Psychotherapy
2013, Vol. 50, No. 2, 256–265


0033-3204/13/$12.00 DOI: 10.1037/a0030058

# Developing an Online, Modular, Active Learning Training Program for Behavioral Activation

Ajeng Puspitasari, Jonathan W. Kanter, Joseph Murphy, and Alex Crowe
University of Wisconsin-Milwaukee

Kelly Koerner
PracticeGround Learning Community, Seattle, Washington

The current study reports on two sequential studies that developed and provided a pilot evaluation of a Behavioral Activation (BA) training package based on an online, modular, active learning model for community mental health providers. In the first study, training outcomes were assessed with a within-subjects design by measuring trainees' ($N = 8$) reported implementation of learned BA skills in clinical practice and their satisfaction with the training at pretraining baseline and throughout the training. The results showed that trainees reported increased implementation of BA techniques in actual sessions. Several improvements were made in the second study, including incorporating more active learning strategies to the training protocol and including a role-play Behavioral Activation Skills Assessment (BASA) for an objective rather than self-report measure of trainees' ($N = 9$) performance before, after, and 6 weeks after training. Results suggested that skill at implementing two of the three core BA techniques (providing the rationale and activity scheduling) increased significantly, and overall performance was maintained at follow-up. Furthermore, trainees reported high satisfaction with the training in both studies.

*Keywords:* dissemination, empirically supported treatments, training, behavioral activation



The World Health Organization (WHO) has identified major depression as the third most burdensome disease in the world and projected that by 2030 depression will be the most burdensome disease in the world (WHO, 2008). Significant success has been achieved in developing treatments for depression that are empirically supported; however, 65% of depressed individuals in the United States do not receive efficacious treatment (González et al., 2010). One possible barrier to access to effective depression treatment is the limited number of mental health professionals who are competent in the delivery of such treatments (Patel, Chowdhary, Rahman, & Verdeli, 2011). This suggests the need for improvements in the dissemination of effective depression treatments to providers in the community (Beidas & Kendall, 2010).

One such depression treatment on which dissemination efforts may be beneficially focused is Behavioral Activation (BA; Kanter et al., 2010; Dimidjian et al., 2011). BA is considered a well-established/efficacious treatment by the American Psychological Association's Division 12 Task Force on Promotion and Dissemination of Psychological Procedures (Chambles et al., 1998) and Roth and Fonagy (1996), and the efficacy of BA against other evidence-based treatments for depression, including antidepressant medication, has been demonstrated in randomized trials (Dimidjian et al., 2006; Dobson et al., 2008) and meta-analyses (Cuijpers, van Straten, & Warmerdam, 2007; Ekers, Richards, & Gilbody, 2008; Mazzucchelli, Kane, & Rees, 2010). Several authors have argued that BA may be especially suitable for large-scale dissemination owing to its apparent simplicity and ease of training relative to other evidence-based psychotherapies for depression (Hollon, 2000; Kanter, Busch, & Rusch, 2009; Sturmey, 2009). However, limited, if any, research has evaluated this prediction.

From its inception, BA's foundation in basic behavioral principles emphasized parsimony and trainability. The basic premise of BA is that depression results from a broad deprivation of positive reinforcement, and treatment uses a variety of relatively straightforward techniques to identify and schedule activities to increase contact with positive reinforcement (Manos, Kanter, & Busch, 2010). Positive reinforcement is defined broadly to include events that clients experience as producing feelings of mastery and pleasure, contact with personal life values, and solving problems. Several treatment variants of this basic premise exist, and different variants share the core strategies related to assessment and activity scheduling but also include distinct techniques that are not stressed in other versions (Kanter et al., 2010). For example, two current well-tested BA treatment packages are the Brief Behavioral Activation Treatment for Depression (BATD), which incorporates a values assessment to determine activities to schedule in a relatively structured approach to activity scheduling (Lejuez, Hopko, Acierno, Daugters, & Pagoto, 2011; Lejuez, Hopko, & Hopko, 2001), and BA by Jacobson and colleagues (Jacobson, Martell, & Dimidjian, 2001; Martell, Addis, & Jacobson, 2001), which extensively

This article was published Online First February 11, 2013.

Ajeng Puspitasari, Jonathan W. Kanter, Joseph Murphy, and Alex Crowe, Department of Psychology, University of Wisconsin-Milwaukee; Kelly Koerner, PracticeGround Learning Community, Seattle, Washington.

Kelly Koerner is now with the Evidence-Based Practice Institute, Seattle, Washington.

Correspondence concerning this article should be addressed to Ajeng Puspitasari, P.O. Box 413, Milwaukee, WI 53201. E-mail: ajp@uwm.edu

targets avoidance behavior in a more complex and flexible approach to activity scheduling.

An important question is what is the most reasonable and efficient BA training strategy to achieve large-scale dissemination? Although training may focus on distinct BA treatment packages such as those discussed previously, an alternative approach to maximize the efficiency of both training and the scientific efforts behind training is to identify the core mechanisms and strategies of BA that appear to be active across different variants and build a modular training model systematically around these core strategies. As discussed by Kanter et al. (2010), these core strategies include providing a rationale for BA treatment, assessment to identify activities to schedule, activity scheduling, and strategies to use when activity scheduling does not succeed such as strategies targeting avoidance (Kanter et al., 2010; Kanter & Puspitasari, in press). A core skills-based approach may have additional benefits in that the explicit operationalization of the skills may clarify and simplify both the training and attempts to measure the outcomes of training. No studies, however, have been conducted to evaluate the effectiveness of training these core modular BA skills that are shared by different BA treatment packages.

An additional consideration in training research is the format of the training (Beidas & Kendall, 2010; Fairburn & Cooper, 2011). For example, typical continuing-education trainings consist of half-day, full-day, or multiday workshops with an expert trainer (DeViva, 2006; Gleacher et al., 2011; Lewis & Simons, 2011; Rubel, Sobell, Miller, 2000). The few studies that have examined the impact of these trainings suggest that they may be effective in changing therapists' knowledge of the treatment but not in changing therapeutic skills in clinical settings (Dolcourt, 2000; Bootzin & Ruggill, 1988). Some have further argued that the main reason for insufficient outcomes is the focus on passive rather than active learning (Beidas & Kendall, 2010) in that in many trainings, the majority of the time is spent on didactic instruction, which provides insufficient time for trainees to practice the learned skills and receive feedback on their performance. Growing evidence suggests that active learning, which includes deliberate practice, strategic learning prompts, and peer/expert feedback may be a more effective strategy for improving therapist performance (Beidas, Koerner, Weingardt, & Kendall, 2011).

