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A Unique Interactive Cognitive Behavioral Training Program for Front Line Cancer Care Professionals

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Background

Cancer-related psychological distress is a serious public health problem facing the American health care system. Cancer survivors experience psychological complications not only related to the cancer and treatment, but also to the side effects of treatment and other changes that can occur during the cancer experience [1,2]. Cancer-related distress may include emotional reactions ranging from fear and sadness to anxiety, depression, panic, and post-traumatic stress reactions [2]. Some of the most compelling evidence of long-term psychological distress is from our prior research [3] with cancer survivors up to 11 years following hematopoietic stem cell transplant (HSCT) where we found that approximately half of survivors reported having experienced intrusive cognitions or physical reactions when reminded of their cancer experience [4]. These long-term psychological symptoms occur irrespective of race, gender, or diagnosis, and have been associated with a serious disruption in quality of life (i.e., impairments in mental, social, physical, and vocational functioning) for cancer survivors. Recognizing this problem, the Institute of Medicine (IOM) has emphasized in its 2008 report, “Cancer Care for the Whole Patient: Meeting Psychosocial Health Needs,” the importance of addressing psychosocial issues, such as distress, to providing quality cancer care [5]. The National Cancer Institute (NCI) has reported a lack of trained professionals who can address these psychosocial needs using evidence-based psychosocial methods [5].

Cognitive Behavioral Therapy (CBT) [6] is one of the most effective, empirically-supported nonpharmacological interventions that have been shown to help cancer survivors cope with aversive aspects of their illness and its consequences. CBT is a type of psychotherapy that

focuses on thoughts, emotions and behaviors and their role in maintaining psychological symptomatology. CBT has a demonstrated track record in reducing distress and other related symptoms in non-cancer populations and has promise in its use with cancer survivors. CBT interventions in cancer populations have been found to yield significant benefits, including reduction of anxiety, posttraumatic anxiety, depression, general distress, and fatigue [7,8]. A recent meta-analysis of CBT on depression, anxiety, and quality of life (QOL) found that with a pooled sample size of 1,492 adult cancer survivors ranging in age from 18 to 84, CBT demonstrated effect sizes of 1.2 for depression, 1.99 for anxiety, and 0.91 for Quality of Life [9]. In specific cancer populations, CBT has been found to reduce distress symptoms among survivors of breast cancer [8, 10–11], head and neck cancer [12], melanoma [13], and prostate cancer [14]. Consistent with this research, DuHamel and colleagues (2010) found that with survivors of HSCT found that CBT reduced cancer survivors' distress on a scale of PTSD symptomatology compared to an assessment only control group ($p = .0201$) [15]. Specifically, this study found evidence of statistically significant reductions in the PTSD symptoms of intrusive disturbing memories of cancer and its treatment ($p = .011$) and avoidance of recurrent and disturbing memories of cancer and its treatment ($p < .001$) as measured by the PTSD Checklist-Civilian Version (PCL-C). In addition, there have been statistically significant reductions in Global General Distress ($p = .005$) and depression ($p = .023$) as measured by the Brief Symptom Inventory (BSI).

The authors conducted a needs assessment survey to evaluate the level of interest in participating in CBT training by cancer health care professionals who provide supportive services for cancer patients and survivors. Responses were collected from 98 health care providers, 80% of which identified as social workers. Although two-thirds of practitioners reported using some CBT techniques in their current practice and 71% believe that CBT is effective in the treatment of cancer patients and survivors, only 5% reported mastery of CBT skills. In addition, more than 80% of respondents reported being highly motivated to learn CBT and would be willing to attend a CBT training workshop to learn such skills. Finally, 99% of professionals indicated they would apply their CBT training in their current practice once they had learned the skills.

The goal of the current CBT training program is to teach cancer health care professionals that changing survivors' beliefs, behaviors, and cognitions can lead to reductions in distress and to give these professionals the means to help their patients learn effective coping skills. The training program focuses on CBT skill mastery using didactic instruction, interactive small group sessions, role playing, feedback, post course follow-up and evaluation. Trainees are encouraged to view implementation of CBT as a collaborative effort with the survivors they treat. This approach has been empirically validated with cross-disciplinary training [16] and is based on a training model developed by Knowles [17] who views adult learners as self-directed, ready to learn, problem-solving oriented and with a resource of life experience. This training model emphasizes that the adult learner needs immediate application of knowledge rather than delayed application. These principles of adult learning were emphasized in the workshop preparation and were used to plan appropriate education methods for the curriculum and its dissemination. The purpose of this paper is to describe in detail the successful recruitment and implementation of a unique CBT training model for frontline cancer care professionals.

