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Utilizing a Telementoring Model to Promote the Evidence-Based School Counseling Model

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Abstract

Telementoring is a low-cost, flexible way for school mental health professionals to access professional learning. Using a mixed-methods intervention design, we examined the impact of prolonged telementoring on school mental health professionals' (school counselors, psychologists, social workers, and others) understanding and application of evidence-based school counseling, including associations between their use of evidence-based, culturally responsive, and collaborative practices to support student mental health. Our findings demonstrate support for the use of telementoring to improve school mental health professionals' understanding and application of the evidence-based school counseling model. We provide specific considerations for school counseling professionals.

Keywords

evidence-based school counseling, school mental health, school mental health professionals, school counseling, telementoring

Introduction

Youth mental health concerns have dramatically worsened since the COVID-19 pandemic and exacerbation of existing racial inequities (Jones et al., 2022). From 2009 to 2019, adolescents reported a 50% increase in persistent feelings of sadness or hopelessness (from 26.1% to 36.7%), a 36% increase in seriously considering attempting suicide (from 13.8% to 18.8%), and a 41% increase in suicide attempts (from 6.3% to 8.9%; Jones et al., 2022). Since the pandemic began in March 2020, more than one in three high school students (37.1%) reported that their mental health was poor most of the time or always during the COVID-19 pandemic and one in five (19.9%) had seriously considered attempting suicide (Jones et al., 2022). Among historically marginalized youth, mental health outcomes are even worse. For example, 66% of lesbian, gay, and bisexual students reported feeling persistently sad or hopeless compared to 32.2% of heterosexual peers; and 40% of Hispanic and 36% of Black students reported feeling persistently sad or hopeless (relative to 31.5% of White students; Centers for Disease Control and Prevention, 2019). Regarding location differences, students living in small communities receive fewer mental health services due to provider shortages (Ezekiel et al., 2021), and reported more mental health problems relative to those living in more populated areas (Bitsko et al., 2018).

The mental health needs of K–12 students require urgent attention and creative solutions. Although scholars have developed a body of research evidence on effective school mental health practices over the past 3 decades (Bradshaw et al., 2022; Weist & Evans, 2005), this research evidence is rarely used (Belser & Mason, 2021; Young & Kaffenberger, 2011; Young et al., 2015). In this article, we explore efforts of a statewide research-practice partnership to improve the use of research evidence following a three-part definition of research evidence described by Dimmitt et al. (2007). We use quantitative and qualitative data to examine changes in school mental health professionals' evidence-based practices (EBPs) following participation in a professional learning community, the *Extension for Community Healthcare Outcomes* (ECHO) model (Arora et al., 2007).

Telementoring

In response to known challenges associated with school counselors' use of EBPs (Mullen et al., 2019), novel strategies may improve the research-to-practice gap. One approach, which is the focus of the current study, is a form of telementoring known as the ECHO model. Telementoring refers to a training

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and support practice that occurs virtually and emphasizes collaborative relationships established among individuals. The ECHO model allows researchers and practitioners to share knowledge about EBPs and real-world applications. It is designed to facilitate knowledge acquisition and skill transfer using adult learning principles that emphasize active learning and relevant skills (Darling-Hammond et al., 2017; Taylor & Hamdy, 2013). Empirical studies of the ECHO model tend to show moderate positive changes in clinicians' self-efficacy and knowledge about EBPs, and positive client outcomes (Arora et al., 2010, 2011). The structure of the ECHO model involves regularly scheduled, live, virtual meetings with an interdisciplinary team of four to five university faculty, referred to as the hub, who have research experience and content knowledge. Also participating are 20–30 community providers, referred to as the spokes.

In the current application of ECHO, university faculty represented the school mental health fields (i.e., school counseling, school psychology, school social work, and school nursing) and the participants were school mental health professionals employed by rural and high-need school districts. ECHO sessions are designed to foster a sense of community among participants in which "all teach, all learn" (Project ECHO, n.d.) through a brief didactic presentation about EBP from a hub team member followed by a case presentation and discussion from one of the school mental health professionals. During the discussion, participants ask questions of the case presenter to gain a deeper understanding of the situation. Next, the group generates recommendations for the provider to implement and address the challenge presented during the ECHO. Finally, participants and hub members ask the case presenter about their next steps and the feasibility of implementing the recommendations provided during the meeting. After each ECHO, the hub team meets to debrief and generate evidence-based recommendations and resources to be shared with all participants. The structure of ECHO provides participants opportunities to practice using data and empirical research to make decisions about how to support student mental health. This process is consistent with modern models of EBP, including evidence-based school counseling. Formative evaluation of midyear impacts of the current ECHO application indicated that the program had a large, positive effect on participants' practices and knowledge/skills associated with EBP (Zabek et al., 2022).

Evidence-Based School Counseling

Evidence-based school counseling (EBSC) involves a systematic approach for selecting, implementing, and evaluating practices that align with school goals (Dimmitt, et al., 2007; Zyromski & Dimmitt, 2022). The use of EBPs involves three elements: (a) defining a problem using data-driven practices, (b) using outcome research to address the problem with fidelity, and (c) evaluating the impact of the intervention and determining next steps. These three elements are intended to guard against potential errors in decision-making and improve the likelihood that a desired outcome will occur. Researchers have also described the ways in which EBSC is consistent with antiracist and socially just school counseling practices. Zyromski & Dimmitt (2022) wrote that "the EBSC approach can be used to address widespread, systemic barriers to student holistic life success that may be due to the pandemic, the profound negative impacts of institutionalized racism, or the multiple mental health difficulties that students are experiencing" (p. 2). In other words, the systematic approach described by EBSC provides a framework for identifying, and targeting, systemic inequities observed in schools. These include disparities in mental health and academic outcomes commonly observed across race, gender, and socioeconomic status of K–12 students (Jones et al., 2022).