There is growing interest in the use of online technology to assist in the delivery of effective and efficient psychotherapy training (Barnett, 2011; Abbass et al., 2011; Wolf, 2011). Online training may be a suitable alternative to direct face-to-face training for active learning. The typical face-to-face training is conducted in a single block of time with no gaps in training during which trainees may practice the newly learned skills. Trainees come to the workshop site from different locations and prolonging the training period for practice is not feasible for logistical reasons. This issue may be resolved with online training in which trainees from different locations may attend the training simply by logging on to their computers, and training sessions may be separated to allow between-session practice. In this way, the same time commitment required for a 4-hr half-day workshop may be extended over several weeks of brief training sessions targeting specific modular BA skills and allowing for practice to occur after a training session, with feedback on performance given by the trainer in the next session. Although little has been written about the benefits and logistics of online therapist training, the issues that arise are consistent with issues of online supervision that have been recently discussed (Manring, Greendberg, Gregory, & Gallinger, 2011; Abbass et al., 2011).

The current article reports on two sequential studies that developed and provided a pilot evaluation of a BA training package based on the online modular active learning model and provided to community mental health providers. The overall research strategy involves an iterative process involving feedback from participants, evaluation of outcomes, implementation of changes, and then reevaluation (Beidas et al., 2011). The first study evaluated training outcomes by measuring trainees' implementation of learned BA skills in clinical practice and their satisfaction with the training with a within-subjects design in which measurements were taken during a pretraining baseline and repeatedly over the course of training. It was hypothesized that the training would be associated with increased implementation of BA skills in real clinical settings and that the BA online training package would be well accepted by participants. The second study made several improvements to the training protocol, developed a role-play assessment for an objective rather than self-report measure of therapist performance before and after training, and included a 6-week follow-up to evaluate the maintenance of skill improvements after training.

## Trial 1

### Method

**Recruitment and screening.** A total of eight participants were recruited via an announcement posted on the website of PracticeGround (http://www.practiceground.org), a membership-based online learning community for therapists that hosts online training courses for more than 150 members. Interested participants were given a detailed description of the training and contacted by a research assistant to obtain informed consent. After providing consent, participants were requested to enroll one client from their practice into the study to measure the impact of training on the participants' behavior with clients. Specifically, each participant was asked to report on their own behavior in session with a selected client over the course of the training period. Before using client session data for this purpose, clients were requested to provide informed consent via an online consent form. Five of the eight participants provided these data, whereas three participants, because of logistical constraints or lack of client provision of informed consent, did not provide these data.

**Training protocol.** The initial BA training protocol identified three key BA skills consistent with a BA manual by Kanter et al. (2009)—providing the rationale, assessment, and scheduling/reviewing activities—and packaged them into a modular training model that was delivered across several formats. First, a self-paced online program was developed that introduced the core BA skills using interactive multimedia, such as packaged interactive powerpoint slides with embedded Flash graphics, video demonstrations, and audio narration. The program can be accessed at *http://eri.adobeconnect.com/ba-tt/*. Second, basic readings on BA (e.g., Kanter et al., 2010; Mazzucchelli, Kane, & Rees, 2010) were provided to participants to read individually. Third, the participants met for three live online training sessions with the trainer in the PracticeGround Collaboration Room, which blended web conferencing and streaming Powerpoint presentation capabilities with

online discussion through instant messaging. Participants were encouraged to review the online program and readings before the live online training sessions. Each training session lasted 90 min and included powerpoint-based didactic instruction on each skill, open audio and text-chat discussion about the skill, and encouragement to practice the skills between sessions as well as try the skills on themselves (e.g., schedule activities to complete in their own lives).

The skills trained in these sessions included providing the specific BA rationale, assessment (including activity monitoring and values assessment), activity scheduling, and reviewing previous assignments. An example of the skill of providing the BA rationale that was trained is, "When one experiences the kinds of things you have experienced in your life, it makes sense that you feel sad and down, and that makes it harder to keep going, and then you stop doing the things that are important to you. The goal of BA is to help you reengage in healthy, desirable, and meaningful behaviors that are in line with your values to break this cycle of depression." An example of activity monitoring is, "One of the first things we want to do is to get a really good sense of what kinds of activities you are already doing, and not doing, on a daily basis. So as an initial assignment I would like to discuss the possibility of you keeping a daily record of your activities for a week, so we can see what your daily life looks like." An example of values assessment is, "In order to help you reengage in diverse activities, it is important to make sure that we choose activities that are really important and meaningful to you. One way to do this is to look at your values from different areas in life and see how this process could inspire some specific activities that you could do." An example of activity scheduling is, "Let's now choose three activities to schedule, one that is challenging but valuable to you and one that is more of a routine that you need to do, and the last one something that brings you pleasure. Let's spend a few minutes on each one and develop a specific plan for when, where, and with whom you will do it. How does this sound?" Finally, an example of reviewing previous assignments is, "How did it go with your activities this week? Let's take some time and review what you did and didn't do, and problem solve any obstacles that surfaced."

The second and third sessions included time for participants to review practice attempts with, and receive feedback from, the trainer. Nonspecific depression treatment issues such as suicide, resistance, and the alliance were not formally discussed, but at the end of each session, participants were able to ask questions about general issues or application to cases.

**Assessment procedure.** Before the first online training session, participants completed an online demographic information questionnaire. Also before the first training session, as well as immediately before the second and third training sessions, and 2 weeks after the final training session, participants reported via an online survey on implementation of BA techniques in sessions with their selected clients. After each training session, each participant also completed a short survey assessing satisfaction with the training session.

**Measures.**

***Self-reported implementation of BA strategies.*** In-session use of the primary BA skills of presenting the rationale, assessment, and scheduling/reviewing activities were assessed via seven specific checklist items, indicating whether the therapist attempted the strategy with the client in the session. Presenting the rationale was assessed with two items: Did you provide a general discussion of the rationale for activation? Did you provide the specific BA rationale?

Use of assessment strategies was assessed with two items: Did you conduct activity monitoring? Did you conduct a values assessment?

Scheduling and reviewing activities was assessed with three items: Did you conduct general activity scheduling? Did you conduct specific and concrete activity scheduling? Did you review previous assignments?

