Achieving oncology mental health providers' usage of an empirically supported treatment: Lessons learned

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Abstract

Objective: There is a need for oncology mental health providers to receive training to use empirically supported psychological treatments (ESTs) with their patients. The purpose of this editorial is to describe "lessons learned" from disseminating–conducting EST trainings–and supporting providers' capacity and confidence to use the EST.

Method: Processes and outcomes from conducting six, 3-days (18 h) EST training institutes from 2012-2016 are discussed. Institutes trained 166 full time oncology mental health providers from more than 100 different settings. The dissemination was intentionally designed to achieve EST implementation, i.e., therapists' sustained usage of the EST for at least 12 months post training.

Results: Previously published discussion and findings show the effort was successful in achieving positive EST dissemination outcomes and sustained EST implementation by providers. Thus, "lessons learned" include discussions of (1) orientation to design education/training to achieve EST usage using theory based aims and outcomes of training efficacy; (2) multimodal, educational strategies used to achieve therapists' positive attitudes toward and self-efficacy to implement the EST; (3) guidance to therapists for adapting the EST to their practice settings while maintaining fidelity; (4) assistance to therapists to identify and problem solve implementation challenges; and (5) using patient reported outcome measures to determine clinical change.

Conclusion: Our discussion of the plan, methods, and goals of EST training contributes to the science of dissemination/implementation by providing support for (1) theory-informed EST dissemination, and (2) mechanisms of EST implementation. For researchers, our experience may guide future EST dissemination/implementation efforts in psycho-oncology. For therapists, lessons learned provide criteria for evaluating future continuing education options.

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Keywords

It is a slow pace by which mental health providers–psychologists, psychiatric social workers, and mental health nurse specialists–receive rigorous training to learn and conduct empirically supported psychological treatments (ESTs) for cancer patients. This is unfortunate because ESTs are the precision medicine treatments of psycho-oncology. Multiple factors contribute to this slow pace, including the continuing gulf between EST discovery through randomized clinical trials and their dissemination, inadequacy of the existing continuing education models,[1] inadequate hospital budgeting and reimbursement structures for psychological care, and others.[2] This was the context six years ago when we applied to a United States National Institutes of Health/National Cancer Institute program announcement aiming to enhance education and training of oncology professionals, broadly defined. With subsequent funding, oncology mental health providers were educated and trained in usage of a specific EST—the Biobehavioral Intervention (BBI)—and followed to determine BBI usage.[3,4]

The purpose of this editorial is to provide "lessons learned" from this effort, many gleaned from conduct of the training and discussions and research findings documenting our training plans and successes. The means for disseminating the BBI were six, 3-days (18 h) training institutes conducted from 2012-2016. Institute trainees were 166 diverse oncology mental health providers from 35 states and Puerto Rico and three foreign countries (Kenya, Mexico, and Malaysia) who were employed as full-time oncology mental health providers in more than 100 different settings, ranging from private practices to comprehensive cancer centers (see Brothers et al. 5 for additional provider details). All trainees participated in the research components of the training institute, which was approved by the IRB at the Ohio State University. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Our training plan and associated activities were conceptually framed (STEPS: Setting, Therapists, Education, Implementation, and Sustainability).[6] Key findings are as follows: (1) Data from the first cohorts (1-2; $N = 62$) found that providers rated the quality of BBI instruction highly and had improvements in proximal dissemination outcomes—BBI knowledge and positive attitudes toward ESTs.[5] These findings were replicated with data from later cohorts (3-6, $N = 104$).[7] (2) Discussion of strategies for therapists to address implementation barriers was provided.[8] (3) Usage by the newly trained providers was high —ranging from 59 to 68% of provider's patients receiving the BBI from 2 to 6 months,[9] with usage sustained (73%) at 12-months, one year post institute.[10] (4) Providers' changes (improvements) in attitudes and intent during dissemination predicted usage,[9,11] and providers' gains in self-efficacy to deliver the BBI and positive attitudes about using evidence based treatments were discovered as mechanisms for achieving implementation.[5,7] (5) Finally, a multi-site ($n = 15$) hybrid study showed providers ($N = 15$) delivered the BBI with fidelity comparable to that of the BBI efficacy trial (see below), consistent with patient

($N = 158$) reports of BBI component usage, and moreover, BBI treated patients significantly improved in mood and physical activity.[12]