EBSC Element One: Problem Description. One source of evidence within the EBSC model involves using available data to understand needs and potential challenges in the school counselor's setting. School counselors are routinely tasked with selecting and implementing interventions in response to a perceived need in their school (e.g., address instances of bullying; Dimmitt et al., 2007). Defining a problem historically relies heavily on quantitative data, access to data, and school counselors' knowledge of data-based decision-making. Although the prevalence and availability of student data has increased, school counselors continue to report that these data are difficult to access, and many do not have appropriate tools or training to use these data in actionable ways (e.g., Astramovich, 2016; Maras et al., 2013;). The ECHO model aims to improve school counselors' understanding of the problem description through improving data-based decision-making, case conceptualization, interdisciplinary collaboration, and increasing multicultural awareness and competence.

EBSC Element Two: Outcome Research Use. A second source of evidence within the EBSC model involves the use of empirical research. Over the last several decades, researchers and other stakeholders interested in school mental health have developed, refined, and rigorously tested a variety of interventions and supports intended to promote student mental health outcomes (Bardhoshi et al., 2019). These innovations include structured and semistructured interventions targeting common mental health needs observed in schools (Griffith et al., 2018), psychometrically validated assessment intended to identify and monitor changes in student mental health outcomes (e.g., Herman et al., 2019; Huang et al., 2019), and evidence-based approaches for engaging families and other community members in ways that promote equity and engagement (e.g., Michel et al., 2017). These innovations have been rigorously tested and are intended to be useful sources of information for school counselors and other school staff selecting strategies to support student mental health. For example, a counselor might use What Works Clearinghouse, a database of interventions and practices that have been rigorously tested and shown to have promising effects, to find strategies for addressing the needs identified in

their school setting (e.g., programs to effectively address bullying).

Unfortunately, barriers related to practitioners' access to empirical research are well documented (Poynton, 2009). For example, paywalls to accessing peer-reviewed articles, limited time to sift through large amounts of available data, and papers written for other researchers with highly technical details all contribute to persistent barriers associated with practitioners' ability to access appropriate information. Despite steps to increase access to empirical research with a focus on translation, school counselors and other school staff continue to report barriers related to accessing, and using, empirical research in routine practice.

EBSC Element Three: Intervention Evaluation. A final element of EBSC is intervention evaluation, which involves collecting new data and using this information to make decisions about the impact of the selected activity on the desired outcome. In other words, this element involves answering the question, "Did the selected intervention have the intended effect on the desired goal or outcome?" The purpose of this practice is not to make broad generalizations about the impact of the selected activity (that is done through outcome research described above); rather, the purpose here is to identify whether the activity impacted outcomes within the school counselor's specific context. Data collected may include information about changes to the desired outcome (e.g., Did instances of bullying decline over time?) and about the implementation of the selected activity (e.g., Did staff implement the bullying intervention as intended?). These data are then expected to be used to make judgments about whether to continue or adjust the selected activity (Dimmitt et al., 2007).

From the perspective of advancing goals related to equity and school mental health, this element is critical for assessing whether (or how much) observed disparities changed because of the selected activity (Fallon et al., 2021). Although outcome research can provide insight into what works, on average, local considerations may moderate the potential effectiveness of the selected activity. Evaluating changes associated with the intervention implementation helps identify that possibility.

Rationale

This study investigated whether and how ECHO participation supports the implementation of the EBSC model to support student mental health. Specifically, we sought to understand the ways in which ECHO participation may increase school counselors' and other school mental health professionals' understanding and application of EBPs with consideration of cultural and systemic contexts. To increase equity and access for underrepresented student groups, school counselors must engage in culturally responsive practices and effectively collaborate with others to create systemic change in schools (Dimmitt & Zyromski, 2020; Zyromski & Dimmitt, 2022). We explored two research questions:

1. What are the associations of ECHO participation with evidence-based, culturally responsive, and collaborative practices to support student mental health?
2. How does ECHO support the understanding and implementation of the core components of EBSC?

Method

We utilized a mixed-methods intervention design to investigate whether and how participation in monthly ECHO sessions supports the implementation of the EBSC model (Creswell & Creswell, 2017; Nastasi et al., 2007). To answer the research questions, we triangulated quantitative and qualitative data collected during the 2021–2022 implementation of training activities. Study methods are reported according to the Consolidated Criteria for Reporting Qualitative Studies (COREQ; Tong et al., 2007).

Design

This study reflects the evaluation research phase of the 2021–2022 (Year 2) implementation of a multiyear research-practice partnership (Nastasi et al., 2007). Using a mixed-methods intervention design, we conducted summative evaluation of Year 2 training activities. Program evaluation results from Year 1 and formative evaluation results of Year 2 indicated that ECHO participation was associated with greater satisfaction and engagement with training activities and with greater gains in EBP and interprofessional collaboration skills than asynchronous professional development opportunities (Lyons et al., 2022, Zabek et al., 2022). The present study utilized concurrent quantitative (pre/post measures of participants' school mental health competencies) and qualitative (postintervention focus groups with ECHO participants) data collection methods to facilitate data triangulation and comprehensively evaluate the Year 2 implementation of training activities (Nastasi et al., 2007).

