



Published in final edited form as:

Psychother Res. 2008 May ; 18(3): 271–280. doi:10.1080/10503300701561537.

Participants' perspectives on cognitive–behavioral therapy for adherence and depression in HIV

CARLA BERG¹, SUDHA RAMINANI², JOSEPH GREER¹, MEAGHAN HARWOOD², and STEVEN SAFREN²

¹Department of Psychiatry, Harvard Medical School and Massachusetts General Hospital, Boston, MA

²Fenway Community Health, Boston, MA

Abstract

As part of the process of developing cognitive–behavioral therapy (CBT) for medical adherence and depression (Safren, Gonzalez, & Soroudi, 2007), the authors conducted exit interviews among 14 HIV-infected patients who received the intervention, and transcribed, coded, and analyzed these data. The authors concluded that CBT was structured yet flexible, developed self-awareness emphasized social support, and involved therapist empathy and supportiveness. Limitations included the discomfort of discussing personal information and the impact of feeling ill on attendance and homework completion. Suggestions included more sessions, more flexibility in scheduling appointments, and more realistic and clear expectations regarding homework. These results provide insights about strengths and limitations of this psychotherapy with medically ill patients and may help to maximize intervention effectiveness and client acceptability.

Keywords

cognitive behavior therapy; depression; brief psychotherapy; qualitative research methods

Psychotherapy treatment outcome research typically uses quantitative measures such as circumscribed patient self-report measures or clinician rating scales. These methods, over time, have served as the evidence base for many psychosocial interventions, with cognitive–behavioral treatments being the most widely studied in the context of randomized controlled trials (see Barlow, 2001; Butler, Chapman, Forman, & Beck, 2006, for reviews). Although quantitative techniques are critical to clinical trials research and similar to the approach used in evaluating psychopharmacological agents, these types of measures are selected based on the specific a priori hypotheses identified by the researchers; thus, these evaluations may not be comprehensive in terms of the scope of relevant information assessed. Client-centered feedback may help generate hypotheses about the effects of treatments that researchers may not have previously considered.

Qualitative research, widely used in ethnographic studies, has the goal of eliciting information from patients from their own perspectives; instead of being hypothesis driven, it is hypothesis generating (Bhugra, 2006; Gryphonck, 2006; Miles & Huberman, 1994). Qualitative research may be able to identify important aspects of psychotherapies from the patients' or consumers' perspectives. This information can be used to further refine

components of a treatment, identify barriers and facilitators to participation in treatments, generate hypotheses about the mechanism of action in psychosocial treatments, and highlight ongoing needs among these patients to develop future psychotherapeutic interventions.

Cognitive-behavioral therapy for medical adherence and depression (CBT-AD; Safren et al., 2004, 2006; Safren, Gonzalez, & Soroudi, 2007) integrates typical CBT approaches for depression (Butler et al., 2006; Freeman, Felgoise, Nezu, Nezu, & Reinecke, 2005; Nezu, 2004) with specific content and counseling around the issue of medical adherence (Safren, Otto, & Worth, 1999; Safren et al., 2001). We began a program of research to develop and test this psychotherapy intervention in HIV (Safren et al., 2004; Soroudi et al., in press) for several reasons. First, adherence to HIV medications is critical to the successful treatment of HIV (e.g., Hammer et al., 2006). Second, in general, meta-analytic work has shown that depressed patients are three times more likely than nondepressed patients to be nonadherent to their medical regimen (Dimatteo, Lepper, & Croghan, 2000). Several studies have replicated the association of depression to worse adherence among HIV patients (e.g., Catz, Kelly, Bogart, Benotsch, & McAuliffe, 2000; Gordillo, del Amo, Soriano, & González-Lahoz, 1999; Holzemer et al., 1999; Paterson et al., 2000; Safren et al., 2001). Third, depression in HIV is a frequent and distressing concern (e.g., Atkinson & Grant, 1994; Dew et al., 1997; Lyketsos, Hanson, Fishman, McHugh, & Treisman, 1994; Rabkin, 1996). Last, although treatments for depression exist in HIV (Olatunji, Mimiaga, O'Leirigh, & Safren, 2006) and other medical conditions (Katon et al., 2004; Lustman, Griffith, Freedland, Kissel, & Clouse, 1998; Williams et al., 2004), generally interventions that target depression but not adherence have not included adherence outcomes (Katon et al., 2004; Lustman et al., 1998; Williams et al., 2004). Hence, we sought to integrate both psychosocial approaches for depression with psychosocial approaches for increasing adherence.