The present manuscript was written for at least three audiences. First, the discussions may be of interest to implementation scientists. We are unaware of papers in the Implementation Science literature of dissemination-to-implementation studies/efforts bolstered by theoretical framing, detailing of the education and training methods, and testing mechanisms for implementation, all of which are supported by multilevel data replicated across time and cohorts of providers. Second, it is hoped that the lessons learned provide guidance for those conducting EST education to mental health oncology providers in the future. Third, for therapists, significant contextual information is provided for evaluating the quality of EST education options in the future. Relevant to all, the "lessons learned" were written to apply generally to EST education and training of providers from diverse settings. While the BBI was the EST taught, it is only an exemplar for the discussion. (For readers unfamiliar with the BBI, a brief description is provided below; others can skip to "EST Education and Training to Achieve Dissemination-to-Implementation Outcomes.")

1 | PRECIS: EMPIRICAL SUPPORT AND DESCRIPTION OF THE BIOBEHAVIORAL INTERVENTION

A theoretical biobehavioral model of cancer stress and disease course was proposed.[13] A randomized controlled trial was designed to test the hypothesis that newly diagnosed Stage II/III breast cancer patients ($N = 227$) randomized to receive a psychological (biobehavioral) intervention would show reduced risk for breast cancer recurrence compared to patients randomized to assessment only. The theoretical model provided the basis for the aims of the BBI (stress reduction, improved health behaviors, treatment adherence, and health), inclusion of biomarkers (immunity), and the disease endpoint (recurrence). The Biobehavioral Model also framed the design of the intervention and determined primary and secondary outcomes. The BBI's eight components were designed anew or selected from previously published, effective treatments for anxiety reduction or symptom management.[14] The BBI was offered in small groups (8-10 patients) in which therapists used a session-by-session manual, with a companion guidebook for patients. Sessions were 1.5 h, with an intensive phase of 18 weekly sessions in 4 months and then a maintenance phase of 8 monthly sessions, for a total of 26 sessions (39 therapy hours) over 12 months.

For the secondary outcomes, patients in the BBI arm showed significant reductions in negative mood, improvements in family support, health behaviors (diet, smoking cessation), chemotherapy dose intensity (adherence), and health (performance status, toxicities, symptoms) along with enhanced T cell immunity at 4 and 12 months compared to the assessment only arm.[15] For those entering the trial with moderate to severe depressive symptoms, those in the BBI arm showed significant reductions to no/mild depressive symptoms and lower inflammation in comparison to the Assessment only arm.[16] For the primary outcome, patients in the BBI arm had reduced risk of breast cancer recurrence (hazard ratio [HR] = 0.55, $p = 0.034$) at a median 11.5 years of follow-up.[4] Additional analyses suggest that therapy attendance (treatment dose) was important in lowering risk of

disease progression.[4] Even for those who did recur, patients in the BBI arm experienced significant improvements in psychological, social, and immune responses in the 12 months following recurrence diagnosis and a lower risk of breast cancer-specific death (HR = 0.35, p = 0.006) compared to the Assessment only arm.[17] The BBI was subsequently modified and found effective for patients with major depressive disorder[18] and for patients coping with recurrence.[19]

2 | EST EDUCATION AND TRAINING TO ACHIEVE SUCCESS IN DISSEMINATION-TO-IMPLEMENTATION OUTCOMES FOR THERAPISTS

2.1 | ORIENTATION

Dissemination is an active process of transferring intervention content to a *target audience*.[20] With this in mind, we have learned that one should first consider the context in which EST learning might best occur and how learning should be tailored to the target audience. For example, what are therapists' personal interests in and motivations for learning any EST? Ideally, the EST would be personally relevant to their practice, and, from the beginning, be viewed at least somewhat positively. What are the best methods for therapist learners with clinical experience? We aimed to present new knowledge while respecting and building upon therapists' prior experiences and providing instruction in the EST in such a way to involve the therapists in the process.[21]