Participants

This study occurred within a larger research-practice partnership (the Partnership) funded by the U.S. Department of Education to increase the number of qualified school mental health professionals in high-need school districts through professional development and supervision activities. We utilized three participant samples: all ECHO participants, focus group participants, and randomized control trial participants (see Table 1). ECHO participants included 42 school mental health professionals (40% school counselors) from six school districts in a southeastern state who were invited to take part in monthly ECHO sessions and given access to 12 supplementary online learning modules. Nine ECHO participants also participated in post-training focus groups. For comparison, 16 control group participants were only given access to the online learning modules (i.e., they did not participate in ECHO sessions).

Table 1. Participant Demographics and Group Difference Tests.

			Randomized control trial participants			
	Total ECHO (n = 42)	ECHO focus group (n = 9)	ECHO + modules (n = 28)	Modules only (n = 16)	Group difference tests	
Variable	n	n	n	n	χ^2	p
Position					5.32	.26
School counselor	17	3	9	5		
School nurse	2	0	2	5		
School psychologist	9	2	4	1		
School social worker	11	3	10	3		
Other school mental health professional	2	1	3	2		
Gender					1.06	.59
Female	32	7	22	10		
Male	3	0	2	2		
Prefer not to say	2	0	1	0		
Ethnicity					N/A	-
Hispanic/Latinx	1	0	0	0		
Not Hispanic/Latinx	35	6	23	12		
Race					2.39	.49
Black or African American	9	2	7	5		
Multiracial	4	1	2	0		
White or European American	22	4	14	7		
Another race	2	0	2	0		
Education					5.71	.13
Doctoral degree	3	1	1	0		
Specialist degree	7	1	4	0		
Master's degree	26	5	19	9		
Bachelor's degree	1	0	1	3		
State certification					2.01	.22[a]
Certified	36	7	24	9		
Not certified	1	0	1	2		
Supervision experience					4.20	.12
Current supervisor	14	2	4	1		
Past supervisor	17	4	15	4		
Never supervisor	6	1	6	7		

Note. Instances in which variable totals do not equal group sample sizes indicate missing data. Group difference tests reflect differences between the randomized control trial participants assigned to the ECHO + Modules condition versus the Modules only condition.
[a]Fisher's Exact Test.

Procedure

Six high-need school districts (e.g., with high concentrations of student poverty and high staff turnover rates) within one southeastern state were invited to participate in Year 2 of the Partnership's training activities. Training activities included (a) nine ECHO sessions (60 minutes per session) and (b) 12 asynchronous online learning modules, developed by researchers with consideration of the priorities identified by school leaders and practitioners (i.e., evidence-based school mental health interventions, supervision, and teaming). During summer 2021, Partnership staff worked with district leaders to identify and recruit participants.

Due to ECHO capacity limits, not all school mental health professionals in the invited districts were enrolled in ECHO sessions. Of the 58 who consented to participate in the research portion of the Partnership, 14 were assigned to participate in ECHO sessions for grant-related training reasons (i.e., being a current supervisor of a school mental health trainee). The remaining 44 school mental health professionals were randomly assigned (using a 2:1 ratio to maximize the number of ECHO participants and a stratified approach to make groups that were similar with respect to participants' profession and school district) to either the ECHO + Modules condition (n = 28) or the Modules only condition (n = 16). This randomization provided

an opportunity to explore group differences among participants who engaged in ECHO and those who did not.

Training Activities. **ECHO.** Participants involved in ECHO were invited to take part in nine monthly small-group sessions, which occurred virtually via Zoom beginning in September. Two ECHO groups were formed, each with four hub team members (university faculty/staff with research and content expertise in school mental health) and approximately 20 school mental health professionals serving as the spokes. Each 1-hour ECHO session followed the same protocol (10 minutes for introductions, 15 minutes for a didactic presentation by a hub team member, and 35 minutes for a deidentified case presentation and discussion by a school mental health professional participant). Didactic presentations focused on topics such as behavioral activation, cultural competence, and collaboration. Case presentations focused on current problems of practice participants were facing and typically involved individual student cases. After each session, case recommendations were summarized and sent to participants.

Online Learning Modules. All participants ($N = 58$) were given access to 12 self-paced online learning modules. Three sets of modules were released sequentially throughout the year (i.e., in September, December, and March). Each set focused on one of the three key priority areas identified by school partners: evidence-based and culturally responsive school mental health services (Modules 1–5), supervision in school mental health (Modules 6–8), and interprofessional collaboration in school mental health (Modules 9–12). Each module was designed to be completed independently in 60–90 minutes and included active learning opportunities, supplemental resources, and comprehension quizzes. Participants had to achieve a score of 80% on the end-of-module quiz to access the next module.

Focus Groups. Following the final ECHO session, we recruited participants via email to engage in focus groups. At the time interviews were scheduled (May–June 2022), 22 of the 42 ECHO participants had indicated interest in participating in focus groups. We scheduled focus groups of three to four participants using a combination of purposive (i.e., heterogeneous sampling across personal and professional characteristics) and convenience sampling (i.e., availability). We continued to schedule and conduct focus groups until data saturation was reached. A total of nine ECHO participants engaged in one of three focus groups (see Table 1 for focus group demographics). Focus groups were conducted via Zoom by a postdoctoral research associate with training and experience conducting focus groups who worked with the partnership but had minimal prior interactions with participants. A doctoral student research assistant was also present and took notes. At the onset of each focus group, facilitators introduced themselves, their roles, and the purpose of the focus group. Participants were encouraged to speak openly and honestly. Each focus group was recorded (audio and video) and lasted 60 minutes. Recordings were then transcribed by the doctoral student and deidentified.