CBT-AD is a structured treatment that is composed of five modules: adherence training and overview of CBT, behavioral activation, cognitive restructuring, problem solving, and relaxation training. This 10-session intervention was delivered on a weekly session basis; medication adherence (via an electronic pill cap, which electronically recorded the time at which a pill bottle had been opened; Medication Event Monitoring System [MEMS], AARDEX, Inc., Union City, CA, USA) and depression (via the Beck Depression Inventory) were also assessed and reviewed at each session. The intervention was tested in three studies: two case series trials in which the intervention was tested among five participants, all of whom received the intervention (no comparison group), and one randomized controlled trial in HIV in which the intervention was investigated by comparing the effects of the intervention with those of a control condition in which participants received a single-session life skills training. The first case series trial consisted of HIV-infected men who have sex with men ($N=5$; Safren et al., 2004), and the second consisted of individuals who acquired HIV through injection drug use and were undergoing methadone maintenance ($N=5$; Soroudi et al., in press). In these two trials, individuals who received the intervention had better adherence as assessed by the MEMS electronic pill cap and decreased depression as assessed by a clinician rater and by self-report. The randomized controlled trial included participants infected with HIV with a comorbid diagnosis of depression ($N=45$ intent to treat, 42 completers; Safren et al., 2004) and no comorbid active substance abuse diagnosis. In this study, the comparison group was a single-session intervention for adherence (Safren et al., 1999). Using quantitative assessments, the intervention resulted in greater improvements in both depression, as rated by an independent assessor who was unaware of study assignment, and medication adherence, as assessed by an electronic pill cap (Safren et al., 2004). Overall, these studies found the intervention to be successful in improving adherence and decreasing symptoms of depression as assessed by quantitative measures.

Despite the effects of CBT-AD demonstrated among HIV patients, quantitative findings provide little information about patient experiences in the intervention. Given these limitations and the importance of addressing depression and medication adherence among a medically and psychosocially complex HIV-infected population, the current study aimed to elicit patient feedback about the utility, strengths, barriers, and limitations of CBT-AD for HIV patients. In doing so, we will be better informed about patients' reactions to the treatment and thus will be able to increase the utility and acceptability of this treatment among this target population. More specifically, we aim to identify how to maximize efficiency in delivering the treatment and to address the concerns of patients who have received the intervention. Likewise, this research may guide the generalizability of this treatment to other patient populations by increasing our awareness of patient concerns and provide suggestions for disseminating the treatment by enhancing patient acceptability. Moreover, eliciting patient feedback will inform the dissemination of CBT-AD in particular and psychotherapy in general.

Method

Participants

Participants for this qualitative study were 14 individuals who completed CBT-AD as part of a randomized controlled crossover trial (for complete methods, see Safren et al., 2006) and who agreed to participate in the structured interview at the completion of the study. Of the 42 individuals who completed the randomized control trial, 32 received the intervention: 21 who were originally randomized to the CBT-AD arm and 11 who were originally assigned to the comparison condition but elected to crossover and complete the intervention after the initial study phase. The sample size of 14 was chosen because in qualitative research, which is hypothesis generating, researchers continue to conduct participant interviews until they obtain redundant information, which was the case here. Of the 14 participants interviewed, eight were originally assigned to CBT and six were originally assigned to the comparison group, but crossed over after the initial study phase. Individuals eligible for the intervention study were those who were diagnosed with a depressive disorder (i.e., met current Diagnostic and Statistical Manual of Mental Disorders, fourth edition [American Psychiatric Association, 1994] criteria for unipolar depression, dysthymia, or bipolar with the most recent episode depressed and stable) or who were subsyndromal as a result of antidepressant medication treatment but were still reporting residual symptoms. The status of having residual symptoms of depression was defined as having a Clinical Global Impression (National Institute of Mental Health, 1985) score of 2 (minimally ill: depressive symptoms but able to function in all areas). Individuals also needed to be diagnosed with HIV and on antiretroviral therapy for 4 months. Excluded were those with another psychiatric disorder that would interfere with study participation or consent (e.g., mental retardation, some psychotic disorders), active substance abuse or dependence (those who were 3 months recovered were not excluded), other inability to consent, or history of participating in structured CBT for depression.

The sample for the current qualitative study included 13 men and one woman. The average age of the participants was 43.93 years ($SD=6.92$; range=31–53 years). Half were White ($N=7$; 50%), four (28.6%) were African American, one (7.1%) was Native American, and two (14.3%) identified as belonging to more than one race. Half had some college education ($N=7$; 50%), three (21.4%) graduated from college, and two (14.3%) had at least some graduate school education. The majority of the sample included men who have sex with men ($n=12$; 85.7%). In terms of employment, three (21.4%) were employed full time, five (35.7%) were unemployed, and six (42.9%) were receiving disability benefits. This subset was representative of the total sample of 45 patients involved in the study as well as the 32 who received the intervention (see Safren et al., 2004). No differences in feedback were

found between those originally assigned to the CBT group and those who crossed over; thus, the findings are reported across the groups.

