to make notes on the plan, go through it, and bring your plan with you to the meeting so that when we go to the meeting, they kind of have an idea of what we're going to talk about and what we're looking at within the plan.

Ci3T Leadership Team members on other committees shared Ci3T information and returned committee information to the team. Some interviewees kept families up to date through newsletters, parent-teacher conferences, and more: "For students and families, we … have flyers that go out to them, we, you know, send magnets home for them to put on the fridge, we do videos that we post on social media and during our assemblies. So I mean, we do a lot."

Interviewees further defined good communication as a process to facilitate Ci3T implementation to include sharing data with staff and families. How Ci3T Leadership Teams shared data varied greatly but was consistently reported by interviewees. One relayed, "So sharing with staff, we do always. So whatever new information we get in, as quickly as we can turn around that and put it into a format—whether it's a PowerPoint or however we're going to present it—we do that right away." Some participants indicated their team created visual reports of data, while others provided direct access to databases; some reported sharing data monthly at staff meetings or by email, others reported sharing data 3–4 times per year. For example, one respondent stated, "[The report] goes out at the end of every month with a monthly recap of here's where we're at and we show the pyramid of here's where our kids are at now." Some interviewees asked staff to help analyze data while others shared data unidirectionally. One interviewee mentioned frustration with unused data and another shared data with families.

Formal onboarding. Some interviewees mentioned formal onboarding for new Ci3T Leadership Team members was a process to facilitate implementation. While several reported they had no process, some were informal where new team members met with the principal to get "caught up" and then jumped into meetings. Those with formal onboarding required employment at the school site for at least 1 year prior to joining the Ci3T Leadership Team to ensure familiarity, or, for example, "last year we actually grew it quite a bit, so our principal came up with – we did an application process so that it was fair as far as people that were interested in it." Relatedly, interviewees stressed the importance of low staff turnover to support consistency and implement efficient and effective Ci3T processes and structures. When new staff were hired, one interviewee reported "they have new teacher training twice a month, and that is in addition to all the staff professional development that we do weekly. So they're getting training approximately six times a month."

Factors Impeding Ci3T Implementation

When asked about the efficiency and effectiveness of the processes, structures, and systems implemented by the Ci3T Leadership Team, participants noted when problems arose. The themes included lack of buy-in, lack of time to do the work, low prioritization or support from building administrators, and difficulties with accessing and using data for decision making.

Lack of buy-in. When asked about lack of buy-in, interviewees relayed most staff understood Ci3T, but a few experienced teachers did not yet buy in to the Ci3T model of prevention. Interviewees said veteran teachers resisted change or did not understand why students no longer received punitive consequences (e.g., loss of recess). Representative examples included: "Their beliefs and what they're rooted in as teachers are different than some other teachers." "Teachers have habits. And it's very hard to kind of change that lens." "Kids didn't do their homework, so they're standing on the wall at recess … it's the same [inaudible] every day. So it's not working. The kid's like, 'I haven't had recess since the beginning of the year.' Well, it's the same kid, so that consequence isn't working but I think it makes the adult feel better, because they punished them."

For focus group participants, lack of buy-in occurred with turnover in staff. Participants reported a barrier to buy-in was the lack of a formal onboarding process to teach staff Ci3T background knowledge, foundational understanding, or procedures (e.g., using tickets paired with behavior-specific praise (BSP) as the universal reinforcement system, integrating social skills throughout the day). One participant shared, "The area that I feel frustration in is that the teachers or the staff that lose the importance of … the praise, the words that are supposed to go with the ticket." Another mentioned Ci3T buy-in is impeded when staff are not part of leadership team discussion or do not understand the *why* when "they're being just told, well, this is what we're doing."

Lack of time. When interviewees discussed time as a barrier to Ci3T implementation, they mentioned getting people to buy in takes time, so they need to allow time for buy-in to occur. One reported how hard it was to "gather the right people around the table and talk and move forward with any implementation because they were already in other groups and other meetings … Just the lack of time with people was the biggest problem." Another mentioned, "the thing that we're lacking is time for training," and others noted providing PL after school can be hard and full-day PL only occurred 1–2 times a semester. "So it's just hard to find the time to get staff that PD and that training." One participant relayed, "I've not been able to attend as many EMPOWER sessions as I would like." Some interviewees initially said there were no barriers to data collection but when prompted mentioned time—an experienced team leader mentioned in the beginning years data collection was hard but got better. A few interviewees reported staff relayed feeling treatment integrity and social validity surveys took too much time to complete.