In addition, overall implementation of BA in each selected session was assessed with the question, "What percentage of the session was spent on BA strategies?"

***Satisfaction with training.*** After each training, participants completed a questionnaire assessing the quality and usefulness of each component of the training (providing the rationale, assessment, and activity scheduling) on a 5-point scale, with 1 (*poor*), 2 (*fair*), 3 (*good*), 4 (*very good*), and 5 (*excellent*). To produce a summary satisfaction score for each training component, the quality and usefulness ratings were averaged, and a total average of all six ratings was also produced. The internal consistencies of the average scores for each skill and for the total score were good ($\alpha$ values = 0.78, 0.95, 0.98, and 0.89 for providing the rationale, assessment, activity scheduling, and total, respectively).

Qualitative responses from participants providing feedback on four aspects of the training were also obtained. These included (1) the format of the workshop (e.g., use of online technology), (2) the length of the workshop, (3) the homework assigned to participants, and (4) additional general feedback.

## Results

**Participant characteristics.** Eight participants (four males) were enrolled in the study. All participants were licensed mental health practitioners, which included four psychologists, one psychiatrist, one psychiatric nurse practitioner, one social worker, and one mental health counselor. The mean age of participants was 42.6 ($SD$ = 9.744). Six participants (75%) self-identified as White/Caucasian and two participants (25%) self-identified as Asian/Asian American. Participants reported that their work settings included community mental health (25%), group independent practice (25%), individual independent practice (25%), and outpatient mental health clinic (25%).

**Client characteristics.** The mean age of the five clients who provided consent for use of session data was 47.80 ($SD$ = 11.75). Four (80%) clients were female, and four (80%) were Caucasian (1 was Hispanic). All clients were diagnosed with Major Depressive Disorder by their therapists.

**Implementation of BA strategies.** Statistical tests were not conducted because of the small sample size, and the fact that several baseline variables demonstrated no variance, prohibiting statistical testing of these variables. Observation of Table 1 suggests that for all, but two, variables, increases in reported use of BA techniques from baseline through the training period are large and obvious, suggesting that cautious interpretation is warranted without statistical tests.

Regarding providing a BA rationale, results suggest that although therapists did occasionally provide general nonspecific discussion of activation during baseline (28.6% of sessions), they

Table 1
*Trial 1: Percentage of Sessions in Which BA Strategies Were Applied According to Therapist Self-Report, During Baseline, and After Each Training Session*

| Modules | Baseline | Post session 1 | Post session 2 | Post session 3 |
|---|---|---|---|---|
| Providing BA rationale | | | | |
| General discussion of activation | 28.6% | 37.5%[a] | 44.4% | 12.5% |
| Specific BA rationale | 0.0% | 37.5%[a] | 44.4% | 12.5% |
| Assessment | | | | |
| Activity monitoring | 0.0% | 62.5%[a] | 22.2%[a] | 0.0% |
| Values assessment | 0.0% | 50.0%[a] | 33.3%[a] | 0.0% |
| Scheduling and reviewing activities | | | | |
| General activity scheduling | 14.3% | 62.5% | 66.7%[a] | 100.0%[a] |
| Specific and concrete scheduling | 0.0% | 50.0% | 44.4%[a] | 87.5%[a] |
| Reviewing previous assignments | 42.9% | 62.5% | 33.3% | 75.0%[a] |
| Overall percentage of each session devoted to BA: *M* (*SD*) | 2.9% (4.9%) | 65.6% (21.3%) | 52.4% (25.4%) | 74.4% (10.2%) |

[a] This BA strategy was covered in that specific training session.

did not use the specific BA rationale that was trained in Session 1 of the training (0.0% of sessions). The use of this specific rationale, which was trained in Session 1, increased after the first (37.5% of therapy sessions) and second training sessions (44.4% of therapy sessions), but decreased after Session 3 of the training (12.5% of therapy sessions), suggesting that use of the rationale may not have become routine for the therapists with this brief training protocol.

Regarding the use of BA assessment techniques, which were trained in the first and second training sessions, a clear and obvious increase in reports of use occurred from baseline (0% of therapy sessions) to after the first training session (50.0%–62.5% of therapy sessions) and after the second training session (22.2%–33.3% of therapy sessions), but it appears that these techniques again did not become routine and decreased to 0.0% of therapy sessions after the specific focus on them in training.

Regarding the use of BA activity scheduling and reviewing techniques, as with providing the rationale, therapists indicated that during baseline they were occasionally providing activity scheduling assignments (14.3% of therapy sessions), as well as regularly reviewing homework assignments (42.9% of therapy sessions), but they were not using the specific and concrete activity scheduling (0.0% of therapy sessions) that characterizes BA. During the training period, a large increase in specific and concrete activity scheduling appears to have occurred with clients (50.0% of therapy sessions after the first training session, 44.4% of therapy sessions after the second training session, and 87.5% of therapy sessions after the third training session), and an increase in general activity scheduling over baseline appears to have occurred during the training period as well (62.5% of therapy sessions after the first training session, 66.7% of therapy sessions after the second training session, and 100% of therapy sessions after the third training session). However, because these techniques were focused on in Sessions 2 and 3 of the training, and no follow-up data were collected, it is unclear whether the increase in use of these techniques was transient, as it appears to have been for BA assessment, or stable and lasting.

Overall, therapists reported a large and obvious increase in the percentage of each session devoted to BA during the training period, from just 2.9% during the baseline period to at least 50% for each of the training periods.

**Satisfaction with training.** Regarding satisfaction with the training, the overall satisfaction was 4.02 (*SD* = 0.82), indicating "very good" quality and usefulness across the three training components. Individual component scores were 3.50 (*SD* = 0.66) for Activity Scheduling, 4.01 (*SD* = 1.06) for Assessment, and 4.57 (*SD* = 0.75) for Providing the Rationale.

Qualitative feedback on the format was positive but included some negative feedback related to some poor phone connections that made it difficult for participants to communicate with each other during the last session (e.g., "I really thought the website was phenomenal. That provides a great way to learn . . . The phone situation unfortunately did not work as well"). Qualitative feedback on the homework was uniformly positive (e.g., "I found this very valuable. By doing it myself, I had insight into the process and could anticipate problems that clients may have. Very smart idea"). Qualitative feedback on the length of the workshop was mostly positive, with several participants commenting that the time between sessions was helpful (e.g., "Good . . . having time between sessions provided us time to get patients and ourselves into the activities"). However, two participants commented that sessions every week rather than every other week would have been preferred (e.g., "I think it would have been better to have them every week, and smaller amounts of information in each one. I think I would have stayed more focused and more on top of things"). Finally, two participants requested more training time (e.g., ". . . would have preferred an additional session to work through patient issues").