Measures

In addition to quantitative and qualitative outcome measures, we used intervention records to assess participant engagement with training activities (e.g., module completion and ECHO attendance).

Quantitative Measures: Pre/Post-Training Surveys. **Evidence-Based Practices.** Two subscales from the Evidence-Based Practice Questionnaire (Upton & Upton, 2006) measured participants' application of EBP (six items asked how often participants engaged in practices, such as "tracked down relevant evidence or evaluated the outcomes of practices?") and skills associated with EBP (14 items asked participants to rate their practice ability, such as "critically analyze evidence or apply evidence to individual cases?"). For both subscales, participants responded on a 7-point scale (*Never* to *Always*, or *Poor* to *Excellent*), and internal reliability was acceptable at each timepoint ($\alpha > .80$).

We also measured knowledge of EBPs using a researcher-developed case study quiz, evaluated for content validity by clinically licensed university faculty with school mental health expertise. Participants read a case scenario and then answered multiple-choice questions based on the information (e.g., "Which type of cognitive-behavioral intervention strategy would be most effective?"). The four-item quiz demonstrated adequate discrimination and difficulty at both timepoints (M point-biserial correlation = .33, and p value = .71; Bashkov & Clauser, 2019).

Multicultural Competence. Two subscales from the School Psychology Multicultural Competence Scale (adapted to be relevant to all school mental health professionals; Malone et al., 2015) measured multicultural knowledge (five items; e.g., "I am knowledgeable of evidence-based intervention strategies used with culturally and linguistically diverse students") and multicultural skills (10 items; e.g., "I can effectively assess the mental health needs of a student from a cultural background significantly different from my own"). Participants responded on a 5-point scale (*Strongly disagree* to *Strongly agree*). For both subscales, internal reliability was acceptable at each timepoint ($\alpha > .75$).

Interprofessional Collaboration. We used two subscales from the Expanded School Mental Health Collaboration Instrument (adapted to reference to interprofessional collaboration within schools; Mellin et al., 2013) to measure the frequency/type of participants' interprofessional collaboration (eight items; e.g., "I develop plans for intervening with students with school mental health professionals from other disciplines") and associated interpersonal processes (eight items; e.g., "In my school/s, interdisciplinary school mental health professionals frequently communicate with one another"). Participants responded using a 5-point scale (*Never* to *Almost always* for frequency/type, and *Strongly disagree* to *Strongly agree* for processes). Internal reliability was acceptable at each timepoint for both subscales ($\alpha > .85$).

Qualitative Measures: Post-Training Focus Groups. Focus groups were facilitated following training using a semistructured guide developed a priori by the researchers. Participants were asked to provide feedback on their overall experience with ECHO and to reflect on how the training activities impacted their use of EBP, including the way that they use data, consider cultural and systemic factors, and collaborate with others.

Analyses

Data occurred in three stages (Creswell & Creswell, 2017). First, we qualitatively analyzed the ECHO focus group data using thematic analysis. Next, we quantitatively analyzed pre/post and implementation data using a series of statistical significance tests and estimates of effect sizes. Finally, we integrated these data using a side-by-side approach, comparing the quantitative and qualitative results, and using the qualitative results to understand why the results occurred and to explore potential mechanisms of change.

Quantitative Analyses. We conducted analyses using IBM SPSS Statistics 28 software, with two-tailed p values <.05 indicating significance. Descriptive statistics were calculated for all variables. The paired t test with a covariate (baseline scores) was used to evaluate pre/post changes in outcomes for all ECHO participants (Hedberg & Ayers, 2015). For participants in the randomized control portion of the study, we used chi-square tests to examine group equivalency with respect to professional and demographic characteristics, the independent t test to analyze group differences in module completion, and analysis of covariance (ANCOVA) to test group differences on post-test scores while controlling for pre-test scores.

Qualitative Analyses. We employed thematic analysis to analyze focus group data, using a hybrid of deductive and inductive coding to investigate the mechanisms through which ECHO may impact EBPs. This approach allowed for the core components of EBSC to be integral to the thematic analysis while allowing us to identify emerging themes (Fereday & Muir-Cochrane, 2006). Four of the coauthors, representing a diverse group of school counseling and school psychology faculty, researchers, and doctoral students, conducted thematic analysis and met regularly for consensus. First, we conducted careful readings of the transcript to familiarize ourselves with the data. Next, we generated an initial coding schema, which included both a priori codes associated with EBSC (i.e., problem description, outcome research use, and intervention evaluation, and consideration of cultural/systemic contexts and use of interprofessional collaboration) and emerging themes. We individually applied the coding schema to the first transcript and met again to review the themes and make any necessary modifications. The final coding framework included the five a priori themes and two emerging themes: the impact of the ECHO community and overall professional learning/growth. Then, we worked in pairs to double code the second and third transcripts and met to review the application of codes, using a consensus-based decision-making approach to resolve inconsistencies. Once all the data were coded, the team met to analyze and interpret the themes. To further ensure the trustworthiness of the thematic analysis, we triangulated qualitative themes with quantitative results to verify findings.

Results

Quantitative Results

Pre/Post Changes: ECHO Participants. ECHO participants were highly engaged, attending an average of seven of nine sessions. We conducted the paired t test with a covariate analysis to test pre/post changes in ECHO participants' evidence-based, culturally competent, and collaborative practices. Post-training, school mental health professionals scored significantly higher on all three measures of EBPs, both measures of multicultural competence, and the frequency/types of interprofessional collaboration (see Table 2). Improvements in application of the EBP process and in skills associated with EBP demonstrated the largest effect sizes (d = .80 and .76, respectively). We observed

Table 2. Pre/Post-Training Change in Practitioner Competency: All ECHO Participants.