Importantly, we view EST dissemination as *a process of persuasion and attitude change* which, when positive, would lead to behavior change, i.e., usage/implementation. According to Petty and Cacioppo's Elaboration Likelihood Model, two routes of persuasion—central and peripheral—lead to attitude change.[22] The central path is best used when the therapist is a) motivated to consider the EST and b) has the ability and context to think about the EST, rehearse EST strategies, and think some more. If the therapist comes with or develops favorable opinions and thoughts about the EST, then positive attitudes toward and intentions to use the EST are likely. By contrast, if evidence for a treatment is weak, ambiguous, neutral (e.g., the treatment will do no harm), or even nonexistent, peripheral cues (e.g., an "expert" appeal to use the treatment) might produce some positive attitude change, but usually only temporarily. Weak arguments will not persuade therapists who, for example, might view a new treatment as hard to learn or use in their practice. Thus, therapists' motivations to learn or use a new EST cannot be assumed. However, if one can create an effective learning opportunity, including engaging presentations of a treatment's empirical support and compelling arguments for its use, positive attitudes about the EST could be generated, *ones that can be relatively enduring, resistant to change or impediments, and predictive of eventual EST usage.*

Lessons Learned: Orientation

1. From the beginning, design dissemination to achieve EST implementation, i.e., therapists' sustained usage of the EST.

2. Know therapists' motivations (personal interest) for EST learning and adapt training accordingly.

3. Employ trainers with characteristics of credibility, competence, and ones seeking feedback to improve training.

4. Use training methods designed for adult learners, i.e., multimodal and interactive such that therapists are continuously engaged in learning and doing.

5. Teach a manualized treatment that therapists come to view as compelling, tailored to patient needs, and easy to implement.

2.2 | NUTS AND BOLTS: CONTENT AND METHODS

Strategically, the aim of EST training is to persuade and support the adoption of new ideas and new ways to treat clinical problems.[23,24] Didactics, per se, are the core of continuing education,[25,26] but the most compelling and persuasive didactic education is the overarching conceptualization of the treatment and each of the components, as well as the empirical evidence supporting their efficacy.

Complimentary to didactics are sequenced sessions—learn-work-learn—enabling therapists to practice the delivery of a treatment component and receive feedback and reinforcement for conceptual understanding and delivery.[27] A trainer substantively familiar with the treatment, one who has used it extensively, will communicate enthusiasm when teaching it to others. Multimodal clinical training, described below, means therapists actively interact with trainers, including the knowledge and demonstrations trainers provide, the materials and manuals they use, and the clinical skills they demonstrate. This is consistent with the principles of "adult learning",[21] i.e., education that is learner-centered, active rather than passive, relevant to the learner's needs, and, importantly, engaging and reinforcing (i.e., fun).

In this example, multimodal education meant an agenda of different learning activities, i.e., lectures (40%; "didactics"), practice in small groups (25%; "practices"), and role-plays and group discussions (35%; "experientials") (see Table 1). Trainers were six Ph.D. psychologists with expertise in the EST's conceptualization, empirical basis, components, and usage. Additionally, providing trainees with the EST manual (the BBI had both therapist and patient versions) is an invaluable asset to learning and later EST usage.[14]

The EST we taught (the BBI[14]) has eight, non-overlapping components, each designed to achieve a different outcome (e.g., stress reduction for mood improvement, social support for improving friend and family relationships), and importantly, the same agenda was used for each component. Didactic education provided the conceptual rationale, empirical support, and step-by-step clinical delivery instruction. Didactics were made more interesting, enjoyable, and effective through brief in-lecture clinical practices pairing therapists, e.g., practice (*"Provide your partner with the rationale for the Rhythmic Walking exercise."*) or discussion (*"List common negative statements/thoughts about body image/sexuality your patients have reported. Next, discuss with your partner how cognitive reappraisal could be used."*). Trainers monitored the pairs' activities and provided guidance as needed. Similar procedures were used in small group experientials (6-8 therapists, 1 trainer). For example, one "therapist" trainee defined for the "patient" trainees different types of support (emotional vs. task) and then asked the "patients" for personal examples. Trainees learned how to use the EST manuals during these exercises, which provided familiarity and

illustrated the value of the manuals when training was over. Using this organization for each component reduced content complexity and facilitated clinical skill development through repetition.