Interview Guide

A semistructured interview guide was developed and reviewed by all members of the study team to ensure that it provided a thorough framework to capture the most comprehensive and accurate participant information. The development of the interview guide was steered by the content of the CBT intervention modules and the need to probe further about the participant's experience in the intervention during the interview. The guide was pretested with other staff at the clinic and was used in individual semistructured interviews. The main content areas included (a) their general experience in the intervention; (b) the reactions of the participants to each of the five modules of the CBT intervention protocol (i.e., adherence training and overview of CBT, behavioral activation, problem solving, relaxation training, cognitive restructuring); (c) the ability to participate in the intervention; (d) the patient–therapist relationship; and (e) the assessments involved in the study. Within each section of the interview inquiring about the modules, interviewers asked the participants how each session changed their behavior, what was helpful about the module, what difficulties they encountered, and what suggestions they might have for improvement.

Procedures

After completing the intervention during the randomized controlled trial, participants were asked at one of the follow-up quantitative assessments to participate in a qualitative interview with a study staff member who was not the participants' therapist. All sessions were digitally recorded, and the recordings were transcribed.

Data Analyses

Data analyses were conducted by members of the research team using NVIVO version 7. Two coders reviewed the same subset of interviews in order to develop a codebook that would be used for the analysis of all qualitative interviews. The codebook was developed by two coders who individually coded the same subset of interviews. The coders created codes for each of the interview guide's questions and identified any additional comments that were beyond the scope of each question or signified a major theme that should be further evaluated as a theme code. Once thematic saturation (a redundancy in thematic codes) was reached, categories within each theme were identified, and responses were then categorized into these themes. Results from these analyses were then compared across coders, and intercoder agreement at each of the three phases of coding (theme, category, and code) was assessed. The coders then collaboratively discussed and defined each code and theme and finalized the codebook. Discrepancies during this process were clarified and resolved by comparing each coder's results with raw data until consensus was reached.

Results

General Experience

In general, participants reported that the intervention was effective in lessening their depressive symptoms and increasing their adherence (Table I). When questioned about how the psychotherapy did this, comments included that it facilitated self-evaluation, allowed them to see things from a different perspective, developed their ability to evaluate themselves and their reactions to situations, provided them with structure to their life, and helped them to control their emotional reactions. Across the modules for treatment, participants reported that self-awareness of their thoughts and behaviors was a central factor in the effectiveness of the treatment and that it allowed them to break the cycle of ineffective

thoughts and behaviors and gave them a sense of control. Many participants talked about the emphasis on building strong social support networks and using existing support networks as being important. Furthermore, participants stated that the empathy, compassion, and supportiveness of the therapist were significant factors involved in the treatment, underscoring the importance of the therapeutic alliance. One participant said,

I didn't know what to expect coming into the study. I saw one of those flyers, and I was in a state where I was so desperate for something that I just said, "You know, I'm going to take a risk." I told my doctor I was going to do it, and he thought it was a good idea. I'm just really happy that I did it and that it had the results that it did. I would have never guessed from the beginning that a year later I was going to be who I am. I really think that the structure of the CBT, the interaction with the therapist, and the interventions that he took ... by adding each layer of intervention, all the pieces came together.

In terms of the challenges of participating in the intervention, these included difficulties overcoming their own personal reservations at the beginning of therapy, the discomfort of divulging personal information, and making and sustaining significant changes. In addition, a commonly reported barrier involved in treatment was the time and effort required to complete homework. Specific to our population, feeling ill was a significant obstacle to attending scheduled appointments and following through with homework. The major suggestion reported by participants was to have more sessions available to them. In fact, four participants indicated that more sessions would have been beneficial.

Participants' Feedback About the Core Intervention Modules

Adherence training and overview of CBT—Participants generally indicated that this module developed their awareness of the links among thoughts, behaviors, and emotions and helped them to try to break this cycle. They reported that they learned to scrutinize their thoughts and thus perceive situations differently. One participant stated,

I think that what I found out was that I was keeping myself in a circle of negativity by the way that I was looking at things. When I would get depressed, I had negative feedback on myself about it. I never was able to like look at it in a positive manner or have a different slant on it. To bring a positive look at it helped me to break that cycle.

Despite the reported utility of this module, one participant reported that he had difficulty identifying this pattern and changing his behavior when he was in emotionally intense situations.

Behavioral activation—Most participants reported that activity scheduling (i.e., behavioral activation) was helpful, specifically in that it allowed them to become aware of their activities, encouraged them to get more involved, and facilitated them actively making their own decisions about their activities. Moreover, one participant stated, "I wasn't wearing down as much, and I was a little less focused on things that were getting me down." Another participant highlighted the impact of their behavior change on their thoughts and emotions:

It made me realize that you can actually change your behavior, and by changing your behavior you could change your feelings, and by changing your feelings you could change your thinking, and by changing your thinking you could feel more healthy about yourself. You could feel better about yourself, which made me learn an effective way of raising my self-esteem, raising my self-worth, and ultimately changing the way that I felt.