		Pre		Post					Cohen's
Measure	*n*	*M*	*SD*	*M*	*SD*	*t*	df	*p*	*d*
Evidence-based practice									
Application of EBP process	26	3.98	1.32	4.78	1.02	5.30	24	< .001	.82
EBP skills	28	5.00	.78	5.45	.58	5.31	26	< .001	.75
EBP knowledge: Case study	29	2.72	1.16	3.24	1.06	2.97	27	.006	.46
Multicultural competence									
Knowledge	27	3.33	.63	3.87	.43	6.48	25	< .001	.69
Skills	27	3.86	.37	4.09	.28	4.56	25	< .001	.63
Interprofessional collaboration									
Frequency/types	29	3.47	.78	3.66	.62	2.13	27	.043	.32
Interpersonal processes	29	3.88	.61	4.06	.59	1.86	27	.075	.30

medium effect sizes on multicultural knowledge and skills ($d = .69$ and .63, respectively), and small effect sizes on the EBP case study and on frequency/types of interprofessional collaboration ($d = .46$ and .32, respectively). Changes in the interpersonal processes associated with interprofessional collaboration approached significance: $t = 1.86$, $p = .08$, $d = .30$.

Group Differences: Randomized Control Trial Participants. Results supported the comparability of the two groups with respect to personal or professional demographic characteristics (see Table 1). School mental health professionals in the ECHO + Modules condition completed significantly more learning modules ($M = 10.5$) than those in the Modules only condition ($M = 3.6$): $t = 4.84$, $p < .001$. Similarly, ECHO + Modules participants were also significantly more likely to complete the post-training surveys ($n = 24$) than Modules only participants ($n = 5$): $\chi^2 = 13.44$, $p < .001$. Within-group t tests suggested that, although completion of post-training surveys was not associated with module engagement in the ECHO + Module condition ($t = 1.34$, $p = .27$), the Modules only participants who completed post-training surveys were significantly more engaged with modules (M modules completion = 10.4) than those who did not ($M = 0.5$): $t = 6.14$, $p < .01$. Notably, among participants who completed the surveys, we found no differences between conditions in the number of completed modules: $t = .52$, $p = .61$. Thus, ANCOVA results reflect differences between those in the ECHO + Modules condition and the most engaged participants in the Modules only condition Table 3.

Due to the low completion rate of postintervention surveys among Modules only participants, we were only powered to detect large effect sizes ($d > 1.0$). ANCOVA results revealed that the ECHO + Module group showed significantly greater improvements when compared to the Modules only group on post-training scores of the interpersonal processes associated with interprofessional collaboration: $F(1, 21) = 5.94$, $p = .02$, $d = 1.22$. Although we did not observe statistically significant group differences on other post-training outcomes, effect size estimates suggest that ECHO had small-to-medium, favorable effects on multicultural knowledge ($d = .76$), EBP knowledge ($d = .62$) and skills ($d = .24$), and the frequency of interprofessional collaboration ($d = .20$).

Qualitative Results

Themes emerging from the focus groups were consistent with the quantitative data. Individuals in the focus groups consistently described how ECHO participation influenced their professional practices related to the three elements of EBSC. Further, focus group members also identified how ECHO participation facilitated community building and interprofessional collaboration.

EBSC Element One: Problem Description. The problem description theme encompassed how ECHO training facilitated school mental health professionals' knowledge and practices related to identifying student needs and conceptualizing cases within larger systems. Focus groups discussed how training activities reinforced "the importance of assessing, like, the needs assessment—what do you need before you're implementing things to make sure you ensure something that's very necessary?" One participant described, "certainly [the training]'s going to help when I develop my annual goals . . . making sure that we're assessing the needs of the students and then pinpointing where there are deficiencies." ECHO participants also revealed how the training encouraged them to utilize data-driven practices to understand student needs and how to intervene. For example, one participant reported:

> I think just being more aware of it. . . . We've always done like a needs assessment of our students to drive our activities for the school year, but to really kind of hone in on what the needs of our students are, and so, you know, finding ways to make sure that we're always circling back to the data that we have and how we can best benefit our students.

Table 3. Group Differences in Post-Training Scores: Randomized Control Trial Participants.

	ECHO + Module			Module only					Cohen's
Measure	*n*	*M*	*SE*	*n*	*d*	*SE*	*F*	*p*	*d*
Evidence-based practice									
EBP practices	17	4.48	.19	3	4.59	.48	.04 (1, 17)	.84	.10
EBP skills	19	5.34	.11	3	5.17	.30	.27 (1, 19)	.61	.24
EBP knowledge: Case study	18	3.27	.25	4	2.54	.54	1.51 (1, 19)	.23	.62
Multicultural competence									
Knowledge	19	3.84	.11	4	3.40	.28	1.92 (1, 20)	.18	.76
Skills	19	4.03	.07	4	3.97	.17	.11 (1, 20)	.75	.15
Interprofessional collaboration									
Frequency/types	20	3.63	.11	4	3.46	.26	.33 (1, 21)	.57	.20
Interpersonal processes	20	4.11	.16	4	3.12	.37	5.94 (1, 21)	.02	1.22

Note. Means are adjusted for pretraining scores.

Participants also discussed how ECHO influenced their conceptualization of cases to consider how student needs are impacted by ecological systems. For example, one participant described how case discussions affected the way she conceptualized students' needs:

> We would talk about just kind of the climate at the schools and what was going on in the classroom. A couple of times people asked about the racial makeup of the teachers versus the students, and that seems to be a common question. And I mean, I think that's a difficult question to ask. It makes us kind of really look at what's going on in our classrooms, and, you know, representation and how that impacts our students.