We were able to use an additional method, a <u>clinical analogue assessment</u>, which served two purposes: 1) a different practice and potentially more difficult role play; and 2) evaluation, as a standardized, "in vivo" assessment of trainees' conceptual and clinical skills. It is very difficult to begin using an intervention that you have only learned passively. Six-minute, private "sessions" with a patient confederate (unknown to the trainee) were conducted for six of the eight BBI components. The trainee received a vignette describing the patient's concern/difficulty with a prompt to use a component strategy, with description tailored to the presenting difficulty, e.g., *"Provide a patient the rationale for learning and using progressive muscle relaxation."* Confederate "patients" had memorized responses to potential queries, adding standardization to the assessment. Although the use of clinical analogue assessments may require additional resources, the benefits may outweigh the costs as trainee learning and skill performance more closely resembles sessions with patients. Lessons Learned: Content and Methods

1. Education (didactics) must.

    a. Have engaging presentations of the empirical support and compelling arguments for EST usage.

    b. Be conducted by experts who are enthusiastic and positive when presenting the treatment and its empirical support, are present and continuously engaged, and provide positive feedback for learning.

    c. Provide adequate time in a professional, accommodating environment to allow therapists' active, thoughtful consideration of the EST.

2. A learn—work—learn clinical training builds knowledge and skills such that therapists come to view themselves as competent and skilled in EST delivery.

2.3 | FIGURING IT OUT: PLANNING FOR ADAPTATION

There is no standard metric for what constitutes EST implementation with fidelity. The term "voltage drop" has been used to describe the discrepancy between EST efficacy as manualized and tested in randomized clinical trials and the version delivered by therapists in the community. We do not view "voltage drop" as inevitable or acceptable,[28] and, in fact, we view ESTs as the best candidates for implementations capable of maintaining "core," empirically supported components. National Institutes of Health recommendations to achieve implementation with fidelity[29] can be easily incorporated, e.g., rigorous training; provision of manuals. Our strategy then, was to assist and guide each therapist with any EST adaptations needed for practical EST usage and tailoring to his/her clinical setting while also emphasizing the importance of and manner for retaining fidelity. Indirectly, this communicated the view that the EST was not a one size fits all intervention.

Unlike some disseminations,[30] many EST trainings will enroll therapists from diverse professional backgrounds and employment settings. From our experience, helping therapists

with EST adaptation needs to be built into the curriculum, with the first step being for therapists to learn and understand the principles of treatment fidelity and integrity. With this, one can more easily persuade trainees to deliver an EST reflective of its evidentiary base, the "core" components.[31] During an experiential session therapists made rough plans for EST adaptation, with feedback from trainers provided. Adaptation plans may include: (a) description of patient characteristics or circumstances necessitating adaptation; (b) proposed changes to EST components and rationales for any changes; and, (c) specification of the delivery format if different from group or individual (e.g., telephone/virtual sessions). Following the training institute (one month later), therapists submitted refined adaptation plans for individual feedback (telephone call) from a trainer. Indirectly, this call also communicated that we remained available to help with EST adaptation. Of note, during the training institute, didactics also recommended the use of component specific, validated patient reported outcome measures. Data are consistent in showing improved patient outcomes when therapists monitor and regularly assess patient change.[32,33] Open-source copies of measures and scoring instructions were available in the trainee portal on the training website.

Lessons Learned: Adaptation

1. Teach the difference between EST adaptation with fidelity versus adaptation without fidelity.

2. Provide guidance and time for therapists to outline the adaptations thought necessary for his/her practice setting and patient populations.

3. Provide direction and support for measuring clinical change in patients, such that therapists' use of ESTs is clinically informed by patient-reported outcomes.

2.4 | DOING IT: IMPLEMENTATION

Adaptation planning is one vehicle for smoothing a path to therapist-centric implementation. The other is providing post-training follow-up support. Not all trainings will have such resources, and so it is suggested to encourage therapists to form their own small groups for conference calls or video meetings to work and support one another during early implementation. Typically, therapists are *the* agents of change—implementing a new treatment without receiving support from his/her setting. In our case, "implementation support" took the form of six, monthly, small group (4-6 trainees; 1 trainer) conference calls, originally designed as a "refresher" of BBI content and, if mentioned, discussion of how implementation was proceeding.

However, our competencies in treatment development, testing, etc., did not provide adequate preparation to do "implementation support" nor did we initially appreciate the challenges to implementation that would arise across the varied clinical settings of the therapists. We were, however, capable of learning. From early cohorts we came to conceptualize therapists' implementation difficulties/successes as having "person" and "environment" factors.[8] Person factors included attitudes, statements, and behaviors of key individuals who might be impacted by implementation of a new treatment, e.g., support staff, colleagues, medical

providers who refer patients. Environment factors were primarily monetary/space resources and the persons who controlled them.