The general feedback comments were positive with some critical feedback particularly related to how to apply the techniques with specific clients.

## Discussion

Results from Trial 1 suggest that trainee's implementation of BA skills increased after receiving the online BA training. Furthermore, therapists also reported feeling satisfied with the training package and provided substantial positive feedback. Therapist satisfaction is important because the use of modular BA skills and the active learning format of the training package are novel. However, several important methodological limitations of the study were noted. First, the sample size was quite small and results

needed to be replicated. Second, the study relied on self-report indicators of implementation of BA techniques, which may have been biased in favor of providing positive feedback about the training. Also, although trainees reported increased implementation of BA techniques in their clinical practice with selected clients, there was no indication of the skill or competence with the techniques implemented. Thus, an objective measure of implementation skill was needed.

Third, there was no follow-up measurement, thus there was no indication that the training had anything other than a transient impact on participants' behavior. In fact, there was some indication from observation of the trends in the therapist self-reports on in-session behavior that the implementation of BA techniques was in fact closely tied to the training sessions and may not have generalized into the therapists' general practices. In particular, self-reported provision of the BA rationale and use of assessment strategies peaked during the training periods in which these skills were the focus, and then decreased considerably when assessed 2 weeks later. However, it is important to note that these skills are not meant to be used in every BA session; thus, it is possible that the therapists applied the skills appropriately during the initial training window, and there was no need to repeat the skills during the latter window. This is substantiated by qualitative feedback suggesting that therapists felt that the techniques were generalizing.

Finally, the training content, which was designed to maximize active learning, emphasized between-session practice, but the training did not allow for much practice during the training sessions, which would have allowed the trainer to provide a more direct assessment of participants' skills and provide immediate feedback on performance. Thus, the active learning nature of the training could have been improved. In addition, some minor audio problems during the training needed to be resolved.

## Trial 2

To address the limitations of the first study, several changes were implemented in the second study. First, a significant change to the training protocol format in Trial 2 was the shift to focus mainly on active learning. In each training session, the didactic instruction portion was kept minimal, and the remaining time was spent on modeling, BA skills rehearsal, feedback on trainees' performance, and discussion. Two types of role-plays were conducted in each session. First, the trainer acted as a BA therapist and modeled the use of BA skills with a participant. Second, a "rapid fire" role-play technique was used in which the participants sequentially acted as the BA therapist in turns of approximately 1 min each to rehearse the skills. During this activity, trainees received direct feedback from both the trainer and other trainees on their performance. In addition, each core BA skill was broken into a series of "microskills" that were focused on in training. These microskills included both standard skills (e.g., for providing the BA rationale: "Discussing activation as a way to break the cycle of depression") and skills in response to specific prompts that may occur in session (e.g., "Responding to clients who believe the problem of depression is their brains or neurochemistry").

Another change to the training content was the inclusion of an additional modular BA skill in the training, specifically how to address client avoidance. This was done in response to participant feedback that the training could be improved by including instruction on how to deal with specific client issues that arise in BA, and avoidance is a common issue emphasized in BA by Martell et al. (2001).

The second major change from Trial 1 was the development of a standardized role-play assessment of the competent provision of BA modular skills, called the Behavioral Activation Skills Assessment (BASA). A role-play assessment has several important advantages when used to measure outcomes of training (Fairburn & Cooper, 2011). First, it does not entail the logistical burden of requiring therapists to provide tapes of therapy sessions for expert-trained raters to evaluate. Second, the role-play assessment is more efficient because it can guarantee that key skills are assessed by prompting the therapist to use specific skills during the role-play, rather than relying on the hit-or-miss occurrence of skills in sessions, potentially requiring a wide range of sessions to be coded.

With the BASA, each trainee interacted with a hypothetical depressed client (acted by a trained research assistant) and was prompted by the client, using natural prompts that would occur in a BA therapy session, to use the specific modular BA skills discussed in the training. Consistent with the larger hypothesis behind this research that BA represents an efficient and easy-to-train strategy, it was important to explore the possibility that the BASA also was easy-to-train and implement. Thus, research assistants without an extensive background in BA were trained to both administer the BASA to participants and code the BASA results, and it was important to evaluate the reliability of the BASA coders with each other (interrater reliability) as well as the reliability of codes provided by the trained raters with codes provided by the expert BA trainer (criterion reliability). Finally, to evaluate the maintenance of any changes in participants' skill at implementing BA techniques over time, the BASA was administered before, immediately after the training, and again 6 weeks after the end of the training.

### Method

**Recruitment and screening.** All recruitment procedures in Trial 2 were the same as in Trial 1, with the exception that participants were not required to recruit a client to participate with them.

**Training protocol.** Many aspects of the training protocol format remained unchanged from Trial 1, including the training duration, assigned readings, and use of the self-paced online program. In terms of the training content, a new core BA skill, how to address client avoidance, was added to the BA training and covered in Session 3. The active learning techniques discussed previously were added to the protocol. The specific rapid-fire role-plays conducted included providing the rationale (Session 1), values assessment (Session 2), activity scheduling (Session 2), and targeting avoidance (Session 3).

**Assessment procedure.** Online survey assessment procedures were the same as in Trial 1, with assessments given before the first online training session and after each training session. In addition, each participant completed a recorded role-play assessment over the phone with a trained assessor before, immediately after, and 6 weeks after the training.

**Measures.**

***Self-reported implementation of BA strategies.*** Because clients did not provide consent for release of session content in Trial 2, participants reported on the number of clients with whom they

used specific BA skills in session, instead of reporting on the content of specific sessions as in Trial 1. The BA skills of presenting the specific BA rationale, assessment (both activity monitoring and values assessment), specific and concrete activity scheduling, reviewing previous assignments, and targeting avoidance (added for Trial 2) were assessed with the question, "With how many clients did you use (specific BA skill)?". Additional online survey questions on a variety of topics are not discussed in this report.