EBSC Element Two: Outcome Research Use. Focus group participants discussed how the ECHO model facilitated their use of outcome research and prompted them to tailor interventions to the unique needs of their students and schools. One school mental health professional described how ECHO:

> gave me more of a push . . . to make sure that the things that I'm doing with my students and families are research based, and it made me more conscious of that when I'm approaching situations—looking to see what evidence is there and how I can utilize it.

Four patterns emerged with respect to how the ECHO model impacted participants' use of research evidence. First, the hub team facilitated the transfer of research evidence during case presentations by asking questions that encouraged participants to consider whether what they are doing is supported by research and by providing innovative recommendations supported by empirical research. One school mental health professional explained: "One of the good things about having feedback from the partners is that it was sort of an out-of-the-box way of thinking and gave us some alternatives that we might not have considered." Second, participants were able to apply the strategies suggested by others during case discussions to their own practice: "Hearing what's going on and how they're applying different interventions . . . give[s] you ideas and help[s] you think through things." Third, ECHO participants were encouraged to reflect on their own practices to ensure that the services they provide are aligned with the needs of the students and families with whom they work. A participant expressed that ECHOs were helpful in "making sure that the services that we deliver are in sync with the needs . . . so that we can deliver appropriate—like groups, if there needs to be like a stress management group or whatever the need happens to be." Finally, participants were able to apply specific recommendations made during case discussions to improve outcomes for students and families. For example, one participant described the progress of a case she presented during an ECHO session: "We took a couple of the recommendations, and it did better our relationship with the parent. . . . So, I'm hopeful, and that really is because of that case presentation and the great feedback that was given."

EBSC Element Three: Intervention Evaluation. Another recurring theme throughout the focus groups was intervention evaluation, which described whether ECHO training impacted the way participants assessed and reflected upon the impact of their services. Intervention evaluation was most often discussed with respect to how training activities impacted the way participants were thinking about and using data to assess their services:

> There needs to be a point where you look at the interventions that you're delivering to that student and determining whether or not they're really working. . . . You can't just be on autopilot . . . which sometimes a lot of us are. We deliver things in the same way, and then we don't go back and collect data on the effectiveness of whatever we're doing.

Participants expressed that the training activities helped them identify quantifiable data that they could use to monitor progress in addition to qualitative reports:

> That was one of the most beneficial things. . . . I really liked the emphasis on 'look at nurse visits, look at the number of absences, look at the number of x, y, z'—so something that's countable, measurable.

The training activities not only encouraged participants to compare pre/post intervention data (e.g., "Your pre and post measurements, developing those baselines . . . I think that's extremely important and something that I'm more aware of"), but also to use data to monitor progress and check for understanding during service delivery (e.g., "The data becomes have they understood the concepts, can they tell me what those are, give me an example of how you could use it in your life. . . . That kind of data helps me move forward"). Finally, participants explained how the ECHO sessions and modules helped them better understand the importance of collecting data to evaluate interventions. For example:

> The ECHO sessions and the modules were really helpful in understanding the why behind collecting really good data . . . and kind of translating, okay, well this is really good practice. What does it look like? Like, how can we do this in a way that is practical for all domains in the school building? Because reading interventions, math interventions, I mean they're collecting daily and weekly data. So, why can't we, you know, create systems that also collect really good data for mental health?

Interprofessional Collaboration and Cultural/Systemic Contexts. While describing the ways in which the ECHO model impacted their understanding and utilization of the three elements of EBSC, focus groups also frequently noted how training activities changed the way that they collaborate with others and consider cultural and systemic contexts within their practice. These themes frequently co-occurred with themes about the three elements of EBSC (e.g., considering systemic issues when identifying student needs), and also occurred independently.

Focus group participants explained how ECHO sessions, particularly the case discussions, encouraged them to consider cultural and systemic contexts within their decision-making practices:

> That is one of the strengths of this program—that those kinds of issues get raised when the case studies are being presented, and they make you think again about equity, and assumptions, and things that we need to do on a daily basis.

The ECHO case discussions provided school mental health professionals with structured opportunities to consider how systemic and cultural factors influence cases. For instance, one participant described how having frank conversations about inequities during case discussions enabled them to better understand how to support their student:

> One of the biggest factors was just cultural background and ethnicity. . . . I appreciated the honesty of, of questions, of conversations, in regard to, within a system that is inequitable, how do we better, as mental health professionals, support this family and sort of support these kids so that we are making sure that they get what they need when they're here, regardless of who they are and what they look like. So, I would say I appreciated the willingness of others to have that conversation.

Training activities also facilitated school mental health professionals' capacity to engage in another critical component of serving students under the EBSC model: teaming and collaboration. Many participants described ECHO sessions as a model of interprofessional collaboration that they could translate to their own practice. For example, one said, "What stuck out to me the most was the collaboration piece because it was modeled for us within the ECHO session. . . . That is such an incredible way to model how collaboration should work." Participants frequently discussed how training activities facilitated their understanding of the roles and functions of other school mental health professionals and how they could better collaborate to improve services:

> That was helpful for me to understand better the specific roles—like school psychologist, social worker—and how that collaboration can better work so that we're actually working for our students and families and not kind of being siloed. . . . It was really good knowledge to have to be able to collaborate better and understand who does what, and why.