With this understanding, a didactic/training segment was altered. The problem solving experiential (see Table 1) shifted from classic problem solving[34] as conducted within the EST to problem solving in anticipation of implementation challenges. Led by a trainer, each therapist: (1) defined the "problem," i.e., identifying the specific person/environment support needed; (2) listed anticipated difficulties with enlisting support from important others or the setting; and, (3) "brainstormed" potential solutions. Therapists' solutions included providing persuasive information about the EST (e.g., empirical base, components, format for delivery) during clinic in-service or administrator/physician meetings, for example, to garner person support. We offered that opponents of implementation were unlikely to become supporters, but therapists' persuasive efforts might change negative attitudes to non-obstructive indifference. Relatedly, those initially neutral/uninvolved might be persuaded to be supportive. For environment support, a template (that a previous trainee had used) for making budgetary requests was provided on the website trainee portal. There are multiple advantages to trainees discussing and problem-solving potential challenges to implementation in advance, centering on trainees having a framework to understand the potential implementation barriers but also thinking through and developing actionable strategies to quickly and successfully address barriers and continue on to implementation.

Lessons Learned: Implementation

1.   Communicate and affirm to therapists that implementation of a new EST is an attainable goal.

2.   Provide grounding to therapists to understand, anticipate, and problem solve any barriers to implementation.

3.   Provide guidance and support therapists to sustain EST delivery.

3 | Mechanisms for achieving therapists' EST implementation

The processes and mechanisms which govern whether or not EST implementation occurs are rarely tested,[35,36] despite behests to do so.[37-39] As an EST is rolled out, an empirical evaluation of the processes for doing so is needed. Change in knowledge is the typical measure for evaluating continuing education programs or trainings.[40-42] A face valid, but minimalist quality metric, knowledge gains do not predict attitudes, intentions, or behavior (EST usage) as we[5,7] and others[24,43] have found. If the goal is therapists' usage of the EST, using measures of hypothesized mechanisms would provide specific directions for improving or designing future disseminations/trainings.

Mechanisms are best identified by using theory. The Elaboration Likelihood Model discussed above provides understanding (and predictions) of how central and peripheral persuasion routes lead to enduring, positive EST attitudes, and how attitudes predict behavior. Somewhat related to the Elaboration Likelihood Model is the Theory of Planned Behavior,[44] which when operationalized, allows for tests of attitudes as predictors of intentions to implement an EST, and both attitudes and intentions as predictors of later

behavior (i.e., EST usage). The Elaboration Likelihood Model and the Theory of Planned Behavior have been widely and successfully used to study the processes of health behavior change.[45-47] In addition to these, another construct was chosen for its therapist-relevance: self-efficacy. Self-efficacy is an individual's perceived ease or confidence to perform a behavior.[48,49] Individuals with higher self-efficacy will set higher goals for themselves, have a firmer commitment to their goals, and are more likely to attain them.[50] In relation to use of ESTs,[51,52] data show higher confidence or perceived ease of delivering an EST to correlate with usage,[53-60] while low self-efficacy may be a barrier.[61]

Our data support attitudes, intentions, and self-efficacy as mechanisms predicting BBI usage, with effects replicated across 12 months (see Table 2). Here, we speculate about the specific methods of education and clinical training and support ("mechanisms of the mechanisms") that resulted in therapists leaving training with high self-efficacy and positive attitudes about and high intentions to actually use the EST with patients. For the interest of the reader, the measures used are also noted.

3.1 | Attitude change

Measures having general relevance and that are specific to the EST are recommended. Two measures were used: (1) general attitudes towards ESTs, using the Evidence-Based Practice Attitudes Scale;[62] and (2) attitudes towards the BBI (see Appendix). Data (see Table 2) show therapists' positive attitudes toward ESTs and the BBI predicted 4-months usage.[5,7] Both the Elaboration Likelihood Model and the Theory of Planned Behavior suggest that strong attitudes predict strong intentions to implement, and our data show high intentions to be a mediator of usage across 12 months.[10,11]

What conditions contribute to therapists having strong, positive attitudes toward an EST? According to the Elaboration Likelihood Model, prerequisites for central message processing are having an "audience" that is motivated to receive the information and with ability to understand/process the information.[22] Table 3 lists examples characterizing our trainees. The converse of these qualities, low motivation, little interest and/or limited ability to process the EST information (e.g., confusing, irrelevant, or "over the head" information delivery) would, from the beginning, handicap uptake. Without vigorous efforts to foster motivation and engagement, "top down" disseminations might be especially vulnerable.