***Perceived overall confidence in BA skills.*** Participants' perceived overall confidence in implementing the core BA microskills was assessed with 19 items, each rated on a 5-point scale, with 0 (*not at all*), 1 (*a little*), 2 (*somewhat*), 3 (*considerably*), and 4 (*extremely*). All questions followed the same format, which was "How confident do you feel in (specific BA microskill)?" Examples of specific BA microskills include "Providing a rationale by discussing activation as a way to break the cycle of depression," "Responding to clients who say 'I just want to feel happy'," and "Exploring when emotional avoidance may get in the way of activation." The internal consistency for the total 19-item scale was good, $\alpha = 0.96$.

***Satisfaction with training.*** Satisfaction with training was measured as per Trial 1, with the addition of quality and usefulness items for the new skill (targeting avoidance). The internal consistencies of the average scores for each skill and the total score were again good ($\alpha$ values ranged from 0.73 to 1.00).

***Role-play assessment.*** The BASA (Puspitasari, Kanter, & Crowe, 2012) was developed to measure participants' abilities to implement each BA skill with a hypothetical client played by a trained assessor following a realistic clinical case conceptualization and script. Each role-play assessment was conducted over the phone and took approximately 1 hr to complete. In the role-play, participants were prompted to perform a sequence of three core BA skills: providing the rationale, values assessment, and activity scheduling (targeting avoidance was not assessed). Before the start of the role-play, each participant was provided a brief description of the client. In addition, instructions for each role-play were provided, which were reviewed by the assessor before beginning the role-play. Additional details about the content of the role play are unavailable as the role play is being used in current and future research, and the first author may be contacted for more information.

Each role-play assessment was audio-taped and coded using a rating sheet. There were 38 items total in the BASA rating sheet, each representing specific microskills. Each skill was rated as either 1 (*performed competently*) or 0 (*not performed competently*), and examples were provided to coders to determine ratings. Scores were then averaged to produce a score for each skill that ranged from 0 to 1 and could be interpreted as representing the percentage of microskills performed competently for each modular BA skill.

The three research assistants (RAs) who acted as the hypothetical client participated in 3 weeks of training to perform the client role and learn the scoring procedures. First, each RA completed assigned reading (Kanter et al., 2010) to become familiar with the core BA skills assessed in the role-play. Second, the RAs learned the scripted scenarios for the hypothetical clients and memorized the important information about the client (e.g., negative life events occurred that triggered the depressive symptoms and desirable activities to schedule). Last, each RA conducted two practice role-play assessments. The RAs were trained to ask the same prompted challenges in each role-play.

Three RAs completed 1 month of training to function as BASA raters, including reading the BA text (Kanter et al., 2009) to learn about core BA skills, meeting with the research coordinator once a week to review therapists' ideal responses for each item on the BASA, and completing at least two practice ratings of recorded role-plays with the research coordinator before starting coding. The total number of training hours was approximately 15–20 hrs. Each BASA recording then was rated by two trained RAs. The coding process involved two steps. First, each RA coded the recording independently to provide an evaluation of interrater reliability. Then, RAs met to compare and discuss their individual scores. When the coders provided different scores for an item, coders presented their reasoning for the score that they gave. If a consensus agreement to give the same score was achieved, the same score was included for the specific item. If a mutual agreement was not achieved, then the average score (0.5) was given to the specific item. Finally, three randomly chosen recordings were coded by the BA expert trainer to provide an evaluation of criterion reliability.

## Results

**Participants' characteristics.** Nine participants (five females) participated in Trial 2, including five psychologists, three clinical social workers, and one occupational therapist. The mean age of participants was 42.2 ($SD = 8.6$). Eight of the nine participants identified themselves as White/Caucasian and one participant self-identified as Middle Eastern. Seven participants were licensed mental health providers and one was a therapist in training. Participants reported that their work settings included group independent practice (12.5%), individual independent practice (12.5%), outpatient mental health clinic (37.5%), training clinic (12.5%), and other (25%).

**Implementation of BA strategies.** Results for therapist self-reported variables are presented in Table 2. With one exception, therapists reported no use of BA techniques with clients during the baseline period. During the training period, therapists reported increasing use of BA techniques with clients. Regarding providing the rationale, therapists reported doing this with approximately two clients each immediately after the training session in which this was covered, and this behavior decreased afterward. Regarding assessment strategies, a similar increase over baseline during the training window and then a slight decrease was observed. Regarding scheduling and reviewing activities, increases were observed during the training period that do not seem to be specific to the focus on this topic in a particular training session, and this also appears to be the case with targeting avoidance.

Regarding confidence with BA techniques, using a repeated measures analysis of variance (ANOVA) with the Greenhouse–Geisser correction, the mean confidence scores over time were significantly different, baseline $M = 1.98$ ($SD = 0.34$), *post Session 1* $M = 2.68$ ($SD = 0.05$), *post Session 2* $M = 2.84$ ($SD = 0.11$), *post Session 3* $M = 3.24$ ($SD = 0.29$), $F(1.72, 3.45) = 20.452$, $p = .013$, partial $\eta^2 = 0.911$. A follow-up test demonstrated that the average confidence score during training (averaging across the three training time points, 2.92, $SD = 0.13$) was

Table 2
*Trial 2: Therapist Reports at Baseline and After Each Training Session on Mean Number of Clients With Whom Specific BA Strategies Were Applied*

| | Baseline | Post session | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| | *M* (*SD*) | *M* (*SD*) | *M* (*SD*) | *M* (*SD*) |
| BA strategy: providing BA rationale | | | | |
| Specific BA rationale | 0.00 (0.00) | 2.09 (3.51)[a] | 0.85 (0.99) | 0.38 (0.74) |
| BA strategy: assessment | | | | |
| Activity monitoring | 0.00 (0.00) | 2.27 (3.13)[a] | 1.46 (2.77)[a] | 0.63 (0.92) |
| Values assessment | 0.33 (0.58) | 1.82 (3.13)[a] | 1.38 (1.45)[a] | 1.13 (0.99) |
| BA strategy: scheduling activities | | | | |
| Specific and concrete scheduling | 0.00 (0.00) | 1.82 (3.09) | 1.69 (2.63)[a] | 1.87 (1.81)[a] |
| Reviewing previous assignments | 0.00 (0.00) | 3.18 (3.84) | 2.23 (3.96)[a] | 1.50 (1.31)[a] |
| BA strategy: targeting avoidance | 0.00 (0.00) | 2.10 (3.31) | 1.08 (1.11) | 0.75 (1.39)[a] |

[a] This BA strategy was covered in that specific training session.



significantly higher than the confidence score during baseline (1.98, $SD = 0.34$), $p = .006$. Overall, the self-reported competency data indicated large changes from pre- to posttraining, Cohen's $d = 1.12$.