In addition to the increase in activity, three participants reported that it increased their social interactions. Thus, they reported that they were encouraged to build and utilize social support.

In regard to the difficulties involved in behavioral activation, one participant reported that logging activities on the activity schedule monitoring form was tedious, and two others reported the difficulty in following through with their activity goals. One participant stated,

I guess I made attempts to do things that used to make me happy or that helps me be involved with other people. I don't think that I always followed through with it, and in a way, it kind of made me feel bad about myself.

However, this participant also reported that the cognitive restructuring module (discussed next) taught him to question and restructure these negative self-appraisals.

Cognitive restructuring—Participants also generally reported that they valued the cognitive restructuring component of the intervention. Specific comments included that it allowed them to become more objective in understanding various situations, to restructure their thoughts, and to respond more rationally. For example, one participant reported, “My thoughts became more productive and more positive. Sometimes even if they remain negative, my reaction to them was different.”

Participants had varied reactions to the homework involved in this module. Whereas three participants reported that the homework exercise of writing down their thoughts and appraising them more objectively was effective in developing more adaptive thinking, three participants reported that doing this homework was time consuming. Two participants reported that they had difficulty understanding how to accurately complete the homework (i.e., the thought record).

Problem solving—Most of the participants not only reported that the problem-solving module was helpful but also discussed how they used it to solve specific problems they were facing during the study as well as since the completion of the intervention. They reported that it was helpful because it developed their ability to identify problems, break problems down, develop an action plan, and overcome problems. One participant reported, “I realized that I can be independent in my problems because I can assess it, take it apart, analyze it, and restructure it.” Another participant said,

It made my problems more manageable and easier to understand. I can step back and look at the big picture. When I came into this study, there was already some pretty serious stuff going on. We looked at the problems individually. The therapist was able to tie it together by saying, “Well, you're doing this with this problem, you're doing the same with this problem that you did with that problem, you see how you're doing the same thing.”

One participant reported that the main difficulty he faced in this module was determining the best course of action and following through with it.

Relaxation training—Participants generally reported that the relaxation training was helpful. Specifically, participants said that relaxation training allowed them to shift focus, stay in control, and calm themselves under stress. One participant reported,

You're able to actually be in tune with what your body is doing. And I find myself doing this while I'm driving. I find myself doing this when I'm lying down trying to take a nap. I'll notice that my shoulders are up to my ears and can just relax them.

In addition, participants highlighted the importance of having an audio recording of a relaxation exercise and of the therapist participating in the relaxation exercise with them during session.

In regard to the limitations of this module, one participant reported that, despite his understanding and practicing of the relaxation training, he had difficulty learning to relax in emotionally charged situations.

Participants' Perspectives About Their Ability to Participate

Overall, eight of the 14 participants reported that they were able to participate well in the intervention. However, common barriers in participating in therapy included difficulty coordinating participant and therapist schedules as well as lack of willingness to complete homework between sessions or not understanding homework assignments. Other reported barriers included lack of motivation and not fully understanding the nature of the therapy. One participant who originally did not understand what topics he could bring into therapy said,

I was going through some issues with somebody that I really wanted to be with that wasn't treating me the way that I wanted to be treated. So I was giving more focus to that person and letting that person know how I felt, and then I realized that I could actually talk about that with the therapist.

In addition to the aforementioned barriers, this population has specific barriers particularly related to their illness. For example, one participant highlighted the impact of HIV on his ability to attend. He reported, "I think illness was the only thing that kept me from being here, you know. ... With having the virus, you can't always be well enough to come out all the time.

Participants' Reactions to the Patient–Therapist Relationship

Almost all of the participants reported high therapist satisfaction and reported feeling comfortable with the therapist. Among the positive aspects of the experience of the relationship were the therapists' ability to listen well, supportiveness, understanding, and sympathetic reactions to participants' experiences. For example, one participant stated, "He always dealt with where I was before we got on to what it was that was planned for the day, and I really appreciated that. Even if it was something that was very personal, he made me feel so comfortable and he was so sympathetic that, as soon as I came in the door, I could start sharing it with him and I didn't feel uncomfortable that it was being taped."

One participant reported difficulty in the relationship: "Sometimes I felt like perhaps he was bored with me, but in the past in other therapy situations I always thought that as well. So maybe that's just my own thinking there."

Participants' Feedback About the Assessments

In terms of the assessments involved in the study, four of the 14 participants commented on their high level of comfort with the independent assessor. Three participants reported that the interviews gave them an opportunity to evaluate their own condition. One participant stated, "It was good for me because it gave me a chance to not only evaluate how I felt right then and there, but it gave me a chance to evaluate the previous week. And it also gave me an opportunity to see where I was headed."

Ten participants reported some difficulty with the pill caps that monitored their adherence to the medications (MEMS), but these difficulties were remedied early in the treatment.