Focus group participants discussed the Ci3T Leadership Team time commitment. One said sometimes a 1- or 1.5-hr after-school meeting was not enough to get through their agenda (e.g., looking at data, connecting students to supports): "Our meetings are after school and people are very willing to give their time after school. But I think I feel like sometimes we don't get as far as we would like when we have an hour-long meeting or an hour-and-a-half-long meeting." One principal related the challenge of incentivizing attendance at 2-hr afterschool PL sessions: "And then … you go on from 5:00 to 7:00. That's a commitment. I mean, even though it's only like four or five times a year, my thought process is, how do I incentivize that for staff?"

Low administrator support. In terms of administration, interviewees discussed lack of district or school leadership support or prioritization was a barrier to Ci3T implementation. One shared, "We do not have the support or understanding from our principal." Another said, "Just because of administrative changes. I feel like it just hasn't been much of a priority as it used to be." Another reported, "In our district, we've had some barriers with upper management, district leadership. They put initiatives into place without referencing Ci3T, and so it feels more like an afterthought rather than being deliberate about, hey, you already have this plan in place, let's fit this into your plan."

Difficulties with data. Similar to time being a barrier to data collection, several team leader interviewees mentioned lack of data access, difficulty interpreting data, and structures/time for sharing data were barriers to implementing Ci3T. One mentioned "in the beginning years it was a lot harder, yes. But this is our fifth year of doing it … We've gotten a little better each year." While challenges around data may ease over time, three team leaders (two different districts) relayed they changed data systems which introduced new challenges. Other data collection barriers surrounded measures used. Some Ci3T Leadership Team members relayed a lack of the "why" behind data collection was a barrier (e.g., buy-in, did not know how data inform student instruction

and staff PL). Others discussed desiring explanation for specific words used on their universal behavior screener, along with the purpose of screening, to increase buy-in.

Prioritized Needs

Onboarding. Multiple Ci3T Leadership Team members mentioned the need for support in onboarding staff to the Ci3T Leadership Team (e.g., providing foundation knowledge, leadership skills). This included annual refresher PL for returning staff. Respondents reported they would recommend colleagues join the Ci3T Leadership Team, though a respectable time commitment, as it helps to understand the Ci3T model of prevention and allows for a direct voice in decision making. They mentioned team members sometimes fulfill multiple roles to create/revise, teach/coach, implement, support, and monitor the Ci3T plan. New members need to learn the responsibilities associated with the various roles as well as the time demands of each, how the team is structured for meeting efficiency, and ensuring everyone shares common understanding while bringing their unique perspective to the team (e.g., mental health, special education). Some respondents mentioned needing to revisit how they structured their Ci3T Leadership Team or how they conducted team meetings to improve efficiency. Some respondents desired better clarity around how high-fidelity Ci3T implementation would look, and suggested short videos would help.

Buy-in. Ci3T Leadership Team members prioritized their need to increase stakeholder buy-in to the Ci3T vision. PL and improved communication were identified as specific avenues needed to help increase buy-in. For example, providing training and supports for creating a culture around the Ci3T model of prevention in the school and sharing the vision with all stakeholders. Respondents identified this would require ongoing communication, including family engagement, to maintain buy-in. A few respondents mentioned the need for a simplified version of the Ci3T Implementation Manual to increase buy-in, something as an overview, a shorter version to explain *why* the school implements the Ci3T model of prevention. Some respondents discussed the need for building administrators, especially new ones, to buy in to Ci3T by giving the model greater prioritization. For example, respondents suggested new principals need to focus on the big picture instead of getting stuck on details and take their time to learn and understand the full Ci3T process (e.g., visit other schools, attend trainings, observe faculty and staff). They also relayed the need for increased district level buy-in as shown through involvement and coordination at the district level.

Professional learning. Respondents prioritized the need for PL, inclusive of onboarding new staff and maintaining buy-in as mentioned above, plus general training to support staff with effective Ci3T implementation. Respondents indicated their school staff needed ongoing PL to learn more about the components of the Ci3T plan, foundational

tenets of Ci3T, how to implement the Ci3T plan, and how to monitor the plan. Part of implementing the Ci3T plan effectively included, as reported by respondents, the need for PL on Tier 1 components. For example, (a) social skills instruction across content areas and (b) using tickets paired with BSP for the universal reinforcement system, especially how to maintain effectiveness during sustained implementation. Respondents mentioned the need for PL on Tier 2 and Tier 3 social, emotional, and behavioral interventions (e.g., de-escalation strategies), particularly supports tailored for their school and accompanied by coaching. For the existing PL provided by university researchers, participants expressed need for implementation support sessions to differentiate for schools' current implementation phase (e.g., initial implementation, full operation) and perhaps foster sharing of ideas across schools and across districts implementing Ci3T.

