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Treating Dysfunctional Beliefs: Implications of the Mood-State Hypothesis

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The mood-state hypothesis proposes that underlying dysfunctional beliefs are more available for therapeutic interventions when patients are in a negative mood state than when they are in a positive mood state. After briefly reviewing evidence supporting the mood-state hypothesis, this article offers recommenda-tions for treating dysfunctional beliefs. First, when patients begin therapy in a clinically depressed state, we recommend working on underlying dysfunctional beliefs early in treatment when the presence of negative mood enhances the patient's ability to report the beliefs. Second, when symptoms have remitted, mood is positive, and underlying beliefs are not readily reported, we discuss four ways to obtain information about the underlying beliefs: direct accessing strategies, the therapeutic relationship, homework, and the case formulation. Finally, when patients experience recurrent pronounced mood shifts, we recom-mend teaching them to anticipate corresponding shifts in thinking.

Treatment of underlying dysfunctional beliefs is an important goal of cognitive therapy. According to the cognitive theory, ·pathological patterns of mood, behavior and thinking are produced by these beliefs (Beck, 1976); therefore, cognitive therapy is designed to identify and correct the dysfunctional beliefs (Beck, Rush, Shaw, & Emery, 1979). Effective treatment of underlying dysfunc-tional beliefs has been shown to be associated with a lower relapse rate (Simons, Murphy, Levine, & Wetzel, 1986) in depressed patients.

Recent findings suggest that individuals who hold dysfunctional beliefs that make them vulnerable to depression have difficulty reporting those beliefs unless they are experiencing a negative mood state (Miranda & Persons, 1988; Miranda, Persons, & Byers, 1990; Teasdale & Dent, 1987). The proposition that negative mood facilitates reporting of dysfunctional beliefs comes directly from Bower's (1981) associative network model of mood and memory; we call it the mood-state hypothesis. We believe this hypothesis has important implications for both the cognitive theory itself (Persons & Miranda, 1990) and for therapeutic work devoted to changing dysfunctional beliefs. In the present article, we briefly describe evidence supporting the mood-state hypothesis and outline recommen-dations for treating dysfunctional beliefs based on the knowledge that dysfunc-tional thinking varies with current mood state.

THE EVIDENCE

Miranda and Persons have directly tested the hypothesis that reports of dysfunc-tional beliefs depend on current mood state in two samples. A volunteer sample of 43 nondepressed women reported changes in mood and dysfunctional thinking following a mood induction (Miranda & Persons, 1988) and depressed psychiatric patients reported changes in mood and dysfunctional thinking during spontaneous diurnal mood fluctuations (Miranda et al., 1990). Furthermore, dysfunctional beliefs have been shown to be mood-state dependent for vulnerable individuals only. In two nondepressed volunteer samples included in the studies cited above, individuals who had a history of depression showed elevated scores on a measure of dysfunctional beliefs if they were in a negative mood state at the time they were assessed; however, nonvulnerable individuals did not show this effect. These studies provide direct support for the mood-state hypothesis.

In addition to these studies that directly test the hypothesis that reporting of dysfunctional beliefs depends on current mood state, three types of evidence collected for other purposes provide indirect support for the mood-state hypoth-esis. First, several longitudinal studies (with one exception, Eaves & Rush, 1984) show that as depressive symptoms remit, underlying dysfunctional beliefs, attributions, or schema "remit" as well (Hamilton & Abramson, 1983; Hammen, Miklowitz, & Dyck, 1986; Persons & Rao, 1985; Reda, 1984; Silverman, Silverman, & Eardley, 1984; Simons, Garfield, & Murphy, 1984). The mood-state hypothesis would predict that when subjects' mood improves as their depression remits, they are less likely to report pathological underlying beliefs.