Methods

Expert Training Faculty

Prior to this training program, the training faculty has had significant experience in administering training programs for cancer health care providers, as well as practicing CBT

in both research and clinical settings. Using this experience the faculty created the curriculum and implemented the course.

Core Curriculum and Format of Training Workshop

The content and scope of the training program addresses key issues that have been identified by major cancer organizations in their effort to establish a national plan for supportive services for cancer survivors. The training program agenda is geared toward health care professionals providing psychosocial services to cancer survivors and includes an intensive three-day training workshop. The core curriculum for these workshops was developed through a rigorous literature review and the knowledge and clinical experience of the expert training faculty. The workshop is organized around a treatment entitled CBT for Cancer Survivors (CBT-CS). CBT-CS is a structured intervention based on a manual developed by several of the authors (DuHamel, Greene and Redd) and other colleagues as part of a previously conducted randomized clinical trial of the intervention [15]. The clinical trial was a large study conducted entirely with survivors of hematopoietic stem cell transplant; results showed significant reductions of general distress, depressive and posttraumatic anxiety symptoms for the CBT-CS group when compared with the control group (assessments only).

CBT-CS focuses on five core cognitive-behavioral skills that address distress and quality of life among cancer survivors: psychoeducation, cognitive coping skills, relaxation training, systematic desensitization, and enlisting social support. Each of the core CBT skills of the intervention is introduced and explained in a “Current Techniques” lecture on specific CBT skills given by a member of the training team. Each lecture is followed by a breakout session that provides trainees with the opportunity to practice applying the contents of each domain in small groups under the direction of expert trainers. Training is accomplished, in part, through role-playing exercises and case studies. In these exercises, clinically relevant and practical information is provided to make the hypothetical cases seem as realistic as possible. This makes the skills learned in breakout sessions more generalizable to the clinical work the trainees will be doing at their home institutions after completing the training. During the breakout sessions, trainees are instructed not only to practice the CBT techniques themselves, but provide feedback for other trainees on their efforts to implement the techniques.

A training kit is assembled for each workshop attendee and composed of a syllabus, a 2-inch binder, reprints of relevant articles, speakers’ slides, a revision of the manual used in our prior research [15] and participant handouts. The manual includes scripted CBT sessions, handouts, assessments, homework assignments including a daily thought record booklet, and a CD with relaxation exercises.

Once all of the workshops are completed, a total of 320 trainees (40 trainees for each of the eight workshops) will have completed the training. Thus far, four workshops have been conducted totaling 162 competitively selected frontline cancer health care professionals. Prior to each course, announcements are e-mailed using lists obtained from the National Cancer Institute (NCI), American Psychosocial Oncology Society, Association of Oncology Social Work, American Psychological Association and other various nursing list serves. The application includes information about both applicants and their institution. Also requested is one letter of support from each applicant’s clinical supervisor or the institutional administrator. These letters also provide an indication of institutional commitment. Institutional commitment has been effective in assisting trainees in our previous training efforts. Applications are reviewed by the investigators using an Application Evaluation Checklist developed specifically for this training program. Across the first four workshops, interest in the workshops has been strong with an average of 150 applications received to fill the 40 spots allocated to each workshop.

Measures

All workshop trainees are given pre and post (immediately following) workshop CBT knowledge and self-efficacy measures to test for any changes in their knowledge and confidence in their CBT skills. The *CBT knowledge assessment* is comprised of 26 true or false items and takes approximately 5 minutes to complete. This measure was developed by the authors for the present study and assesses knowledge on each of the didactic lectures delivered during the workshop. The *Self Efficacy Scale*. Bandura [18,19] defines self-efficacy as “one’s beliefs about their capabilities to learn or perform behaviors at designated levels”. Self-efficacy beliefs influence task choice, effort, persistence, resilience and achievement [20,21]. To measure self-efficacy of the trainees, a standard self-efficacy measure was modified to measure CBT-specific efficacy. This 10 item measure includes a five point rating scale (1 = not at all confident; 5 = totally confident) for each belief and takes about 2 minutes to complete.

As a means of improving the workshop in real-time, trainees were asked to rate the quality of the lectures, breakout sessions, and activities at the conclusion of each day. The evaluation form used was adapted from the group’s previous NCI-supported training efforts. It provides evaluation from the trainees on the courses for each day. Data are used to refine and improve subsequent courses and to determine the content trainees viewed as most valuable.

In addition trainees are asked to complete a 12 month post workshop follow-up satisfaction survey. This survey includes one overall satisfaction item, five items around the satisfaction of each of the CBT skills training received (psychoeducation, cognitive coping skills, relaxation training, systematic desensitization, and enlisting social support), one item asking about the satisfaction of the conference calls (1=not satisfied, 5=very satisfied), and one item about the continued use of CBT with cancer survivors (1=not at all, 5=very often).