However, six participants commented on how the MEMS cap made them feel more accountable and increased their attention to the timing of dosages. One participant said,

It's just been very helpful for me to really try and be on time or as close to being on time as possible, knowing that it's being recorded. And now I'll even check as I open it up—I'll just check the clock just to see how close I am to 7:30.

Discussion

This study suggests that participants felt that the intervention was helpful in decreasing symptoms of depression and increasing medication adherence. It seems that both the skill set developed by the specific content of the intervention as well as the nonspecific variables in a psychotherapy setting were important factors in change. These hypotheses can be further explored in quantitative research. Beyond confirming the utility of the specific and nonspecific factors, participants seemed to view each of the various modules involved in the treatment as beneficial, which has not been investigated in previous quantitative findings. Hence, we do not expect to remove any of them from the intervention package. We also learned that there was a desire for more sessions among some of the participants and that participants felt that the expectations of the treatment were sometimes difficult to understand or follow through with given their overall life circumstances (i.e., illness).

This specific HIV patient population was largely men who have sex with men, was Caucasian, had at least some college education, and was largely unemployed or receiving disability benefits. There are many implications for treatment based on these demographics. First, because this sample was largely unemployed or receiving disability benefits, they may have engaged in less activity at baseline, and thus, behavioral activation may have been especially relevant for this group. Also, the associated financial limitations may have been an additional barrier to participating in some activities and attending sessions. Given that this sample was composed largely of men who have sex with men, it is difficult to ascertain the extent to which these findings might generalize to other subgroups. This population may face specific psychosocial stressors, which may have provided additional barriers to treatment. It is also difficult to determine how these demographic factors may affect receptivity to psychotherapy in general and CBT in particular.

Regarding the nonspecific factors, participants endorsed the importance of the empathy of and relationship with the therapist. This finding further supports the notion that nonspecific factors are important in psychotherapy, even if the intervention is a specific, skills-based one (Crits-Christoph et al., 1991; Safren, Heimberg, & Juster, 1997). Previous research investigating patient reactions to short-term psychotherapy found that patients perceived the therapist as the most important factor (Dimcovic, 2001). Moreover, Wampold (2001) documented that there is relatively little difference in the effectiveness of different psychotherapies and a lack of scientific justification for the belief that the benefits of psychotherapy derive from the specific ingredients of a particular therapy (e.g., Wampold, Minami, Baskin, & Callen Tierney, 2002). His research suggests, rather, that the characteristics of the therapist are a potentially more important consideration, because research has found that therapist effects account for more variance than treatment effects (Wampold, 2001).

On the other hand, research has suggested that the specific processes of cognitive treatments may be more associated with reduction in depression than the common processes involved in treatment (Oei & Shuttlewood, 1997). Likewise, participants reported that the specific skills taught by this treatment resulted in an increased ability to evaluate themselves, be more objective and comprehensive in their thinking, and regulate their emotions. Previous research has documented the strength of psychosocial treatments, including CBT, in

decreasing symptoms of depression among HIV patients (Olatunji, Mimiaga, O'Leirigh, & Safren, 2007) and those with other medical conditions (Katon et al., 2004; Lustman et al., 1998; Williams et al., 2004). However, our study indicated that skills to address depression and adherence were acquired as a result of CBT-AD. Given that these are major goals of this specific treatment, it is important to note that these goals were achieved and that decreased depression and better medication adherence was reported by the patients.

Of major interest, participants reported that each of the modules was helpful and generally achieved the goals of the module. This is important information given that quantitative assessments typically evaluate the utility of the treatment as a whole. Thus, little is known about the value of each individual module. Many other CBT interventions, such as exposure-based treatments for anxiety, generally emphasize one core skill for patients to learn across 10 to 20 sessions. Given that patients with medical and psychological comorbidity encompass a complex and heterogeneous group, this intervention has multiple modules with different content. Hence, one concern would be whether certain modules could be dropped or modified. The responses from these exit interviews do not support dropping any of the particular content areas for this treatment. In fact, it seemed that participants requested more sessions versus dropping specific material per se. However, these requests may also be a result of desiring additional support from and contact with the therapist.

Additionally, participants reported that the assessments (i.e., the self-report questionnaires and the assessor meetings) gave them an opportunity to reflect on their experiences, were helpful in developing their understanding of their own experiences, and made them feel validated. Thus, comprehensive evaluations of patients and objective markers of patient symptoms and the change in symptom status over time may be important aspects of the treatment. This underscores the importance of following a scientist-practitioner model in which assessment and treatment are linked. In this study, therapists reviewed depression and adherence scores at each and every session. This allowed for changes to be made as the treatment was delivered and suggests that, even in the context of clinical care that is not part of a research trial, having measures of weekly progress may be beneficial.

The electronic pill cap assessing adherence (MEMS) also may be a clinically useful tool, because participants reported that using the MEMS cap increased their attention to the timing of adherence. It may be the case that monitoring adherence in and of itself may result in better adherence.