Finally, the ECHO model facilitated real-time collaboration among participants in the same school districts. Participants were able to collaborate with colleagues to apply learning to their schools:

> We were able to kind of carve out time after our ECHOs and talk through, you know, what we heard, and how can we apply it to what we're doing here. . . . It was very much a part of our conversations this year, and it gave us kind of the framework to have the conversations that we needed to have, and I think it's making us a better team.

An important outcome was that school mental health professionals were able to respond to real cases presented by others in their districts to coordinate collaborative responses:

> There were a couple of instances where we heard about students . . . and right after, we were able to connect with, you know, the school counselor or admin at that school to figure out how we could intervene. And so, that was extremely helpful for us. It was also helpful for those students because we were able to fill in some gaps and get a greater understanding about what was going on.

Utilizing the ECHO Community to Facilitate Professional Learning. Participants repeatedly described the ECHO experience as building a collaborative community infused with professional learning. The community aspect of ECHO is a cornerstone of the model to enhance professional learning for those who may have limited opportunities for collaboration or supervision. Participants described ECHOs as building connection (e.g., "It was good to see that other educators and colleagues are having some of the same experiences with students"), trust (e.g., "This was maybe a safe space for everyone to kind of process and to be vulnerable without judgment that was a good thing"), and interdisciplinary learning:

> I think it really speaks to the power of human connection and just carved-out time; it's like a form of supervision in a way, because we're helping each other grow, but as an elementary counselor who for almost 20 years has been isolated in a school, it's been really, really helpful to be around other professionals and other people from other disciplines to learn and grow together. . . . It's the first time ever I've had the opportunity to talk through cases with other counselors since grad school, like the first time, so that's really powerful.

One participant described an enriching growth experience and feeling empowered to advocate for their students as a result of the ECHO community:

> The big picture—helping me grow as a counselor for sure, and advocate for myself, and advocate for my role, and advocate for my students, and just be more confident in that way. I mean that's evolved over time, but the group has been a part of that process, and I'm finding my voice in my role, you know, and advocating for my role.

Finally, the ongoing nature of the ECHO sessions in collaboration with the modules provided participants with continuous access to professional supervision, collaboration, and opportunities to learn. Participants were highly satisfied with this level of engagement.

> It's not just a one and done. The modules you get through and then you could set aside. The ECHOs—it was ongoing professional development, where we were pulled in and engaged and reminded to think about all that information, as opposed to just filling it out and sort of setting it aside and moving on. So, I knew that was part of my work life this school year was that I would be hearing and seeing other professionals on the screen, and we, there would be some level of accountability and just engagement.

Discussion

In 2020, Dimmitt and Zyromski described challenges to the existing EBSC paradigm and offered several recommendations to "thoughtfully evolve" (p. 1) the EBSC framework. These recommendations include several key components of our research, including increasing interdisciplinary collaboration, advancing knowledge of what counseling interventions work with students, and improving the use of EBPs to address widespread student mental health concerns. This study examined how the ECHO model supports school mental health professionals' understanding and implementation of the three core components of EBSC: knowing what needs to be addressed, knowing what is likely to work, and knowing if the intervention worked (Dimmitt et al., 2007). Based on the evolving framework of EBSC, we further explored the associations of ECHO participation with school mental health professionals' application of EBPs, multicultural competence, and frequency of interdisciplinary collaboration (Dimmitt & Zyromski, 2020).

Using a mixed-methods design, we were able to quantitatively examine the associations of ECHO with the components of EBSC and qualitatively explore how ECHO influenced these outcomes. In response to our first research question, quantitative results provided support for the impact of ECHO on participants' knowledge and use of evidence-based, culturally competent, and collaborative practices to support student mental health. ECHO participants demonstrated the largest pre/post-training growth with respect to their application of an evidence-based process and in knowledge and skills related to EBPs and multicultural competence (d = .46–.82). This growth is consistent with studies of ECHO in other fields and extends the evidence base for ECHO by demonstrating its use in school mental health settings (Arora et al., 2010; Mazurek et al., 2019; Zhou et al., 2016). Group difference results from our randomized control trial supported the role of ECHO in these pre/post changes. Compared to Modules only participants, ECHO + Modules participants demonstrated significantly greater improvements in their collaborative processes (d = 1.22), and effect size estimates revealed moderate positive impacts of ECHO on participants' knowledge of evidence-based and culturally competent practices. Like previous studies, we found that ECHO participation was associated with increased engagement with supplementary learning modules (Lyons et al., 2022). However, Modules only participants who returned post-training surveys demonstrated similar levels of module engagement as those in the ECHO condition. Thus, our findings reflected the impact of ECHO when compared to the most engaged participants in the Modules only condition.

Our qualitative findings further confirmed these quantitative results by demonstrating that participation in the ECHOs enhanced school mental health professionals' perceived understanding of the core components of EBSC. In recent years, scholars have pushed for the inclusion of qualitative data to better understand problems of practice from a social justice perspective (Fallon et al., 2021; Safir & Dugan, 2021). Participants described understanding problems through an ecological lens and a greater ability to conceptualize cases from a systems standpoint. Furthermore, the ECHO model helped school mental health professionals identify various sources of data to determine student needs. For instance, while working through case studies, participants were able to recognize contextual and systems issues that impacted student mental health. Participants continually noted how ECHO participation helped them better understand student needs to select appropriate research-based interventions. Participants further described how to better monitor student progress to determine intervention efficacy. Beyond the three primary elements of EBSC, participants frequently mentioned how ECHOs enhanced their interprofessional collaboration and increased awareness of cultural and systemic contexts in school settings.