Second, comparisons of normals and recovered depressives find (except for Dobson & Shaw, 1986) that these groups do not differ in underlying dysfunctional attitudes (Hamilton & Abramson, 1983; Hollon, Kendall, & Lumry, 1986; Silverman et al., 1983). The mood-state hypothesis would predict that although underlying pathological cognitions are present in recovered depressives, the cognitions would not be reported when the individuals are in a positive mood. Third, findings in cognitive and clinical psychology showing that recall of life events, perception of ambiguous pictures, free associations to neutral words, and other cognitive processes depend on mood state (see reviews by Bower, 1981; Singer & Salovey, 1988; Teasdale, 1983) also support the mood-state hypothesis.

Although some evidence supports the hypothesis that reporting of underlying dysfunctional beliefs depends on mood state, much more evidence is needed. However, if the mood-state hypothesis is correct, it has important implications for the practice of cognitive therapy. We outline those implications here.

CLINICAL IMPLICATIONS

We describe implications of the mood-state hypothesis for therapeutic work in three types of situations. First, we examine work with clinically depressed patients. Second, we outline four approaches to obtaining information about underlying dysfunctional attitudes when negative mood is not present during therapy sessions. Finally, we consider treatment of dysfunctional attitudes when patients experience recurrent intense mood fluctuations.

When Patients are Depressed, Elicit Underlying Beliefs Early

When treating severely depressed patients, therapists often focus first on increas-ing pleasant activities; asking a severely depressed patient to challenge distorted cognitions may seem too demanding. However, if the patient recovers prior to uncovering the distorted cognitions, the beliefs may become much less accessible. We recommend eliciting the beliefs early in therapy.

Once the dysfunctional beliefs have been elicited, it may be possible to begin working to change them. This viewpoint is consistent with the views of Greenberg and Safran (1987), who argue that emotion, including powerful negative emotion, plays a central role in therapeutic change. However, as Beck et al. (1979) point out, some severely depressed patients are unable to perceive alternatives to their negative world view. For example, an elderly woman with serious medical problems stated that life was not worth living. The therapist's attempts to alter this hopeless view met with extreme resistance. Finally, the therapist distracted the patient momentarily by asking her about her grandchildren and other more positive aspects of her life. The patient's mood shifted, and within a few minutes she was able to counter the hopelessness and suicidality that had overwhelmed her earlier. Thus, the therapist may need to work actively to produce a mood change, or wait until the patient's mood has improved, before challenging the dysfunc-tional beliefs.

Even if underlying dysfunctional beliefs cannot be treated directly early in treatment, we argue that it is important to get as much information about them as possible early on. Murphy, Simons, Wetzel, and Lustman (1984) reported that their depressed subjects (in all treatment groups) showed a dramatic drop in Beck Depression Inventory (BDI) score by week 4 (approximately session 8) of a 16- week treatment protocol. Fennell and Teasdale (1987) reported that, on average, 17 cognitive therapy patients showed a marked response to treatment after two weeks of therapy (maximum of three sessions), with an average BDI score dropping from approximately 30 to 15 during that interval. The mood-state hypothesis proposes that later in treatment, when the patient's mood state is improved, retrieval of important information about the beliefs-including memo-ries of traumatic incidents in which the beliefs were learned-is likely to be more difficult To some degree this may be due to the fact that when she has begun feeling better, the patient is reluctant to retrieve painful memories because she knows how badly she feels when this material is activated.

When Mood is Positive, Work Actively to Uncover Dysfunctional Beliefs

The cognitive theory proposes that individuals can hold dysfunctional beliefs at times when they are unaware of and unable to report them, particularly when they are in a positive mood state. For example, a dependent person, depressed following the breakup of the relationship with his girlfriend, may "cure" his depression by getting a new girlfriend. The new relationship alleviates his depressive symptoms but does not change his underlying dysfunctional belief ("Unless I'm loved, I'm worthless"), leaving him vulnerable to future depression following the breakup of an important relationship.
If one of the goals of treatment is prevention of relapse, then treatment of latent dysfunctional attitudes is indicated before terminating therapy. To accomplish this, we outline four strategies useful in uncovering the latent dysfunctional beliefs: direct accessing, homework, the therapeutic relationship, and the case formulation.