**Satisfaction with training.** Regarding satisfaction with the training, the overall satisfaction was 4.18 ($SD = 0.74$), indicating "very good" quality and usefulness across the three training components. Individual component scores were 4.07 ($SD = 0.63$) for providing the rationale, 4.00 ($SD = 1.00$) for assessment, 4.32 ($SD = 0.73$) for activity scheduling, and 4.40 ($SD = 0.55$) for strategies targeting avoidance.

**Role-play reliability and outcomes.** To evaluate the internal consistency of the BASA scores for each skill and for total skill, Cronbach's α was calculated. Results indicated acceptable internal consistency for all scores (α values = 0.87, 0.82, 0.79, and 0.91 for providing the rationale, values assessment, activity scheduling, and total skill, respectively). In addition, to examine the degree to which the total scale score reflected the contribution of each of the subscale scores, we computed correlations between each skill and the total score ($r$ values = 0.85, 0.90, and 0.84, all $p$ values $< .001$, respectively, for providing the rationale, values assessment, and activity scheduling), and these correlations remained strong for each subscale when the specific subscale under consideration was removed from the total scale score ($r$ values = 0.70, 0.82, and 0.61, all $p$ values $< .01$, respectively, for providing the rationale, values assessment, and activity scheduling). To evaluate interrater reliability of BASA coders, intraclass coefficients (ICCs) were calculated to compare individual rater's scores for each BA skill and for the total skill. Interrater reliability was high in all cases, ranging from 0.84 to 1.00 ($n$ values for each ICC comparing two raters scores ranged from 6–14). For criterion reliability ($n = 3$ for each comparison between the expert rater's scores and the combined coders' scores used in the outcome analyses), ICCs were 0.87 for providing the rationale, 0.67 for values assessment, 0.87 for activity scheduling, and 0.86 for total skill.

To explore role-play outcomes, repeated measures ANOVAs were first conducted to evaluate significant differences across the three assessment periods in skill implementing the BA rationale, values assessment, activity scheduling, and overall skill. When significant, they were followed by bonferroni-corrected tests comparing baseline to posttraining and follow-up scores. Results are presented in Table 3.

For skill implementing the BA rationale, the repeated measures ANOVA was significant, $F(2, 14) = 4.49$, $p = .031$, partial $\eta^2 = 0.391$, but the comparisons between baseline and posttraining (d = .68) and baseline and follow-up (d = .36), when adjusting for multiple comparisons, were not significant.

For skill implementing values assessment, the repeated measures ANOVA was not significant.

For skill implementing activity scheduling, the repeated measures ANOVA was significant, $F(2, 14) = 12.64$, $p = .001$, partial $\eta^2 = 0.644$, as were the comparisons between baseline and posttraining ($p = .02$, d = 1.36) and baseline and follow-up ($p = .014$, d = 1.25).

For overall skill, the repeated measures ANOVA was significant, $F(2, 14) = 19.12$, $p < .001$, partial $\eta^2 = 0.732$, as were the comparisons between baseline and posttraining ($p = .003$, d = 1.02) and baseline and follow-up ($p = .006$, d =.85).

In terms of overall BASA scores for each trainee, all but one participant demonstrated an increase in skill from pretraining to posttraining. The participant who did not demonstrate an increase showed a ceiling effect at pretraining. At follow-up, gains were either maintained or increased for 50% of the participants. Furthermore, 8 out of 9 participants appeared to maintain some gains over baseline at follow-up.

Table 3
*Trial 2: BA Skills Assessment Scores at Pretraining, Posttraining, and 6-Week Follow-Up*

| Module | Pretraining *M* (*SD*) | Posttraining *M* (*SD*) | Follow-up *M* (*SD*) |
|---|---|---|---|
| Specific BA Rationale | 0.66 (0.30) | 0.83 (0.19) | 0.75 (0.19) |
| Values Assessment | 0.49 (0.30) | 0.63 (0.36) | 0.64 (0.31) |
| Scheduling Activities | 0.41 (0.21)[a,b] | 0.67 (0.17)[a] | 0.66 (0.19)[b] |
| Overall Skill | 0.52 (0.21)[c,d] | 0.72 (0.18)[c] | 0.69 (0.19)[d] |

*Note.* Means with the same superscript were significantly different ($p < .025$).

## Discussion

Several changes were made in Trial 2 in terms of the training protocol (e.g., inclusion of rapid-fire exercise) and addition of the BASA to assess therapists' skill in providing the BA rationale, values assessment, and activity scheduling. Consistent with findings from Trial 1, participants reported increased implementation of BA strategies in their therapy sessions with actual clients during the training period. Participants also reported high satisfaction with the training protocol.

Reliability of the BASA was confirmed between raters and with an expert criterion, suggesting that multiple raters can implement this novel method for assessing BA skill with consistency with each other and with an expert with detailed knowledge of the skills trained. BASA results suggested that skill at implementing two of the three core BA techniques (providing the rationale and activity scheduling) increased significantly during the training period, and overall skill also increased significantly. Notably, skill may have dropped somewhat over the 6-week follow-up but was still significantly higher than baseline for activity scheduling and overall skill, suggesting that skills were at least partially maintained.

Several limitations of Trial 2 should be noted. First, the follow-up period of 6 weeks was relatively short, and future studies may benefit from longer follow-up periods to assess the stability of increases in skill over longer periods of time. Second, the small sample size of Trial 2 limits our confidence that these results can generalize to a larger group of trainees. Third, although the open-trial design was appropriate for this stage of development of the training protocol, future studies may benefit from inclusion of a control condition and randomization of participants to groups to control for the passage of time and other relevant variables.

Fourth, there are several limitations to the BASA that are currently being addressed. First, the skill of targeting avoidance was not assessed in this initial study (a BASA role-play assessing this skill has since been developed and is being used in current studies), so the results cannot speak to any impact of training on this important skill in BA. Second, because the BASA consists of only one hypothetical client scenario and was given at three time points, results might be affected by practice. Additional hypothetical client scenarios are currently being developed for the BASA to address this concern. Finally, although good reliability with the BASA was achieved, this was produced with a small sample of tapes, and future research should make efforts to improve our confidence that the BASA can be conducted and coded reliably.

