



Using Project ECHO to Keep Professionals Well at Work: Individual and Organizational Outcomes

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Abstract

Objective The toll of COVID-19 stress on the mental health of the workforce has been well-documented. The present study examined the use of the Project ECHO framework to provide practices and resources on stress management and emotion regulation to increase individual and organizational health and well-being.

Methods Three independent ECHOs were designed and conducted over an 18-month period. Data was collected on the implementation of new learning and comparisons of organizational efforts toward being more secondary trauma responsive from baseline to post initiative, using cloud-based survey methods.

Results Findings suggest that the use of micro-interventions at the organizational level improved over time in the areas of resilience-building and policy-making, and that individuals were actively integrating skills related to managing their stress.

Conclusions Lessons learned adapting and implementing ECHO strategies in the midst of a pandemic are offered, as well as how to cultivate wellness champions in the workforce.

Keywords Professional well-being · Secondary traumatic stress · Project ECHO · COVID

The pandemic created unprecedented health and wellness challenges to the workforce [1]. As such, methods are needed to address the well-being of professionals that are feasible, effective, and available to a geographically diverse audience. Project Extension for Community Healthcare Outcomes (Project ECHO) is a collaborative education/mentoring initiative designed to address this need. An ECHO is a curriculum-based series of web-hosted interactions between the hub (subject matter experts) and the spokes (the learners) that transfers content expertise from an academic center to lower-resourced regions and organizations. To facilitate application, members of the hub present an anonymized case and a didactic related to the scenario. After the presentation, the spokes discuss what they have learned and generate recommendations on how to manage the case. Lastly, the experts provide their own advice [2]. This model is

particularly relevant for academic psychiatry as it provides psychoeducation, and the teaching of self-regulation skills to large groups, thereby disseminating evidence-based mental health information broadly. The present study examined the utility of the Project ECHO framework to facilitate the use of individual and organizational health and well-being strategies in a wide range of providers.

Methods

ECHO series participants were predominantly female (90%) who worked within healthcare organizations such as hospitals, outpatient health centers (21.11%), and community mental health clinics including residential treatment programs (9.05%), hospice (2.71%), and state agencies representing child welfare, behavioral health (10.41%), and school settings (56.56%). Non-clinical service providers (31.25%), clinicians (26.25%), supervisors (20%), managers (17.5%), and senior executives (chairs, directors, Chief Executive Officers) (2.5%) were represented.

Three ECHOs were designed and conducted. The first, *Health and Wellness in Uncertain Times: Strategies for*

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Being Well@Work, was conducted from November 2020 through March 2021 and had 88 registrants (62.5% healthcare; 20.6% community mental health; 12.2% schools/education; and 4.7% state agencies). Spokes were recruited via emails and direct marketing from health and behavioral healthcare systems throughout the state, though representatives from any organization that had been severely impacted by COVID-19 were allowed to participate. Topics for series one were delivered once a month and included Building Relational Connections, Addressing Secondary Traumatic Stress, Personal and Community Resilience, Psychological First Aid, and Moral Distress.

The second ECHO ran from October through November 2021 with 221 attendees that included school personnel (51.1%), health/behavioral health workers (40.5%), and state agency workers (8.4%). Spokes were recruited in a similar manner through school systems, and the Department of Education was included. The second offering included five weekly topics, namely the Science of Hope, Addressing COVID Fatigue, Compassion-based Practices, Meaning-Making, and Peer-to-Peer Psychological First Aid.

The third ECHO ran from February through March 2022 and drew 86 registrants (healthcare = 35.7%; behavioral health = 28.6%; school personnel = 26.1%; and state agencies = 9.6%) who were recruited using the same methods used in previous sessions. The five weekly topics for the third ECHO session are Mindfulness to Manage Stress, Preventing Secondary Traumatic Stress, Building Resilience after Grief and Loss, Positive Coping Using the Circle of Influence, and How Not to Lose Faith.

Each session was led by a hub member via Zoom who described a hypothetical case example relevant to the session's topic. These cases described a problem statement, the way the dilemma manifested, solutions attempted, and questions for the group. Next, a hub member presented a 15-min didactic covering the research and strategies to address the case. Spoke attendees were randomly distributed into hub-facilitated breakout groups to generate agency-specific recommendations to address case issues. Finally, hub faculty shared recommendations that were action-oriented and easily implementable across settings. The ECHO session concluded with a mindfulness activity, an evaluation, and a list of takeaway strategies. Each ECHO was limited to 60 min and occurred during the lunch hour. The study protocol was approved by the University of Kentucky Institutional Review Board.

The Skill Utilization Checklist (available from the corresponding author) was constructed as part of this ECHO series to represent the 27 wellness strategies that were taught over the course of the offerings (e.g., mindfulness, grounding exercises, meaning-making, strategies to cultivate hope, marking boundaries, low impact processing). Each participant was asked to select all that they had utilized since the ECHO sessions. An "I have not used any of these strategies"

option was provided. The Skill Utilization Checklist was administered at the end of the ECHO series.