Direct accessing strategies. Dysfunctional attitudes can be elicited by arrang-ing for the patient to directly confront situations that evoke negative mood, pathological thinking and maladaptive behaviors. Direct accessing techniques are well known to behavior therapists who treat phobias and anxiety (e.g., Foa & Kozak, 1986; Marks, 1981). This is probably a result of the natural way in which pathological fear responses tend to be limited to specific situations. Thus, a

person who is afraid of cats usually does not show a fear response or report distorted cognitions about cats unless in the presence of live or imagined cats. As a result, a major component of behavioral treatment of fears and phobias includes active procedures to access pathological fear. Similarly, we recommend the use of active procedures to access pathological depression and underlying dysfunctional beliefs.

The therapist may be able to activate hidden dysfunctional beliefs by asking patients to focus on current difficulties and problems they are avoiding. Careful questioning, guided by the therapist's hypothesis about the patient's problematic underlying beliefs may be necessary to reveal these patterns of avoidance. In other cases, the nature of the avoidance behavior is readily apparent. For example, the lover described above may spend all his time with his new girlfriend, avoiding solitude at all costs because unless he is receiving infusions of love and caring, he feels lonely, unwanted, and worthless. To expose the dysfunctional belief causing these feelings, the therapist could ask the lover to spend some time alone, recording his mood and automatic thoughts or to come early to the therapy session and spend some time alone in the waiting room, so the therapist can work with him on the negative thoughts and feelings that emerge.

The downward arrow technique (Bums, 1980) can be used to uncover the pathogenic beliefs underlying the patient's emotional upset and automatic thoughts. That is, the therapist can ask repeatedly, "Why is this situation upsetting to you? What does it mean to you?" After answering this question several times, the sequence often "bottoms out" at the irrational underlying belief, "This situation is upsetting because I'm alone, and if I'm alone that means no one cares about me, and if no one cares about me I'll be alone forever, and if I'm alone forever, it means I'm unwanted, bad, and worthless."

The therapist can also ask the patient to focus on and recall previous upsetting experiences. The therapist can help the patient recreate and re-experience these events in the session. The patient can be asked to provide details of the situation and to focus on how he or she felt at the time and why the event was so upsetting. Again, the therapist can guide the patient through this material to uncover underlying dysfunctional attitudes.

Some patients may not be able to report dysfunctional attitudes even when they confront distressing situations. The therapist may be able to evoke the attitudes by focusing on the aspects of the situation (mood, behavior) that the patient does recall. Sometimes a probe for a feeling elicits a cognition, as when the therapist asks, "How did you feel when the boss put you in charge?" and the patient responds, "I felt I couldn't do a good job." The therapist might also ask the patient to imagine, as vividly as possible, the details of the problematic situation: What furniture was in the room? Who else was there? What were they wearing? What were they doing? As Beck et al. (1979) and Edwards (1989) point out, some patients retrieve important material when they focus on images rather than on cognitions.

Role-playing can also be quite helpful in uncovering dysfunctional beliefs. A patient reported distress at the thought of being assertive but was unable to report automatic thoughts that hampered her abi1ity to speak up. She was asked to role-play being assertive with her husband. As the role-play progressed, the patient's mood plunged and she reported the belief, "I must never reveal my feelings to others-if! do, I'll get hurt."

Therapists can also help patients access their dysfunctional beliefs by talcing advantage of spontaneously occurring mood states. Therapists can encourage patients to schedule therapy sessions or telephone the therapist at times of acute emotional distress. Sessions conducted at times when the negative material is readily available can be extremely profitable and powerful. {This intervention may be countertherapeutic for patients who believe "I am weak and fragile and I can't tolerate any emotional distress" or "I can't solve problems on my own-I must get help or I won't survive.")