In regard to the limitations of CBT-AD, participants underscored the need to be attentive to patients' reactions to the psychotherapy. The common limitations reported by the participants highlighted the need for flexibility in terms of scheduling, homework, and availability of additional resources and sessions for patients who may benefit from them. These findings may generalize to other patient populations but also must be considered within the context of the specific challenges (i.e., illness, conflicts with scheduling multiple medical appointments) faced by this sample of HIV-infected patients. This study has implications for CBT interventions with medical patients in general and for future revisions of this CBT intervention aimed at treating depression and increasing medication adherence among HIV patients. First, orienting patients to psychotherapy and providing a clear explanation of CBT is important because of the misconceptions patients might have about psychotherapy and because of the directive, protocol-based, skills training nature of CBT in comparison to other treatment approaches. Participants highlighted the importance of orienting patients to therapy and providing a clear explanation of the approach to be used, which has been documented in previous research (Guajardo & Anderson, 2007). Relatedly, participants reported that their own initial reservations were barriers to treatment, which

previous research has also documented (Dimcovic, 2001). Thus, addressing concerns and expectations at the outset of treatment seems to be imperative. Second, expectations regarding homework and attendance should be set giving consideration to the nature of this patient population and should be explicitly discussed. This group does have significant demands that are beyond their control, specifically barriers related to their physical well-being as well as the strain of coordinating their health care. On a related point, therapist flexibility in scheduling appointments is also of major importance given the demands of managing their health care and the restrictions of the illness. In addition, the instructions and rationale for homework assignments (particularly when some are more complicated like cognitive restructuring) should be clearly communicated in order to increase the likelihood of patient adherence to homework and feelings of mastery, because not understanding homework was reported to be a significant barrier. Helping patients review and process homework to ensure that they are able to apply the homework outside of session is also important. Moreover, some patients may benefit from additional CBT-AD sessions. This is a medically and psychologically complex population with a variety of needs. Thus, attending to the specific issues presented by each patient may require flexibility in presenting modules in a time-sensitive manner and in using additional intervention tools not included in the protocol.

Limitations of the present qualitative study should be noted. The sample was small and drawn from one geographic region. The participants involved in the intervention study may have been a relatively proactive subset of depressed HIV patients. Moreover, this study included those participants who selected to complete the interview; thus, this subset may have been especially receptive to treatment or may have benefited more than other participants. Finally, the present study is limited by the degree to which participants were willing to disclose their perceptions about the barriers and facilitators of the treatment.

Despite these limitations, the feedback from this sample provides valuable insight regarding patient experiences of this CBT intervention that may be helpful in increasing its feasibility and utility. Moreover, given that quantitative research can only assess a priori expectations of what is important from the viewpoint of the researcher, qualitative research can be an important complement to a comprehensive way of assessing psychotherapy outcomes. It can elicit feedback about how to customize interventions for specific groups in order to address population-specific barriers, capitalize on techniques that patients perceive to be helpful, and incorporate patients' suggestions. By considering patient feedback more systematically and incorporating it into future interventions, researchers and clinicians may be able to maximize their intervention efforts and increase the dissemination of these interventions.

Acknowledgments

Funding for this project for data collection and some of the analysis came from National Institute of Mental Health Grant 066660 to Steven Safren. Funding for investigator time for some of the data analysis and investigator time came from National Institute on Drug Abuse Grant 018603 to Steven Safren

References

- American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 4th ed.. Author.y; Washington, DC: 1994.
- Atkinson JH, Grant I. Natural history of neuropsychiatric manifestations of HIV disease. *Psychiatric Clinics of North America*. 1994; 17:17–33. [PubMed: 8190664]
- Barlow, DH. *Clinical handbook of psychological disorders*. Guilford Press; New York: 2001.
- Bhugra D. Review of successful qualitative health research. *International Review of Psychiatry*. 2006; 18(5):483.