At the end of the series, participants were asked to rate the impact of the sessions on their daily work, the level of integration of new skills into practice, and the utility of the content using a Likert scale from 1 (low) to 5 (high). Participants were asked if they would recommend the series to a colleague to create a Net Promoter Score, a learner experience metric where respondents give a rating between 0 (not at all likely) and 10 (extremely likely). Responses were categorized into promoters (scores 9–10), passives (scores 7–8), and detractors (scores 0–6). The Net Promoter Score (NPS) is determined by subtracting the percentage of participants who are detractors from the percentage who are promoters, with higher scores indicating a more favorable review.

The *Secondary Traumatic Stress Informed Organizational Assessment Pandemic Version (STSI-OAP)* was used as a pre- and post-assessment of the degree to which an organization addresses secondary trauma in the organization (aka is STS-informed) [3]. The 40-item measure includes five domains of activity related to organizational promotion of resilience-building activities (7 items); the degree to which an organization promotes physical and psychological safety (7 items); the degree to which the organization has STS relevant policies (6 items); how STS informed respondent rate leadership practices (9 items); and routine organizational practices (11 items). These response categories include (0) not applicable, (1) not at all, (2) rarely, (3) somewhat, (4) mostly, and (5) completely. Possible scores range from 0 to 200, with higher scores indicating the organization is more STS-informed.

Results

Seven skills received endorsement from over 20% of the respondents. The top two skills, practicing gratitude and how to stay inside the Window of Tolerance [4] (using mindfulness awareness, reducing indirect trauma exposure, self-regulation, and trauma-informed supervision), were endorsed as being used by 57.14%, and 47.6% of respondents, respectively. Mindfulness activities (42.8%), self-regulation methods (39.6%), grounding exercises (34.9%), strategies to cultivate hope (28.5%), and the Four A's to address Moral Distress (Ask, Affirm, Assess, and Act) complete the top tier of adopted skills. Notably, the individually focused coping skills were most endorsed, though the integration of organizationally focused peer support strategies was also evident (e.g., reflective supervision, affinity groups, resilience buddies). No respondent selected "I have not used any of these strategies."

Only data from participants who completed five or more sessions were included in follow-up analysis. Overall,

participants ($N=63$) rated the ECHO series as having high impact ($M=4.51$, $SD=0.59$), and usefulness ($M=4.46$, $SD=0.74$). In terms of integration of knowledge and skills into their professional life, there was evidence of considerable application at work ($M=4.17$, $SD=1.04$). Table 1 shows the breakdown of responses by category for each question. There was a significant, positive correlation between the number of sessions attended and higher ratings on impact ($r=0.327$, $p=0.013$) and the perceived utility ($r=0.464$, $p<0.001$).

A total Net Promoter Score of 81 was achieved, with 81% scoring in the promoter range and 19% in the passive category. There were no detractors.

Independent sample t -tests reveal statistically significant changes in total STSI-OA scores from baseline to post, for those participants who completed at least five sessions and the STSI-OA, with significant improvements in Resiliency domain and the Policy Domain scores. Although mean scores improved from baseline to post in the other STSI-OA domains, these changes were not statistically significant (see Table 2).

Discussion

This paper describes the implementation and outcomes of a three-part, ECHO series designed as a “just-in-time” response to COVID-19’s impact on professional well-being in a broad range of professionals. This was especially important during the pandemic, as many professionals found that crucial resources were diverted from workforce development and protection to crisis management and organizational survival [4]. Participants reported using self-regulation and resilience-building skills, and indicated their organizations

Table 2 Baseline and post scores for all STSI-OAP domains and total score

Domain	Time	<i>N</i>	Mean (SD)	<i>F</i>	<i>d</i>
Resilience	Baseline	154	21.40 (6.06)	4.979*	.933
	Post	62	27.24 (6.75)		
Safety	Baseline	154	22.25 (6.91)	1.383	.617
	Post	62	26.56 (7.19)		
Policy	Baseline	143	17.85 (6.18)	6.303	.560
	Post	62	21.52 (7.35)		
Leadership practices	Baseline	142	26.86 (9.63)	.698	.891
	Post	62	35.48 (9.78)		
Organizational practices	Baseline	136	19.29 (7.69)	2.549	.870
	Post	60	26.13 (8.25)		
Eval/monitoring	Baseline	136	10.17 (4.97)	1.192	.790
	Post	62	14.11 (5.04)		
Total	Baseline	132	116.97 (35.99)	4.743*	.834
	Post	60	150.37 (40.07)		

d Cohen’s *d* effect size, STSI-OAP Secondary Traumatic Stress Informed Organizational Assessment Pandemic Version

* $p < .05$

were using strategies to enhance peer and supervisory support.