In sum, a variety of techniques, including confronting, recalling, or enacting situations that evoke negative mood, and scheduling therapy at times of distress, can be used to directly access dysfunctional attitudes that are not spontaneously reported in therapy sessions.

Homework. Homework assignments can be used to provide valuable informa-tion about underlying beliefs during times those problems are powerfully acti-vated and available for inspection (Burns, Adams, & Anastopoulos, 1985). For example, a physician sought treatment for vague, amorphous feelings of anxiety and distress that "came out of the blue." Repeated attempts during therapy sessions to collect more information about her symptoms proved futile. To determine the origins of the anxiety, the patient carried out a homework assign-ment in which she recorded her thoughts and feelings whenever this vague feeling occurred. After several weeks of record keeping, she came to therapy saying, "I realize I'm afraid that my husband is going to leave me and I feel I can't survive without him!" In therapy sessions, where she felt calm and protected by the therapist, she was unable to experience and describe this fear, but when she kept careful logs at home of her feelings and their precipitants (her husband's business trips), the nature of her fear became clear.

In therapy groups for medical patients in the Depression Clinic at San Francisco General Hospital, a homework assignment called "working backward" is used to treat dysfunctional beliefs. Patients are asked to keep daily mood logs so they become aware of changes in their mood. Next, they are asked to note periods of intense negative mood. They are taught to "work backward" from the negative mood to access the distorted thoughts. That is, they first become aware of the mood; they next note the situation creating the mood; and they finally note the thoughts that are most prominent during the negative mood.

The therapeutic relationship. Interactions with the therapist can elicit nega-tive mood states, irrational cognitions and attitudes, and maladaptive behaviors (Goldfried, 1985). This material can provide valuable clues about the patient's underlying beliefs and a powerful setting in which to work on these beliefs. For example, when his therapist arrived five minutes late to his therapy session, a young teacher became panicky and angry. When the therapist asked him to report the automatic thoughts that were causing these feelings, the patient reported the following thoughts: "You don't care about me, You're not committed to the therapy, I'll never get well, I'll be starved, beaten, and abandoned." This interaction with the

therapist elicited his central fears, and a very productive session was spent working on them. Although no research evidence is available as yet to support this notion, we suggest that in vivo cognitive-behavior therapy, conducted when the interaction with the therapist activates intense mood states, distorted thinking, and problematic behavior patterns, is particularly effective at changing underlying pathogenic cognitions; similar ideas have been outlined by others (Goldfried, 1985; Jacobson, 1989; Safran & Greenberg, 1986).

Nearly every aspect of the patient-therapist interaction, including fee-setting, scheduling appointments, billing procedures, and the patient's responsiveness to the therapist's interventions, can be informative and provide a basis for useful work on the underlying beliefs. For example, patient-therapist interactions involving homework can bring up patients' beliefs about competence or indepen-dence. Although every interaction with the therapist does not point to an underlying pathogenic belief, those that are highly emotionally charged or involve a frequently repeated theme deserve careful inspection from this point of view.

The case formulation. The case formulation method {Turkat, 1985; Turkat & Maisto, 1985; Persons, 1989) offers another route to uncovering and working on underlying beliefs. The case formulation model proposes that overt psychological symptoms and problems stem from and reflect an individual's central underlying pathogenic beliefs. This model is based directly on the cognitive theory of depression, which proposes that depressive symptoms originate in underlying pathological beliefs (Beck, 1983). The case formulation model simply extends the cognitive theory and uses it to understand all of the patient's problems and difficulties-not just depressive symptoms.

For example, a woman who believes "My needs don't count-I'm only worthwhile if I'm helping others" may avoid depression by doing laundry for her grown children, meeting the needs of an alcoholic spouse, and spending many hours doing volunteer work at church. Although she is not clinically depressed, the patterns of her behavior provide important clues about her underlying belief, and the therapist who includes these behaviors in a careful assessment may be able to develop a hypothesis (formulation) about the nature of the underlying belief. To activate the belief and point it out to the patient, the therapist might suggest a behavioral change that challenges the belief:

T: ·suppose you said to the people at church, 'No, I won't be able to help with that.' How would you feel?
P: No, I couldn't do that! I'd feel too guilty!
T: I see, and what thoughts would you be having that would be making you feel so guilty?
P: I'd think, 'If they need me to do it, then I should do it for them.'
T: Suppose they need you to do it, but you don't do it-what would that mean? P: (long pause) It would mean I'm bad.