- Butler AC, Chapman JE, Forman EM, Beck AT. The empirical status of cognitive-behavioral therapy: A review of meta-analyses. *Clinical Psychology Review*. 2006; 26(1):17–31. [PubMed: 16199119]
- Catz SJ, Kelly JA, Bogart LM, Benotsch EG, McAuliffe TL. Patterns, correlates, and barriers to medication adherence among persons prescribed new treatments for HIV disease. *Health Psychology*. 2000; 19:124–133. [PubMed: 10762096]
- Crits-Christoph P, Baranackie K, Kurcias JS, Beck AT, Carroll K, Perry K, et al. Meta-analysis of therapist effects in psychotherapy outcome studies. *Psychotherapy Research*. 1991; 1:81–91.
- Dew MA, Beckor JT, Sanchez J, Cladararo R, Lopez OL, Wess J, et al. Prevalence and predictors of depressive, anxiety and substance use disorders in HIV-infected and uninfected men: A longitudinal evaluation. *Psychological Medicine*. 1997; 27:395–409. [PubMed: 9089832]
- Dimatteo MR, Lepper HS, Croghan TW. Depression is a risk factor for noncompliance with medical treatment: Meta-analysis of the effects of anxiety and depression on participant adherence. *Archives of Internal Medicine*. 2000; 160:2101–2107. [PubMed: 10904452]
- Dimcovic N. Clients' perceptions of their short-term psychotherapy. *European Journal of Psychotherapy, Counseling, and Health*. 2001; 4(2):249–265.
- Freeman, A.; Felgoise, SH.; Nezu, AM.; Nezu, CM.; Reinecke, MA., editors. *Encyclopedia of cognitive behavioral therapy*. Springer Science & Business Media; New York: 2005.
- Gordillo V, del Amo J, Soriano V, González-Lahoz J. Sociodemographic and psychological variables influencing adherence in antiretroviral therapy. *AIDS*. 1999; 13:1763–1769. [PubMed: 10509579]
- Grypdonck MHF. Qualitative health research in the era of evidence-based practice. *Qualitative Health Research*. 2006; 16(10):1371–1385. [PubMed: 17079799]
- Gujardo JMF, Anderson T. An investigation of psychoeducational interventions about therapy. *Psychotherapy Research*. 2007; 17:120–127.
- Hammer SM, Saag MS, Schechter M, Montaner JSG, Schooley RT, Jacobsen DM, et al. Treatment for adult HIV infection: 2006 recommendations of the International AIDS Society–USA Panel. *JAMA*. 2006; 296(7):827–843. [PubMed: 16905788]
- Holzemer WL, Gorles IB, Nokes KM, Turner JC, Brown MA, Powell-Cope GM, et al. Predictors of self-reported adherence in persons living with HIV disease. *AIDS Patient Care and STDs*. 1999; 13:185–197. [PubMed: 10375267]
- Katon WJ, Von Korff M, Lin EH, Simon G, Ludman E, Russo J, et al. The Pathways Study: A randomized trial of collaborative care in patients with diabetes and depression. *Archives of General Psychiatry*. 2004; 61:1042–1049. [PubMed: 15466678]
- Lustman PJ, Griffith LS, Freedland KE, Kissel SS, Clouse RE. Cognitive behavior therapy for depression in type 2 diabetes mellitus. *Annals of Internal Medicine*. 1998; 129:613–621. [PubMed: 9786808]
- Lyketsos CG, Hanson AL, Fishman M, McHugh PR, Treisman GJ. Screening for psychiatric morbidity in a medical outpatient clinic for HIV infection: The need for a psychiatric presence. *International Journal of Psychiatry and Medicine*. 1994; 24:103–113.
- Miles, M.; Huberman, AM. *Qualitative data analysis*. 2nd ed. Sage; Thousand Oaks, CA: 1994.
- National Institute of Mental Health. Clinical Global Impressions (CGI) scale. *Psychopharmacology Bulletin*. 1985; 21:839–843.
- Nezu AM. Problem solving and behavior therapy revisited. *Behavior Therapy*. 2004; 35(1):1–33.
- Oei TPS, Shuttlewood GJ. Comparison of specific and nonspecific factors in a group cognitive therapy for depression. *Journal of Behavior Therapy and Experimental Psychiatry*. 1997; 28(3):221–231. [PubMed: 9327301]
- Olatunji BO, Mimiaga MJ, O'Cleirigh C, Safren SA. A review of treatment studies of depression in HIV. *Topics in HIV Medicine*. 2006; 14(3):112–124. [PubMed: 16946456]
- Paterson DL, Swindelis S, Mohr J, Vergis EN, Squire C, Wagener MM, et al. Adherence to protease inhibitor therapy and outcomes in participants with HIV infection. *Annals of Internal Medicine*. 2000; 133:21–30. [PubMed: 10877736]
- Rabkin JG. Prevalence of psychiatric disorders in HIV illness. *International Review of Psychiatry*. 1996; 8:157–166.