Discussion

Our purpose in conducting interviews and focus groups with Ci3T Leadership Team members was to ascertain what they perceived to be facilitators and barriers to successful Ci3T implementation and what they prioritized in terms of PL needs. Through thematic qualitative analysis of 21 interview and five focus group transcripts we learned our results both converged and diverged with previous studies of enablers and barriers to implementation of tiered systems. In terms of divergence, our respondents did not mention money as either a facilitator or barrier to Ci3T implementation unlike for PBIS in both McIntosh et al. (2014) and Pinkelman et al. (2015). Our respondents' only connection to money was in mentioning it would be good to incentivize attendance at PL sessions. We also diverged from McIntosh et al. (2014) in that our respondents did not mention fidelity of implementation, previously identified as an enabler. In the following sections we discuss areas where findings of the present study converged with previous research, which we believe supports generalizability to leadership teams of other integrated tiered systems in addition to schools with a Ci3T Leadership Team implementing Ci3T.

Buy-in

One area in which results of the current study align with prior research is the importance of staff buy-in. Menzies et al., 2020 identified the importance of sharing and using data to facilitate teacher buy-in to implementing Ci3T. McIntosh et al. (2014) and Pinkelman et al. (2015) identified staff buy-in as an enabler to PBIS when present and as a barrier when absent. Similarly, our study respondents considered the lack of staff buy-in to be a barrier to successful Ci3T implementation. Participants discussed Ci3T buy-in in terms of veteran teachers resisting change, administrators and district leaders not prioritizing Ci3T, and the drift of understanding over time. To address teacher, staff, and district level buy-in, schools may need to focus on providing information about the "why" of Ci3T in short, attention-grabbing bursts, such as 2–3 min videos, social media tags, and

brief weekly emails. If adults understand the science behind Ci3T components they may be more likely to give them a try, and once implemented, encounter the benefits (e.g., increased student academic engaged time in class, less disruptive behavior, students receiving academic support at the first sign of concern). When benefits are realized on the personal—rather than theoretical—level, adults are able to prioritize Ci3T, believing from experience implementing Ci3T will lead to desired changes (Andreou et al., 2015). Ci3T Leadership Team members could also focus on reteaching the plan each semester and reinforcing implementation of Ci3T components by adults to encourage continued use. Giving staff written praise notes, verbal BSP, and sharing staff successes at meetings can reinforce desired adult behaviors for those being lauded and may serve to motivate others to engage in similar behaviors knowing how successful others' actions were.

As one example of how Ci3T understanding may drift over time, participants discussed the use of tickets paired with BSP as the universal reinforcement system. Specifically, they noted how during initial implementation the tickets were understood and used, but how schools implementing Ci3T for 3–4 years lost sight of the "why" behind tickets and started to believe "the tickets aren't working." To prevent such concerns, schools can target PL to increase levels of use of BSP (Simonsen et al., 2020) and address issues of drift. Further, some drift is to be expected when teachers shift to other skills (Simonsen et al., 2017, 2020; e.g., integration of social skills and expectations in academic instruction). This belief could also be related to using the same reinforcement menu over time, which students may see as stagnant and needing updated. In response, schools could provide PL on how to conduct periodic student preference assessments to update reinforcement menus. This includes (a) ensuring items available meet various behavior functions (e.g., physical prizes, escape tasks, gain attention/activities with friends and/or preferred staff), (b) ensuring prizes are available for both students who save enough tickets and those who wish to enter into chance drawings, (c) reminding staff to always pair tickets with BSP, and (d) considering having both classroom and school stores where tickets can be exchanged for prizes and entered into chance drawings.

Time

A second barrier identified within the current study, and found to be consistent with that of prior research, was time (McIntosh et al., 2014; Menzies et al., 2020; Pinkelman et al., 2015). Menzies et al., 2020 identified how great a barrier a lack of time was to learn about Ci3T and collaborate with colleagues—in the current study respondents specified lack of time to collect, analyze, and use data as a barrier. Ci3T Leadership Team members reporting the need for more time is to be expected, as volunteering to organize system change efforts does take time on top of teaching responsibilities. Efficiency could be increased through district level systematic procedures and

distribution of responsibilities, saving individuals from being responsible for too many elements. Additionally, time needed for decision making can be reduced through use of efficient data systems (Horner & Sugai, 2015). For example, district computer programs can check all teachers completed academic and behavior screeners, distribute treatment integrity and social validity surveys, compile and share data back with staff in report format, arrange all sources of schoolwide data side-by-side in a dashboard for each teacher and school leaders to access, and run algorithms to provide initial suggestions for Tier 2 and Tier 3 supports based on cut scores in Ci3T intervention grids. Ci3T Leadership Team members could then focus on reteaching the plan at regular intervals to promote buy-in and use data reports provided to determine what PL is needed and which supports to connect students.