Other strategies for obtaining information about patients' central irrational beliefs are provided by Persons (1989) and by Safran, Vallis, Segal, and Shaw (1986).

Mood Swings are Likely to be Accompanied by Cognitive Swings

Some patients experience recurrent dramatic shifts in mood and equally dramatic shifts in thinking. The knowledge that mood and cognitions covary can be quite helpful to the therapist. First, it can help the therapist maintain a stabilized viewpoint instead of passively following the patient's swings in mood and thinking. Second, it reminds the therapist that the patient's dysfunctional thinking has probably not dramatically changed, even though it appears to have shifted overnight. That is, the lover who feels vulnerable to abandonment probably retains the belief "Unless I'm loved, I'm worthless" even during periodic positive moods that occur when he is involved in a relationship. In fact, the intensity of the positive mood the patient experiences at these times can serve as a clue to the presence of the underlying irrational belief; if questioned about his positive mood, the patient may report the distorted cognition: "Because I'm loved, I'm a good person." Therefore, additional work on the patient's pathogenic beliefs is indi-cated even though the patient's mood and thinking has shifted.

The patient also can learn that dysfunctional thinking and negative mood are linked and may be able to use this information to maintain a more stabilized self-concept and behavior plan. For example, the patient who begins feeling bad and then believe11 that no one likes her may have a tendency to avoid others, thus reinforcing her view that she is undesirable and destined to be alone. If, on the other hand, she learns to say to herself, "When I am in a bad mood I believe that others will reject me, but when I am in a good mood I know that I have friends who love me," she may be able to distance herself from the negative thoughts, continue to interact with friends, and receive positive feedback that contradicts her irrational belief that others will reject her.

The notion that dramatic mood swings are accompanied by dramatic cognitive swings seems particularly helpful when working with individuals who have personality disorders, such as borderline and narcissistic disorders. For these individuals, environmental events may trigger vast mood swings and resultant severe changes in dysfunctional thinking. In fact, dramatic mood swings and accompanying shifts in thinking and behavior may explain why these individuals find it difficult to develop a stable identity and to persevere in careers and relationships.

CONCLUSIONS

Although further empirical evidence is needed, the mood-state hypothesis has important implications for psychotherapy with depressed patients. We hope the ideas presented here will stimulate this work.

The role of mood in cognitive and therapeutic processes is controversial and has been discussed by others. For example, the mood-state hypothesis is consistent with Reda's (1984) views about the effects of antidepressant medica-tion on underlying irrational beliefs: "My hypothesis is that the tricyclic antidepressants. . . modify the negative emotional state that may be the cause. . . of the emergence of the depressive beliefs . . .. (p. 134). Like Reda, we speculate that the apparent remission in dysfunctional attitudes seen in patients treated with antidepressants (e.g., Simons et al., 1984) results from medication-produced mood improvements that prevent subjects from reporting dysfunctional attitudes that are still actually present. Other writers, including Segal (1988), Segal and Shaw (1986), and Teasdale (1983) have also suggested that mood may play a role in activating latent dysfunctional beliefs.

Riskind (1989) offers a slightly different proposal. He suggests that what appear to be effects of mood on cognitive processing are actually cognitive effects. For example, he argues that mood inductions may activate a cognitive priming that effects other cognitions. Whether the effects of mood change are a result of mood per se or cognitive priming, the point we want to make here is that some type of activation procedure may be necessary for full and effective assessment and treatment of underlying dysfunctional attitudes.