## General Discussion

This article presents results from two studies to develop and evaluate a novel method to train therapists in the implementation of four core BA skills: providing the rationale, assessment, activity scheduling, and targeting avoidance. This training method, based on the recommendations of Beidas et al. (2011) and Fairburn and Cooper (2011), was revised over the course of the two studies and used an online format for several purposes: To allow for didactic information to be provided to trainees outside of training sessions, to maximize the use of training session time for active learning including deliberate practice and feedback, and to present the training as a course spaced over several weeks, thereby allowing additional practice and use of the BA skills in between sessions.

The first study provided evidence that trainees reported high satisfaction with the training and that they were able to implement the techniques with clients during the training period. However there was no evidence that gains made during training were maintained after the training period. The second study replicated results with respect to self-reported implementation of techniques during the training period and self-reported satisfaction with the training, and added an assessment of self-reported confidence with the skills, which also demonstrated a significant increase during the training period. The second study also added the BASA role-play to more objectively evaluate the degree of participants' skills at implementing three of the four core BA skills trained (the fourth skill, targeting avoidance, was not assessed in the role-play). Furthermore the second study evaluated therapist skill with the BASA at a 6-week follow-up to assess maintenance of gains.

Several limitations of both studies should be noted. First, conclusions about increased implementation of BA strategies in the clinical setting were based solely on therapists' self-report. More objective assessment is still needed to assess appropriate implementation in clinical settings (e.g., by coding video/audio recordings of actual therapy sessions). Second, client outcomes were not assessed in these studies. Measuring client outcome is important because the overall objective of disseminating efficacious treatments through training is to improve client outcomes. Future studies are needed to better assess the relationship between training and client outcomes.

The BASA role-play is a new assessment strategy that should be seen as in development, and results generated from it should be seen as preliminary. Primarily, additional work to validate the method against actual behavior in clinical settings is required. Administration of the BASA to known groups (e.g., known BA experts vs. naïve clinical psychology graduate students) would provide scores against which trainee scores could be benchmarked. In other words, it is unclear whether an increase in overall BA skill from 52% to 69%, as was found in Trial 2, is sufficient to claim that the trainees are able to deliver BA competently. It also remains unknown whether BA skill assessed by the role-play will be translated to real clinical practice. An issue here is that the role-play may demonstrate skill at implementing rehearsed skills, but it remains unknown whether trainees can implement the skills flexibly and in the context of various client difficulty levels (Beidas et al., 2011). Along these lines, it is well known that common factors play a large role in treatment outcomes for depression (Luborsky et al., 2002). The current training protocol and the BASA role-play do not focus on common factors although the specific training in providing the rationale may be seen as partially focusing on important aspects of the therapeutic alliance such as obtaining agreement on the goals and tasks of therapy (Horvath & Bedi, 2002). Nonetheless, future studies may benefit from inclusion of training in, and measurement of, common factors for a full assessment of relevant therapeutic skills in treatment.

Overall, with these limitations in mind, current results are encouraging. Across the two studies, the online BA training was associated with short-term increased self-reported implementation of the strategies in clinical practice, was well accepted by community mental health providers, and was associated with increased BA skill at the end of training and at a 6-week follow-up, according to the BASA role-play. Collectively, these two studies provide initial support for the promise of BA as an easy-to-train treatment

approach, in the context of a brief online active learning approach that is applicable to a broad range of therapists in a global effort to reduce the burden of depression. The studies also are encouraging with respect to an approach to training that identifies modular therapeutic skills, trains them sequentially, and evaluates training with a role-play assessment, as recommended by Fairburn and Cooper (2011). It is important to note, given the preliminary nature of these findings, that the training package is still in the process of iterative development to strengthen its impact and produce more robust skill acquisition and maintenance across diverse clinical presentations, as per the recommendations of Beidas et al. (2011). Future studies using this modular, online, active learning approach using larger samples, randomized comparison conditions, and assessments of both therapist skill and client outcomes are warranted.

## References


Abbass, A., Arthey, S., Elliott, J., Fedak, T., Nowoweiski, D., Markovski, J., & Nowoweiski, S. (2011). Web-conference supervision for advanced psychotherapy training: A practical guide. *Psychotherapy, 48,* 109–118. doi:10.1037/a0022427

Barnett, J. E. (2011). Utilizing technological innovations to enhance psychotherapy supervision, training, and outcomes. *Psychotherapy, 48,* 103–108. doi:10.1037/a0023381

Beidas, R. S., & Kendall, P. C. (2010). Training therapists in evidence-based practice: A critical review of studies from a systems-contextual perspective. *Clinical Psychology: Science and Practice, 17,* 1–30. doi:10.1111/j.1468-2850.2009.01187.x

Beidas, R. S., Koerner, K., Weingardt, K. R., & Kendall, P. C. (2011). Training research: Practical recommendations for maximum impact. *Administration and Policy in Mental Health, 38,* 223–237.

Bootzin, R. R., & Ruggill, J. S. (1988). Training issues in behavior therapy. *Journal of Consulting and Clinical Psychology, 56,* 703–709. doi:10.1037/0022-006X.56.5.703

Chambless, D. L., Baker, M. J., Baucom, D. H., Beutler, L. E., Calhoun, K. S., Crits-Christoph, P., . . . Woody, S. R. (1998). Update on empirically validated therapies II. *The Clinical Psychologist, 51,* 3–16.

Cuijpers, P., van Straten, A., & Warmerdam, L. (2007). Behavioral activation treatments of depression: A meta-analysis. *Clinical Psychology Review, 27,* 318–326. doi:10.1016/j.cpr.2006.11.001

DeViva, J. C. (2006). The effects of full-day and half-day workshops for health care providers in techniques for increasing resistant clients' motivation. *Professional Psychology: Research and Practice, 37,* 83–90. doi:10.1037/0735-7028.37.1.83

Dimidjian, S., Barrera, M. R., Martell, C., Muñoz, R. F., & Lewinsohn, P. M. (2011). The origins and current status of behavioral activation treatments for depression. *Annual Review of Clinical Psychology, 7,* 1–38.