Follow-up Support Post Workshop

A common criticism of traditional clinical training workshops is that there are little or no resources available for trainees following the conclusion of the workshop. To address this concern, the current training format incorporates two additional methods of reinforcement and support: 1) a series of six follow-up conference calls, and 2) the creation of an online discussion board for trainees that is in use for six months following each workshop, with an option to continue to participate after the 6 months.

Follow-up conference calls

Expert faculty members carry out a series of six monthly telephone conference calls with their trainees, addressing six specific topics to supplement the workshop training. The six topics discussed on the conference calls are: 1) The multifaceted needs of cancer patients and survivors: reviewing recent data; 2) Research on prevalence of various types of distress in recently diagnosed patients and survivors, 3) Demonstrated efficacy of CBT with cancer patients; 4) Expanding CBT beyond traditional psychosocial problems to medical problems; 5) CBT for special cancer patient and survivor populations, and 6) Integrating CBT with traditional methods. In addition, during these calls, the faculty also leads a discussion about specific cases where trainees have implemented CBT, along with successes, lessons learned, and progress of the trainees’ implementation of CBT at their home institutions with their survivor populations. There is also a recent article assigned for each of the six calls. Each conference call is forty-five minutes in duration.

Web-based discussion board

Additionally, a web-based discussion board was created that allows trainees to share their experiences implementing the clinical techniques at their home institutions, to keep trainees aware of the activities of their colleagues, to pose questions for other trainees and the trainers, and to provide a supportive network and resources (e.g. articles, book recommendations, case studies, videos) to encourage continued use of CBT interventions. The discussion board is also used to remind trainees of upcoming conference calls and for discussion of the materials from the workshops and the follow-up conference calls. Similar efforts to facilitate communication between trainees have been extremely successful in some of the authors' previous educational and training programs.

Results

Trainee and Institutional Characteristics

To date, four workshops total have been conducted (1 every six months, alternating workshop locations between the Mount Sinai School of Medicine in New York and the City of Hope in Duarte, California), and a total of 162 trainees participated in the training program thus far. Trainees came from across the United States (Figure 1) representing 31 states, as well as one trainee from Puerto Rico, one from Japan and two from Iceland. The type of institutional settings most frequently represented were cancer centers (37.3%) or community cancer settings (23.5%). Trainees came from a variety of disciplines with the most common being social work (65.60%). The majority of trainees were Caucasian (85.9%) and female (91.5%) (Table 1 includes a complete list of the trainee and institutional characteristics).

Course Evaluations

Course evaluations were generally positive (N=162). Faculty lectures and breakout sessions were evaluated on a 5 point scale with 5 being the highest score. For clarity of the presentations the mean score was 4.41. Mean scores for quality of the content of the presentation was 4.40. The trainees rated the presentations as valuable to them as a clinician (mean=4.35), while the average rating of their increase in knowledge was 4.15. The material was also rated as organized and easy to follow (mean=4.42). In addition, 97.3% of the trainees reported that the presentations met their expectations. The breakout sessions were also rated very high (N=162). Trainees rated the breakout sessions valuable to them as a clinician (mean=4.34), and the average rating of their increase in knowledge as 4.21.

Trainee Outcome Measures

There was a significant increase in the trainees CBT knowledge from pre (mean=20.61) to post workshop (mean=21.05), $p=.02$. In addition, participants' overall confidence around implementing CBT significantly increased from pre (mean=24.31) to post workshop (mean=26.68), $p=.00$. Table 2 displays each self-efficacy item at pre and post workshop.

In terms of the follow-up support, all trainees have used the discussion board at least monthly to access the articles and conference call agendas. In addition, the average attendance rate of the conference calls is 75%.

For the 12 month post workshop follow-up data trainees (n=42) continued to have high satisfaction (mean=4.63) with the CBT training workshop. In terms of the specific skills training, the following satisfaction ratings (5 point scale) were found: relaxation training (mean=4.73), psychoeducation training (mean 4.60), cognitive restructuring (mean=4.57), enlisting social support (mean=4.51) and systematic desensitization (mean=4.25). Trainees overall satisfaction with the conference calls was also high (mean=4.07). Finally trainees

rated their average level of continued use of the CBT techniques learned through the CBT training program in their everyday clinical work with cancer survivors as 4.48 (often to very often).