Table 3 next provides examples to achieve therapists' effortful, "central" consideration of the EST and possibly important "peripheral" routes. The examples provide the following: (1) distinction between empirical support (the message) and the source (messengers); and, (2) the need for an environment conducive to considering the EST and, more generally, learning. Peripheral elements are typically less important when the central messaging is strong and persuasive. Peripheral elements alone, when there is minimal/weak evidence for a treatment, may yield some positive attitudes, albeit temporarily and insufficient to impact behavior. The persuasion examples listed are not exceptional or difficult and could be achievable with any EST training.

3.2 | Self-Efficacy

Like attitudes, two measures were used (see Appendix): (1) The Counselor Activity Self-Efficacy Scale[63] assessed general self-efficacy in counseling skills, both basic (e.g., listening, restatements) and advanced (e.g., helping a patient set realistic goals). (2) A BBI-specific measure assessed confidence to deliver the components (e.g., teach patient how to use assertive communication skills). Even if therapists conceptually understand a treatment, they might not try to implement the intervention (or try and soon stop) if not confident to deliver it. Building therapists' self-efficacy must be a training goal from the beginning. If therapists are not early adopters, they are unlikely to be late ones. The data (see Table 2) show self-efficacy predicted the earliest usage assessed (2 months).[7]

According to Bandura's Self-Efficacy Theory,[64] four factors affect self-efficacy: (1) enactive mastery experiences ("I have done this before and I can do this again"); (2) vicarious experience or modeling ("If she did it, I can do it"); (3) social persuasion, such as encouragement (or discouragement) from another person ("He believes that I can do it, so I believe that I can do it"); and, (4) accompanying physiological or affective states (e.g. learning in a positive environment). Using this framework, we list aspects of the training (methods, personnel, BBI information) that may be the basis for therapists' self-efficacy to use the BBI clinically and self-efficacy to implement a new treatment more generally (see Table 4).

Lessons Learned: Mechanisms

1. Design trainings intentionally to instill therapists' positive EST attitudes and promote high self-efficacy to deliver and implement the EST to patients in his/her clinical setting.

2. To achieve attitude change, provide substantive (persuasive) central route information supported by positive peripheral cues and learning environments.

3. To achieve therapists' clinical self-efficacy, enactive mastery experiences, vicarious learning, and social persuasion should be used in a supportive and enjoyable learning context.

4. Commit to evaluating trainer quality and therapist outcomes beyond knowledge gains. Most importantly, measure therapists' usage of the EST and identify mechanisms of in/effectiveness to improve future trainings and achieve sustained, EST implementation.

4 | FINAL COMMENTS

We had several aims for this manuscript and hope some were achieved. First, discussion of education and clinical training strategies might enhance future EST trainings to achieve the key outcome of usage. Second, discussion of the plan, methods, and goals of training might contribute to advances in Implementation Science EST disseminations guided by theory, designed to achieve implementation, and the discovery of mechanisms to improve future dissemination. Last, and most importantly, we hope therapists wanting to learn and deliver

ESTs have new guidance to discern treatment trainings worthy of their time, their effort, and their expenditures.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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DATA AVAILABILITY

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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TABLE 1

Schedule (3 days) for Biobehavioral Intervention (BBI) training institutes, illustrating sequencing of didactic education with clinical "practice, practice, practice"

Day	Time	Instructional method	Topic
1	8:00–10:15	Didactic, In session practice with partner	• Welcome and overview • Stress conceptualization and stress reduction • Problem-solving
	10:30–12:00	Experiential: Small group	• Engaging patients in use of PMR and active problem-solving techniques
	1:00–3:15	Didactic, In session practice with partner	• Seeking information • Assertive communication
	3:30–5:00	Experiential: Small group	• Discuss barriers to seeking information with patients • How to assess assertive communication in your patients
2	8:00–10:15	Didactic, In session practice with partner	• Welcome and review • Social network
	10:30–12:00	Experiential: Small group	• Reviewing patients' assessment of their social network • Helping patients make strategic support decisions
	1:00–3:15	Didactic, In session practice with partner	• Sexuality and cancer
	3:30–5:00	Experiential: Small group	• Breaking down barriers to discussing sexuality • How to talk about sexual matters • Helping patients to communicate about sexuality
3	8:00–10:45	Didactic, In session practice with partner	• Health behaviors: Diet, activity • Maintenance
	11:00–12:00	Experiential: Small group	• Engaging patients in discussions of health behavior change • The walking protocol
	1:00–3:00	Didactic	• Adapting the BBI; overview of planning • Conclusion and wrap up