Qualitative results also provided insight into how ECHO supports the understanding and implementation of the core components of EBSC (Research Question 2). Consistent with previous studies of ECHO, participants emphasized the critical role of case discussions for helping them contextualize student needs within systems, identify cultural and environmental factors that may influence cases, and apply research evidence to real-life practice (Socolovsky et al., 2013). ECHO participants described how ongoing consultation in the sessions with both research partners and peers exposed them to novel interventions and strategies from a variety of perspectives that they could apply to their own practice. ECHO sessions also reinforced the benefits of interprofessional collaboration and provided a model for collaborative practices—a critical component of effective school mental health systems (Markle et al., 2014). Similarly, ECHO sessions facilitated collaborative responses among participants within the same school districts, where case discussions prompted immediate action from interdisciplinary school mental health professionals to support student needs. In general, participants were enthusiastic about the ECHO model, appreciated the learning environment, and felt connected to the ECHO community. These feelings appeared to translate to increased engagement in training activities, decreased experiences of professional isolation, and improvements in professional self-efficacy and advocacy. Overall, both our quantitative and qualitative findings provide support for the use of ECHO for

improving school mental health professionals' understanding and application of the EBSC model.

Limitations

Pre-to-post changes in ECHO participants' knowledge and practices should not be interpreted as causal effects. To explore the ECHO intervention effect, we employed a randomized control trial design using a comparison condition (Modules only). However, participants in this condition were significantly less engaged in training activities and less likely to complete post-training surveys, reducing our final sample size and power to detect small-to-moderate group differences. Although the effect size estimates obtained in this study were comparable to other evaluations of ECHO (Zhou et al., 2016) and both group difference results and qualitative findings supported the role of ECHO in facilitating the observed growth, future studies of ECHO for school mental health applications should use larger sample sizes within experimental designs to provide a stronger estimate of causal effects and limit threats to internal validity.

Implications for Practice

The documented decline of youth mental health presents an urgent need to improve school-based counseling services (Racine et al., 2020). This study suggests that telementoring models, such as ECHO, increase school mental health professionals' data-driven practices, outcome research use, and intervention evaluation. An important finding is that ECHO appears to support school mental health professionals' collaborative practices and understanding of EBPs with consideration of cultural and systemic contexts. These skills are critical to efforts to increase equity and access for underrepresented student groups, because these efforts require school mental health professionals to effectively collaborate with others in culturally responsive ways to create systemic change in schools (Dimmitt & Zyromski, 2020; Zyromski & Dimmitt, 2022). School counselors need access to high-quality, focused professional development to improve practice (Dahir et al., 2019). When professional development is delivered in short bursts, it rarely contributes to long-term, sustainable change (Darling-Hammond et al., 2017). The ECHO model offers an accessible, reliable, low-cost, and scalable platform for prolonged engagement and interdisciplinary collaboration (Lyons et al., 2022). These factors are critical to consider when selecting professional learning/training for school counselors. We recommend that school district leaders, in collaboration with school counselors, develop professional training that offers prolonged and sustainable engagement with learning materials.

The research-to-practice gap has been widely discussed in educational arenas with few viable solutions. Belser and Mason (2021) found that school counselors seek and consume information from blogs and social media more frequently than scholarly journals. Although school counselors believe research is important, almost half of those surveyed noted that they are unlikely to seek information from scholarly sources when faced with a problem of practice. ECHOs provide an ideal format to facilitate the transfer of research evidence between university faculty and practitioners (Lyons et al., 2022). Practitioners could benefit from regularly scheduled interdisciplinary consultation/supervision groups with counselor educators following the ECHO model (Brott et al., 2021; Lyons et al., 2022). Specifically, those who have limited access to a collaborative network or who work in isolation (i.e., rural, small, or elementary settings) could develop and/or strengthen EBSC practices utilizing a telementoring model.

The ability to understand and disaggregate system-level data is imperative to provide culturally responsive and antiracist interventions at the student level. In this study, participants frequently described how discussing real-world scenarios in a semistructured environment improved their case conceptualization skills. The program consistently challenged them to think differently about student cases from a systems perspective. This process offered greater insight into cultural and ecological factors while enhancing discussions around "What is evidence?" Under the current EBSC model, quantitative data is frequently relied on to apply and evaluate student interventions (Dimmitt et al., 2007). The evolution of the EBSC model challenges school counseling professionals to consider ecological, cultural, and sociopolitical factors related to creating and sustaining socially just environments (Dimmitt & Zyromski, 2020). Participants of this study felt "thankful" to have a safe space to explore cultural and contextual factors that impacted student outcomes. Our results suggest that participants experience an accountability process within the ECHOs, as they were called into critical conversations related to systematic injustice. It is suggested that school counseling professionals continually evaluate their understanding of data, evidence, and systems factors that harm students. Moreover, conceptualizing student cases from an antiracist lens and considering both student and system factors is important for school counselors when determining student need, selecting interventions, and evaluating progress.

Conclusion

As we continue to change the status quo of EBSC, a clear and consistent need remains for professional learning to make disseminating knowledge to practitioners more effective and accessible. Results of this study illustrate how the utilization of telementoring can enhance school mental health professionals' use and application of EBSC to address widespread youth mental health concerns. Moreover, our findings highlight how prolonged engagement with professional learning improved key components of an integrative EBSC model, such as intradisciplinary collaboration, culturally responsive practices, and knowledge of evidence-based approaches to intervention. The dual pandemics of COVID-19 and systemic racism, and the subsequent youth mental health crisis, make these initiatives even more imperative. Telementoring is an accessible and

promising method of transferring knowledge to address these critical concerns.

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