Dimidjian, S., Hollon, S. D., Dobson, K. S., Schmaling, K. B., Kohlenberg, R. J., Addis, M. E., . . . Jacobson, N. S. (2006). Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the acute treatment of adults with major depression. *Journal of Consulting and Clinical Psychology, 74,* 658–670. doi:10.1037/0022-006X.74.4.658

Dobson, K. S., Hollon, S. D., Dimidjian, S., Schmaling, K. B., Kohlenberg, R. J., Gallop, R. J., . . . Jacobson, N. S. (2008). Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the prevention of relapse and recurrence in major depression. *Journal of Consulting and Clinical Psychology, 76,* 468–477. doi:10.1037/0022-006X.76.3.468

Dolcourt, J. L. (2000). Commitment to change: A strategy for promoting educational effectiveness. *Journal of Continuing Education in Health Professions, 20,* 156–163. doi:10.1002/chp.1340200304

Ekers, D. D., Richards, D. D., & Gilbody, S. S. (2008). A meta-analysis of randomized trials of behavioural treatment of depression. *Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences, 38,* 611–623.

Fairburn, C. G., & Cooper, Z. (2011). Therapist competence, therapy quality, and therapist training. *Behaviour Research and Therapy, 49,* 373–378. doi:10.1016/j.brat.2011.03.005

Gleacher, A. A., Nadeem, E., Moy, A. J., Whited, A. L., Albano, A., Radigan, M., . . . Eaton Hoagwood, K. (2011). Statewide CBT training for clinicians and supervisors treating youth: The New York State evidence based Treatment Dissemination Center. *Journal of Emotional and Behavioral Disorders, 19,* 182–192. doi:10.1177/1063426610367793

González, H. M., Vega, W. A., Williams, D. R., Tarraf, W., West, B. T., & Neighbors, H. W. (2010). Depression care in the United States: Too little for too few. *Archives of General Psychiatry, 67,* 37–46. doi:10.1001/archgenpsychiatry.2009.168

Hollon, S. D. (2000). Do cognitive change strategies matter in cognitive therapy? *Prevention & Treatment, 3,* Article 25 No pagination. doi:10.1037/1522-3736.3.0025c

Horvath, A. O., & Bedi, R. P. (2002). The alliance. In J. C. Norcross (Ed.), *Psychotherapy relationships that work* (pp. 37–70). New York, NY: Oxford.

Jacobson, N. S., Martell, C. R., & Dimidjian, S. (2001). Behavioral activation treatment for depression: Returning to contextual roots. *Clinical Psychology: Science and Practice, 8,* 255–270. doi:10.1093/clipsy.8.3.255

Kanter, J. W., Busch, A. M., & Rusch, L. C. (2009). *Behavioral activation: Distinctive features*. London, UK: Routledge Press.

Kanter, J. W., Manos, R. C., Bowe, W. M., Baruch, D. E., Busch, A. M., & Rusch, L. C. (2010). What is behavioural activation? A review of the empirical literature. *Clinical Psychology Review, 30,* 608–620. doi:10.1016/j.cpr.2010.04.001

Kanter, J. W., & Puspitasari, A. J. (in press). Behavioral Activation. In W. O'Donohue & J. E. Fisher (Eds.), *Core principles of cognitive behavior therapy*. Hoboken, NJ: John Wiley. doi:10.1002/9781118470886.ch9

Lejuez, C. W., Hopko, D. R., Acierno, R., Daughters, S. B., & Pagoto, S. L. (2011). Ten year revision of the brief behavioral activation treatment for depression: Revised treatment manual. *Behavior Modification, 35,* 111–161. doi:10.1177/0145445510390929

Lejuez, C. W., Hopko, D. R., & Hopko, S. D. (2001). A brief behavioral activation treatment for depression: Treatment manual. *Behavior Modification, 25,* 255–286. doi:10.1177/0145445501252005

Lewis, C. C., & Simons, A. D. (2011). A pilot study disseminating cognitive behavioral therapy for depression: Therapist factors and perceptions of barriers to implementation. *Administration and Policy in Mental Health and Mental Health Services Research, 38,* 324–334.

Luborsky, L., Rosenthal, R., Diguer, L., Andrusyna, T. P., Berman, J. S., Levitt, J. T., . . . Krause, E. D. (2002). The dodo bird verdict is alive and well-mostly. *Clinical Psychology: Science and Practice, 9,* 2–12. doi:10.1093/clipsy/9.1.2

Manos, R., Kanter, J., & Busch, A. (2010). A critical review of assessment strategies to measure the behavioral activation model of depression. *Clinical Psychology Review, 30,* 547–561. doi:10.1016/j.cpr.2010.03.008

Manring, J., Greenberg, R. P., Gregory, R., & Gallinger, L. (2011). Learning psychotherapy in the digital age. *Psychotherapy, 48,* 119–126. doi:10.1037/a0022185

Martell, C. R., Addis, M. E., & Jacobson, N. S. (2001). *Depression in context: Strategies for guided action*. New York, NY: W W Norton & Co.

Mazzucchelli, T. G., Kane, R. T., & Rees, C. S. (2010). Behavioral activation interventions for well-being: A meta-analysis. *The Journal of Positive Psychology, 5,* 105–121. doi:10.1080/17439760903569154

Patel, V., Chowdhary, N., Rahman, A., & Verdeli, H. (2011). Improving access to psychological treatments: Lessons from developing countries. *Behaviour Research and Therapy, 49,* 523–528. doi:10.1016/j.brat.2011.06.012

Puspitasari, A. J., Kanter, J. W., & Crowe, A. S. (2012). *The Behavioral Activation Skills Assessment*. Wisconsin, MI: University of Wisconsin-Milwaukee.

Roth, D., & Fonagy, P. (1996). *What works for whom? A critical review of psychotherapy research*. New York, NY: Guildford Press.

Rubel, E. C., Sobell, L. C., & Miller, W. R. (2000). Do continuing education workshops improve participants' skills? Effects of a motivational interviewing workshop on substance-abuse counselors' skills and knowledge. *The Behavior Therapist, 23,* 73–77.

Sturmey, P. (2009). Behavioral activation is an evidence-based treatment for depression. *Behavior Modification, 33,* 818–829. doi:10.1177/0145445509350094

Wolf, A. W. (2011). Internet and video technology in psychotherapy supervision and training. *Psychotherapy, 48,* 179–181. doi:10.1037/a0023532

World Health Organization. (2008). *The global burden of disease: 2004 update*. Geneva, Switzerland: World Health Organization.

Received January 31, 2012
Revision received July 19, 2012
Accepted July 19, 2012 ■