Although we focus this discussion primarily on depression and anxiety, irrational underlying beliefs may also play a role in other pathological phenom-ena, such as addictive behaviors. Evidence that a negative mood state is a major contributor to relapse of drinking, smoking and other addictive behaviors (Marlatt, 1985) can be understood through the mood-state hypothesis. Negative mood may be linked to irrational cognitions and maladaptive behavioral patterns, so that when the mood state changes, thinking and behavior change in tandem. Most discussions of cognitive therapy focus on the way in which negative cognitions produce negative mood. We suggest that attention to the way in which negative mood elicits negative cognitions can be therapeutically useful as well. Of course, as Teasdale (1983) points out, causal influences probably flow in both directions.

REFERENCES

Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. New York: International Universities Press.

Beck, A. T. (1983). Cognitive therapy of depression: New perspectives. In P. J. Clayton & J. E. Barrett (Eds.), *Treatment of depression: Old controversies and new approaches*. New York: Raven Press.

Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. New York: Guilford.

Bower, G. H. (1981). Mood and memory. *American Psychologist, 36,* 129-148.

Burns, D. D. (1980). *Feeling good: The new mood therapy*. New York: William Morrow and Co.

Burns, D. D., Adams, R. L., & Anastopoulos, A. D. (1985). The role of self-help assignments in the treatment of depression. E. E. Beckham & W. R. eber (Eds.), Handbook for the diagnosis, treatment and research of depression (pp. 634-669) Homewood, Illinois: Dorsey Press.

Dobson, K. S., & Shaw, B. F. (1986). Cognitive assessment with major depressive disorders. *Cognitive Therapy and Research, 10,* 13-29.

Eaves, G., & Rush, A. J. (1984). Cognitive patterns in symptomatic and remitted unipolar major depression. *Journal of Abnormal Psychology, 93,* 31-40.

Edwards, D. J. A. (1989). Cognitive restructuring through guided imagery: Lessons from Gestalt therapy. In A. Freeman, K. M. Simon, L. E. Beutler, & H. Arkowitz (Eds.), *Comprehensive handbook of cognitive therapy* (pp. 283-298). New York: Plenum Press.

Fennell, M. J. V., & Teasdale, J. D. (1987). Cognitive therapy for depression: Individual differences and the process of change. *Cognitive Therapy and Research, 11,* 253-271.

Foa, E. B., & Kozak, M. J. (1986). Emotional processing of fear: Exposure to corrective information. *Psychological Bulletin, 99,* 20-35.

Goldfried, M. (1985). In-vivo intervention or transference? In W. Dryden (Ed.), *Therapists' dilemmas* (Chapter 7, pp. 63-74). London: Harper & Row.

Greenberg, L. S., & Safran, J. D. (1987). *Emotion in psychotherapy*. New York: Guilford.

Hamilton, E. W., & Abramson, L. Y. (1983). Cognitive patterns and major depressive disorder: A longitudinal study in a hospital setting. *Journal of Abnormal Psychology, 92,* 173-184.

Hammen, C., Miklowitz, D. J., & Dyck, D. G. (1986). Stability and severity parameters of depressive self-schema responding. *Journal of Social and Clinical Psychology, 4,* 23–45.

Hollon, S. D., Kendall, P. C., & Lumry, A. (1986). Specificity of depressotypic cognitions in clinical depression. *Journal of Abnormal Psychology, 95,* 52-59.

Jacobson, N. S. (1989). The therapist-client relationship in cognitive behavior therapy: Implications for treating depression. *Journal of Cognitive Psychotherapy, 3,* 85-96.

Marlatt, G. A. (1985). Relapse prevention: Theoretical rationale and overview of the model. In G. A. Marlatt & J. R. Gordon (Eds.) *Relapse prevention* (pp. 3-70). New York: Guilford.

Marks, I. M. (1981). *Cure and care of neuroses: Theory and practice of behavioral psychotherapy*. New York: Wiley.