- Safren, SA.; Gonzalez, JS.; Soroudi, N. Cognitive behavioral therapy for adherence and depression in individuals with chronic illness, Therapist guide. Oxford University Press; New York: 2007.
- Safren, SA.; Gonzalez, JS.; Soroudi, N. Cognitive behavioral therapy for adherence and depression in individuals with chronic illness, Patient workbook. Oxford University Press; New York: 2007.
- Safren SA, Heimberg RG, Juster HR. Patient's expectancies and their relationship to pretreatment symptomatology and outcome of cognitive behavioral group treatment for social phobia. *Journal of Consulting and Clinical Psychology*. 1997; 65:694–698. [PubMed: 9256571]
- Safren SA, Hendriksen ES, Mayer KH, Mimiaga MJ, Pickard R, Otto MW. Cognitive-behavioral therapy for HIV medication adherence and depression. *Cognitive and Behavioral Practice*. 2004; 11:415–424.
- Safren, SA.; Knauz, RO.; O'Cleirigh, C.; Lerner, JA.; Greer, JA.; Harwood, M., et al. Cognitive behavioral therapy for HIV medication adherence and depression: Process and outcome at post-treatment and three months using a cross-over design. Paper presented at the annual meeting of the Society of Behavioral Medicine; San Francisco, CA. Mar. 2006
- Safren SA, Otto MW, Worth J. Life-Steps: Applying cognitive-behavioral therapy to participant adherence to HIV medication treatment. *Cognitive and Behavioral Practice*. 1999; 6:332–341.
- Safren SA, Otto MW, Worth J, Salomon E, Johnson W, Mayer K, et al. Two strategies to increase adherence to HIV antiretroviral medication: Life-Steps and medication monitoring. *Behavioral Research and Therapy*. 2001; 39:1151–1162.
- Soroudi N, Perez GK, Gonzalez JS, Greer JA, Pollack MH, Otto MW, Safren SA. CBT for medication adherence and depression in HIV-infected participants receiving methadone maintenance therapy. *Cognitive and Behavioral Practice*. in press.
- Wampold, BE. *The great psychotherapy debate: Models, methods, and findings*. Erlbaum; Mahwah, NJ: 2001.
- Wampold BE, Minami T, Baskin TW, Callen Tierney S. A meta-analysis of the effects of cognitive therapy versus “other therapies” for depression. *Journal of Affective Disorders*. 2002; 68(2–3): 159–165. [PubMed: 12063144]
- Williams JW Jr, Katon W, Lin EH, Noel PH, Worchel J, Cornell J, et al. The effectiveness of depression care management on diabetes-related outcomes in older patients. *Annals of Internal Medicine*. 2004; 140:1015–1024. [PubMed: 15197019]

Table I

Participant Reactions to CBT for Adherence and Depression in HIV

Topic	Participant reactions	
	Strengths	Limitations
General experience	Therapy was helpful (<i>n</i> =6) Increased adherence (<i>n</i> =4) and decreased depression (<i>n</i> =4) Facilitated self-evaluation (<i>n</i> =6) Changed perspective (<i>n</i> =6) Increased structure in daily living (<i>n</i> =4)	Completing homework (<i>n</i> =3) Difficulty discussing personal topics (<i>n</i> =4) Difficulty facing problems (<i>n</i> =2) and changing behaviors (<i>n</i> =2) Own initial reservations about therapy (<i>n</i> =2)
Core modules		
Psychoeducation	Developed awareness of links among thoughts, behaviors, emotions (<i>n</i> =5) Allowed them to break the cycle (<i>n</i> =5) Helped to change thoughts (<i>n</i> =5) differently (<i>n</i> =5)	Applying information (<i>n</i> =1)
Behavioral activation	Encouraged engagement in activities (<i>n</i> =4) Fostered use of social support (<i>n</i> =3) Increased awareness of activities (<i>n</i> =3) and involvement in activities (<i>n</i> =3)	Following through with activities (<i>n</i> =2) Tediousness of logging activities (<i>n</i> =1)
Cognitive restructuring	Fostered a more objective thought process (<i>n</i> =5) Restructured thoughts (<i>n</i> =5) Writing thoughts down was helpful (<i>n</i> =3) Increased rational responses (<i>n</i> =2)	Time required to complete homework (<i>n</i> =3)
Problem solving	Increased ability to break problems down (<i>n</i> =3), develop action plan (<i>n</i> =3), overcome problems (<i>n</i> =3)	Selecting best alternative (<i>n</i> =1)
Relaxation training	Increased ability to shift focus (<i>n</i> =5) and stay in control (<i>n</i> =2)	Learning to apply skill (<i>n</i> =1)
Ability to participate	Fully able to participate (<i>n</i> =8)	Feeling ill due to HIV (<i>n</i> =1) Scheduling difficulties (<i>n</i> =2) Completing homework (<i>n</i> =2) Not understanding how to use therapy or what issues could be addressed (<i>n</i> =1) Lack of motivation to engage in treatment (<i>n</i> =1)
Patient-therapist relationship	Comfortable with therapist (<i>n</i> =8) Satisfied with therapist (<i>n</i> =13) Therapist listened well (<i>n</i> =5) Therapist was understanding (<i>n</i> =9), supportive (<i>n</i> =2), and sympathetic (<i>n</i> =13)	Was concerned that the therapist would get bored if participant was not doing the homework (<i>n</i> =1)
Assessments	Felt comfortable with assessor (<i>n</i> =4) Provided an opportunity to evaluate oneself (<i>n</i> =3) Pill caps increased awareness of timing of medications (<i>n</i> =6)	Difficulty with pill caps (<i>n</i> =10)

Note. CBT=cognitive-behavioral therapy.