The series used the Window of Tolerance model for understanding psychological and physiological responses to occupational stress [5]. According to this model, individuals have an optimal window of tolerance where they can manage stressors and challenges using their existing adaptive capacities. As the level of perceived threat increases, the window narrows, and the individual may move outside their optimal tolerance zone into hyperarousal (e.g., anger, hypervigilance) or hypoarousal (e.g., numbing, avoidance, dissociation) [5]. The series taught skills to help individuals

Table 1 The impact, knowledge, skills, and usefulness of the ECHO series ($N=63$)

	<i>n</i>	%
Overall, I found this ECHO series to have a positive impact on my daily work		
Neither agree nor disagree	3	4.8
Agree	25	39.7
Strongly agree	35	55.6
To what degree did you incorporate the knowledge and skills gained during this ECHO series into your daily work?		
Some	6	9.5
A moderate amount	11	17.5
A lot	12	19.0
A great deal	34	54.0
How would you rate the usefulness of the ECHO series?		
Somewhat useful	9	14.3
Very useful	16	25.4
Extremely useful	38	60.3

detect drift, and strategies to re-enter and expand their window. These skills spanned individual-level adaptations (e.g., mindful awareness, reducing indirect trauma exposure, self-regulation, practicing gratitude), as well as organizational approaches to improve organizational health (e.g., trauma-informed supervision). This window of tolerance approach was found to be one of the most frequently implemented strategies utilized by participants. Utilization of trauma-informed supervision is important as low levels of supervisory support were a significant predictor of low personal well-being in trainees during COVID [6]. It was also notable that the majority of microlevel interventions endorsed were readily accessible (e.g., needed few outside resources), with little interaction with external forms of support such as Employee Assistance Programs. The degree to which this represented successful adaptation is an important next step in evaluating the effectiveness of the ECHO.

The series purposely integrated a two-pronged approach (i.e., individual and organizational strategies) to addressing professional harms associated with work during COVID. This bifocal approach is effective in improving organizational performance toward resilience-building, safety promotion, and trauma-informed workplace practices [7]. The sessions focused on enhancing resilience, improving safety, cultivating supervisor and leader sensitivity to secondary traumatic stress, and increasing monitoring of threats to employee wellness. Although all scores on the subscales of organizational performance improved, positive changes in resiliency-building and policy development were statistically significant. While the former was an emphasis of ECHO teaching, policy development was not specifically addressed, making this finding surprising. It appears the participating organizations were quick to move wellness-related strategies into policy over the course of 18 months, though future research to assess the impact of these policies over time is needed.

One reason for improvements in organizational functioning may be related to the Net Promoter Scores reported by attendees. In fact, the high Net Promoter Score represents a willingness of attendees to promote learning gained during the ECHO series to their colleagues, consistent with the notion of a workplace champion [8]. Champions are the face of an initiative, and actively support and persuade others to engage in new interventions and ways of working [9]. The literature on champions suggests they contribute to successful implementation of new practices, and the formalization of protocols into policy [10]. This was facilitated by the ECHO focus on the development of wellness champions in the organizations: the application of skills at the individual and organizational level during each breakout, supplementing learning with a resource library to facilitate organizational action, and technical assistance to

supervisors and senior leaders. These strategies promoted effective champion behavior by enhancing member self-efficacy [10], cultivating organizational support for the initiative [11], and improving performance and impact [12]. Furthermore, this level of engagement is consistent with other Project ECHO studies that report high levels of participant satisfaction and spread using similar approaches [2]. The design of the ECHO series allowed for iterative adaptation to an ever-changing pandemic context. Instead of participant-led case presentations, the hub team created scenarios to represent spoke experiences based on needs assessment and participant reports. This reduced burden on the spokes, and followed emerging crisis-response models that shift burden away from those most impacted so that they can receive support without being preoccupied with performance [2]. Similarly, each session concluded with a mindfulness and gratitude exercise to prepare the spokes for return to work. These practices carried forward into the workplace, as evidenced by high levels of endorsement of practicing gratitude throughout the workday. This is viewed as a positive outcome, as research documents that grateful people experience higher levels of positive emotions, and higher levels of gratitude can be protective, guarding against harmful impulses such as resentment and bitterness [13]. The use of listening rooms where participants connected with other spokes in virtual breakout rooms to share strategies, ideas, and innovations extended the learning outside expert presentations, and created real-time peer support [14].

This study has some limitations that should be noted including a pre-post design with no comparison group or follow-up. Additionally, measurement of a narrow range of outcomes was based on self-report, introducing the possibility of desirability bias, though reporting was anonymous. Even so, this study is novel in its use of pandemic-specific measurement of organizational functioning (STSI-OAP).

Overall, this study contributes to the literature by demonstrating how the ECHO framework can be successfully used by academic psychiatry to improve well-being during the pandemic across a wide range of disciplines. Findings point to the utility of a bifocal approach to guide individual and organizational supports and outcomes, as well as adapting the ECHO framework in real-time to best meet the needs of participants. Furthermore, results suggest that participation in the ECHO can assist with cultivating champion behaviors that promote the sharing of resources and practices to others within the organization along with a potential influence on policy-making.

Data Availability The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Disclosures On behalf of all authors, the corresponding author states that there is no conflict of interest.

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