Miranda, J., & Persons, J. B. (1988). Dysfunctional attitudes are mood-state dependent. *Journal of Abnormal Psychology, 97,* 76-79.

Miranda, J., Persons, J. B., & Byers, C. N. (1990). Endorsement of dysfunctional beliefs depends on current mood state. *Journal of Abnormal Psychology, 99,* 237-241.

Murphy, G. E., Simons, A. D., Wetzel, R. D., & Lustman, P. J. (1984). Cognitive therapy and pharmacotherapy: Singly and together in the treatment of depression. *Archives of General Psychiatry, 41,* 33-41.

Persons, J. (1989). *Cognitive therapy in practice: A case formulation approach*. New York: Norton.

Persons, J. B., & Miranda, J. (1990). *Cognitive theories of vulnerability to depression: Reconciling negative evidence*. Paper presented at meetings of Society for Psychotherapy Research, June 1990, Wintergreen, VA.

Persons, J. B., & Rao, P. A. (1985). Longitudinal study of cognitions, life events, and depression in psychiatric inpatients. *Journal of Abnormal Psychology, 94,* 51-63.

Reda, M. A. (1984). Cognitive organization and antidepressants: Attitude modification during amitriptyline treatment in severely depressed individuals. In M. A. Reda & M. J. Mahoney (Eds.), *Cognitive psychotherapies: Recent developments in theory, research, and practice*. Cambridge, MA: Ballinger.

Riskind, J. H. (1989). The mediating mechanisms in mood and memory: A cognitive-priming formulation. In D. Kuiken (Ed.), Mood and memory: Theory, research, and applications. (Special issue). *Journal of Social Behavior and Personality, 4,* 173-184.

Safran, J. D., & Greenberg, L. S. (1986). Hot cognition and psychotherapy process: An information processing/ecological approach. In P. C. Kendall (Ed.), *Advances in cognitive-behavioral research and therapy,* Vol. 5. New York: Academic Press.

Safran, J. D., Vallis, T. M., Segal, Z. V., & Shaw, B. F. (1986). Assessment of core cognitive processes in cognitive therapy. *Cognitive Therapy and Research, 10,* 509-526.

Segal, Z. V. (1988). Appraisal of the self-schema construct in cognitive models of depression. *Psychological Bulletin, 103,* 147-162.

Segal, Z. V., & Shaw, B. F. (1986). Cognition in depression: A reappraisal of Coyne and Gotlib's critique. *Cognitive Therapy and Research, 10,* 671-693.

Silverman, J. S., Silverman, J. A., & Eardley, D. A. (1984). Do maladaptive attitudes cause depression? *Archives of General Psychiatry, 41,* 28-30.

Simons, A. D., Garfield, S. L., & Murphy, G. E. (1984). The process of change in cognitive therapy and pharmacotherapy for depression. *Archives of General Psychiatry, 41,* 45-51.

Simons, A. D., Murphy, G. E., Levine, J. L., & Wetzel, R. D. (1986). Cognitive therapy and pharmacotherapy for depression: Sustained improvement over one year. *Archives of General Psychiatry, 43,* 43-48.

Singer, J. A., & Salovey, P. (1988). Mood and memory: Evaluating the network theory of affect. *Clinical Psychology Review, 8,* 211-251.

Teasdale, J. (1983). Negative thinking in depression: Cause, effect, or reciprocal relationship? *Advances in Behavior Research and Therapy, 22,* 549-552.

Turkat, I. D. (Ed.) 1985. *Behavioral case formulation.* New York: Plenum.

Teasdale, J. & Dent, (1987). Cognitive vulnerability to depression: An investigation of two hypotheses. *British Journal of Clinical Psychology, 26,* 113–126.

Turkat, I. D., & Maisto, S. A. (1985). Personality disorders: Application of the experimental method to the formulation and modification of personality disorders. In Barlow, D. H. (Ed.), *Clinical handbook of psychological disorders: A step-by-step treatment manual* (pp. 502-570). New York: Guilford.

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