Onboarding and New Staff

McIntosh et al. (2014) identified lack of staffing as a barrier, similar to Pinkelman et al. (2015) identifying time to train new staff as a barrier. Our respondents similarly identified staff turnover (and associated lack of onboarding procedures) as a barrier to Ci3T implementation. School leaders can prevent this barrier by developing explicit Ci3T onboarding procedures for new staff so they are aware of schoolwide expectations and procedures, everyone's roles and responsibilities, and how the school fulfills its Ci3T mission and values. While many procedures will be school specific, a lot can be developed in general terms (e.g., the "why" of Ci3T, three domains, integrated lesson planning, focus on data-informed decision making) and made available on-demand for new staff to review independently.

Prioritized Need: Professional Learning

Overwhelmingly, respondents expressed the need for additional PL covering an array of topics: PL to increase buy-in and maintain momentum, to address student behavior, to teach new staff everything about Ci3T, how to organize a Ci3T Leadership Team and run efficient meetings, logistics of effective use of tickets, validated Tier 2 intervention options, how to be a leader, and collecting and using data. PL must also address needs of Ci3T Leadership Team members at various stages of experience. While new team members may need to learn about the 'why' and foundational elements of Ci3T, if PL continues to focus on foundational elements it may stifle the professional growth of more experienced leaders (Guin, 2004). Our results validated anecdotal data from interacting with Ci3T Leadership Teams and reaffirmed our commitment to providing PL support after the initial Ci3T PL series (training year). We will use these results to create on-demand PL materials for use as part of a comprehensive PL plan for all staff and Ci3T Leadership Team members, as well as by coaches to provide more individualized supports to help ensure all adults implement Ci3T with fidelity (Gage et al., 2017).

A systems-level shift in PL may be required to effectively provide Ci3T Leadership Team members the knowledge, skills, and attitude to lead implementation, provide identified enablers to faculty and staff, and address potential barriers. To begin, administrative support and strong leadership are essential to ensure PL is ongoing throughout implementation years to sustain high fidelity (Menzies et al., 2020; Pinkelman et al., 2015). A strong leadership team is needed to continuously analyze data from treatment integrity, social validity, student outcomes, and other schoolwide data reports to identify strengths and successes of faculty, staff, and students to celebrate and sustain, plus areas for growth where PL is needed.

We recognize school leadership teams have varied PL needs and competing schedules, necessitating PL beyond a large-group delivery model to support systems change and implement Ci3T with integrity—we will use results of this study to create on-demand PL materials for use by Ci3T Leadership Team members and by individuals in personalized PL plans. Providing PL often comes at a cost, sometimes so expensive only a limited number of people can participate. With a range of options available whenever needed, such as choice of self-guided online modules, PL can be efficiently individualized and more desirable (Common et al., 2021; Oakes et al., 2021).

Limitations and Future Directions

Review and interpretation of our results should be made with caution in light of a few limitations. First, we did not conduct a traditional member check to verify our findings. As originally planned, we used these data to draft implementation materials in the form of online learning modules to address prioritized Ci3T Leadership Team needs. We are working with participants as of the time of writing to show them the new PL products, provide time to explore and interact with the multimedia, and gain their additional feedback to determine the extent to which we are meeting their needs. In other words, we are conducting our member check through feedback received on products developed from the qualitative data. Future researchers during non-pandemic times might consider more proximal forms of member checking, such as through sharing transcripts or reviewing themes in a group format. Out of respect for participants' time during the COVID-19 pandemic, we did not employ these procedures.

A second limitation was participants were predominately White and female. Yet, these characteristics were similar to those of the districts' elementary faculty and staff. However, the current sample was older and more experienced compared to district elementary faculty and staff. While we achieved desired representation through purposive sampling for years of experience on the Ci3T Leadership Team and educator role (e.g., administrator, paraeducator, counselor, teacher), views of more diverse participants are necessary (see Table 2). In addition, it would be interesting for future research to determine if these findings are replicated with less experienced educators. We desired unique opinions and experiences from across roles and time on the team, and other demographics such as race/ethnicity were not included as considerations during sampling procedures. Future studies should endeavor to have a more balanced

sample across demographics, educator role, and years of experience as a Ci3T Leadership Team member.

Summary

Between interviewees and focus group participants, we identified the most common facilitators for implementing Ci3T were PL, structured and regular Ci3T Leadership Team meetings, efficient use of time, communication, data sharing, and on-boarding new staff. Common barriers for school leaders implementing Ci3T were identified as lack of time to do the work, lack of buy-in, low prioritization or support from building administrators, and lack of training/support to understand logistics. Prioritized needs matched these perceived barriers, with our sample desiring more PL to support buy-in; onboard new faculty, staff, and administrators; and interpret and utilize data. We will use these data to develop on-demand PL resources to meet these needs and support high-fidelity Ci3T implementation during initial years, through full operation, and in sustainability years.

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