Discussion

Our efforts to respond to the IOM's emphasis on the importance of addressing psychosocial issues for providing quality cancer care in the 2007 report, "Cancer Care for the Whole Patient: Meeting Psychosocial Health Needs," led to the development and implementation of this unique interactive CBT training program. The adult learning model developed by Knowles [17] was supported including immediate application of the new learned skills through interactive small group exercises and role play. The results indicate that trainees were highly satisfied with the lectures as well as the breakout sessions. The training program evaluation data will continue to be a source of valuable information for program enhancements. Using real-time evaluation data to enhance the training program is a strength of this program. In addition, the trainees increased their knowledge and self-efficacy of the CBT techniques learned during the workshop. To further assess the effectiveness of this training approach a suggested future study includes having independent raters evaluate videotaped sessions of trainees providing CBT at 6 and 12 months following the workshops to observe whether the trainees actually learned and retained the CBT skills they were supposed to learn.

The authors created this training program to attract multidisciplinary frontline cancer care professionals who were competitively selected, and represented a variety of health care settings and geographic locations. Our marketing approaches were successful in attracting a large group of applicants from a variety of states. Future efforts will continue to target these disciplines. While we did attract a small percentage of minority participants, a continued effort will be in place to recruit additional minority applicants.

Although a highly successful training program has been developed and implemented, there are some limitations that need to be mentioned. A system of long-term follow-up of the trainees' implementation of the CBT techniques is not in place. In addition, the direct impact of the CBT techniques implemented with cancer survivors is not being systematically measured. For example, collecting measures of problem-related distress before and after the CBT techniques were applied would be a good opportunity for a future study. Although feedback provided by the trainees has all been very positive in terms of the benefits their patients are receiving as a result of their applying the CBT techniques learned during the training program, collecting patient outcomes as a part of the current training program was not feasible due to individual trainees having to obtain Institutional Review Board (IRB) approval at their institutions. Since the majority of the trainees were clinicians they were not experienced in conducting research and obtaining IRB approval. Future studies are necessary to test the effectiveness of this training approach on improving patient outcomes including education about how to conduct research and obtain IRB approval.

Conclusions

In summary, this paper presents the successful recruitment and implementation of an interactive training model to facilitate health care professionals' implementation of CBT techniques. The first four of eight planned training programs have been successful in attracting attendees, developing a comprehensive curriculum, and implementing an interactive workshop and follow-up support. Plans to implement this unique interactive CBT training program for an additional 158 frontline cancer care professionals are currently underway. Future directions include the implementation of additional skills-based health

care professionals training programs utilizing this interactive format. For example, proposals have already been submitted to teach health care professionals how to build comprehensive supportive care programs, implement biopsychosocial screening programs, and maximize the sexual health of cancer survivors. Applying web-based learning techniques is also another educational opportunity that deserves significant attention. In conclusion, through the successful recruitment and implementation of this unique training program feasibility of this approach has been demonstrated and can be used as a model for future cancer education initiatives.

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Table 1

Trainee Demographics (N=162)

Demographic	Percentage
Gender	
Female	91.5%
Male	7.3%
Race	
Caucasian	85.9%
Asian	5.8%
African American	3.8%
Pacific Islander	0.6%
Current Position	
Social Worker	65.6%
Manager/Director	8%
Nurse	7.4%
Psychologist	7.4%
Oncology Counselor	3.1%
Professor	2.5%
Cancer Resource Specialist	1.2%
Group Facilitator	1.2%
Program Coordinator	1.2%
Case Manager	0.6%
Genetic Counselor	0.6%
Navigator	0.6%
Researcher	0.6%
Type of Institution	
Cancer Center	37.3%
Community Cancer Setting	23.5%
Major Medical Center	17%
NCI Designated Cancer Center	15%
Ambulatory Care Center	4.6%
Foundation	1.3%
Group Practice	0.7%
VA Hospital	0.7%

Table 2

Self-Efficacy Scores Pre-Post Workshop (N=162)

Self-Efficacy Item	Pre Workshop Average Score ^a	Post Workshop Average Score ^a	p-value
By exerting my best effort, I can successfully carry out cognitive-behavioral interventions with cancer patients and survivors.	3.49	4.32	.00 *
By exerting my best effort, I can persevere in learning the CBT skills I need to be effective in using CBT.	4.38	4.69	.00 *
By exerting my best effort, I can incorporate CBT skills into my clinical work.	4.23	4.64	.00 *
By exerting my best effort, I can learn the CBT skills necessary to positively impact Quality of Life in my patients.	4.45	4.65	.00 *
By exerting my best effort, I can train others in CBT interventions.	3.65	3.99	.00 *
By exerting my best effort, I can encourage other clinicians to use CBT skills.	4.14	4.41	.00 *
Total Self-Efficacy Score (sum of all the scores)	24.31	26.68	.00 *

^aScale-1–5 (1= Not at all Confident to 5=Totally Confident)*
p<.05