TABLE 2

Summary of published findings showing therapists' attitudes, intentions, and self-efficacy as mechanisms predicting their usage of the BBI with patients in the year post training

PREDICTORS[a]	Outcomes Behavior (EST Usage by month)		
	2	4	2-12
Knowledge			
General			
BBI-specific			
Attitudes			
EST		$X^{b,d}$	
BBI-specific		X^{b}	
Self-efficacy			
General	X^{d}	X^{d}	
BBI-specific	X^{d}		
Intentions		M^{b}	X^{c}

Note: EST = Empirically supported treatment; X = indicates a significant predictive relationship. M = Significant mediator of attitudes.

[a] Assessed during Training Institute.

[b] Lo, Ryba, Brothers, & Andersen, 2019.

[c] Ryba, Lo, & Andersen, 2019.

[d] Lo et al. in press.

TABLE 3

Examples of trainee characteristics (i.e., high motivation, EST relevant abilities) as prerequisites necessary to promote positive attitudes, and examples of central and peripheral persuasion routes

Trainee prerequisites	
Evidence of motivation	**Evidence of ability**
• Individuals initiate application for training	• PhD/MA level trained
• Individuals interested in advancing patient care	• Licensed provider
• Effort: Travel and commitment to 3-days training	• Employed full time in care provision
• CE credit sought	
Processes of Persuasion	
Central Routes	**Peripheral Routes**
The message:	Cues associated with the message:
<u>Content</u>: Empirical support showing significant, enduring positive outcomes, i.e., psychological, treatment adherence, health behavior change, symptom reductions, improved immunity, improved disease endpoints	<u>Source factors</u>: (i.e., expertise, trustworthiness, attractiveness)
• Strong arguments in favor of efficacy for important patient outcomes.	• Known EST researcher
• Rigor and reliability of evidence, e.g., randomized controlled trial; evidence for specific components (mechanisms) leading to specific positive outcomes provided	• Trainers with credibility, competence, continuous engagement, positive attitude
	<u>Ability/Time</u>
	• Use of adult learning principles to improve skill acquisition
<u>Clarity</u>: EST made tangible with detailed, user friendly, therapist and patient manuals	• Adequate time provided for trainees to process (think about) the EST information
	Training environment: Support of information processing, engagement
	• Meeting spaces pleasant, welcoming
	• Quantity of messages (lots)
	• Persuasive central arguments for usage/implementation used
	• Collegial, enjoyable environment

TABLE 4

Training to achieve gains in therapists' self-efficacy for EST clinical use and its implementation

Self-Efficacy (Clinical skill) to use BBI with patients

Enactive mastery experiences	Vicarious experience	Social persuasion	Physiological or affective states
• Practice, practice, practice training orientation	• Trainers demonstrated use of BBI (didactics, experientials, etc.)	• Trainers provided constructive feedback and encouragement during role-plays, etc.	• BBI was billed as learnable
• Each component (8) practiced in 4 different settings	• Role-plays		• Engaging (fun!) training environment
	• Peer modeling		• Trainees connected and formed relationships
	• Manuals with session-by-session descriptions and "scripts"		• Trainers were talented speakers and clinicians.

Self-Efficacy to implement BBI in his/her practice/setting

Enactive mastery experiences	Vicarious experience	Social persuasion	Physiological or affective states
• Pre-planning of implementation and problem-solving barriers	• Group support calls provided peer support and exchange re: usage experiences	• Calls with trainers provided support and guidance during implementation	• Cohort trainees remained in contact
• Need for adaptation determined early, with modifications in place prior to usage	• Prior trainees recommended the training to colleagues		• A support "help line" available on the website trainee portal.
• Implementation support for early usage and troubleshooting challenges			• Online message boards