3

Cognitive-Behavioral Case Formulation

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A case formulation is a theory of a particular case. A cognitive-behavioral case formulation is an idiographic (individualized) theory that is based on a nomothetic (general) cognitive-behavioral theory (Haynes, Kaholokula, & Nelson, 2000). For example, a formulation might rely on Beck's (Beck, Rush, Shaw, & Emery, 1979) cognitive theory of psychopathology, which states that external life events activate schemata to produce symptoms and problems. A case formulation based on Beck's theory specifies *which* life events have activated *which* schemata to produce the symptoms and problems experienced by the particular patient under consideration.

The format and content of a case formulation depend on its function (Haynes & O'Brien, 2000). In this chapter we describe a format for a case formulation that has, as its chief function, helping the therapist devise an effective treatment plan (cf. Hayes, Nelson, & Jarrett, 1987).

Individualized case formulation has a long history in behavior therapy and behavior analysis and in psychodynamic psychotherapy, but it is a relatively recent development in cognitive therapy. Writings by behavior analysts are too numerous to name exhaustively, but include those by Nelson and Hayes (1986), Turkat (1985), and Wolpe (1980). Useful recent clinically oriented writings in behavioral analysis include those by Haynes, Leisen, and Blaine (1997), Haynes and O'Brien (2000), and O'Brien and

Haynes (1995). Recent writings on case conceptualization by cognitive and cognitive-behavioral therapists include those by Persons and colleagues (Persons, 1989, 1992; Persons & Tompkins, 1997), Nezu, Nezu, Friedman, and Haynes (1997), and Koerner and Linehan (1997). Eells (1997) has edited a volume that provides detailed description of conceptualization methods utilized by numerous psychotherapeutic orientations.

This chapter describes three levels of case formulation: formulation at the level of the case, at the level of the problem or syndrome, and at the level of the situation. We describe in detail the format of the cognitive-behavioral formulation at the case level, providing a clinical example (Judy). To illustrate the role of the formulation in enhancing treatment effectiveness, we offer several examples of the way the formulation was useful in Judy's therapy. We conclude with a brief discussion of the role of the individualized case formulation in an evidence-based approach to psychotherapy.

LEVELS OF CASE FORMULATION

As noted above, case formulation can occur at three levels: at the level of the case, at the level of the problem or syndrome, and at the level of the situation. In the formulation at the case level, the therapist develops a conceptualization of the case as a whole. One of the key roles of the case-level formulation is to explain the relationships among the patient's problems (see Haynes, 1992). This level of formulation can be helpful to the therapist when selecting treatment targets, as the therapist would like to focus first on problems that appear to play a causal role in other problems (e.g., depression may be causing marital problems and contributing to a child's behavior problems, and thus may merit early intervention). We strive to develop an initial case-level formulation after three to four sessions of therapy.

A formulation at the level of problem or syndrome provides a conceptualization of a particular clinical problem or syndrome, such as depressive symptoms, shoplifting, insomnia, obsessive–compulsive disorder, or bingeing and purging. Beck's cognitive theory of depression is a formulation at this level. In fact, when we use Beck's theory to conceptualize at the case level, we are extrapolating from the original theory, which was developed to explain a syndrome. The therapist's treatment plan for the syndrome or problem depends on the formulation of the problem. For example, one of us (J. B. P.) recently treated a patient who complained of severe fatigue. The assessment process yielded two possible formulations, either or both of which might explain the fatigue: abuse of sleeping medications, or negative

thoughts ("There's no point in trying—I always fail") in response to a recent professional setback. The different formulations suggest different interventions.

A conceptualization at the level of situation provides a "mini-formulation" of the patient's reactions in a particular situation, and this formulation guides the therapist's interventions in that situation. For developing a situation-level formulation based on Beck's theory, the Thought Record format (see Figure 3.1) is ideal, as it includes columns for the central components of Beck's theory: situation, thoughts, behaviors, and emotions. For example, a patient came to her therapy session wanting help with feelings of anxiety she had experienced in her Spanish class the previous evening. If that patient's Thought Record indicated that she had had the automatic thoughts "If I get anxious, I'll have a panic attack and pass out," and that she had responded emotionally by feeling anxious and apprehensive and behaviorally with rapid, shallow breathing and by sitting in the back of the class so as to be able to leave quickly if needed, then the therapist's interventions would focus on those problematic thoughts, behaviors, and feelings. If the patient's Thought Record indicated that she had had the automatic thoughts "I'm fat. No one will like me. I don't belong here," and that she had responded by feeling worthless and inadequate, speaking to no one, and leaving early, the therapist's interventions would address those problematic thoughts, behaviors, and feelings. The behavioral chain analyses of parasuicidal behaviors in Linehan's (1993) dialectical behavior therapy for patients with borderline personality disorder provide further examples of formulation at the level of the situation.

DATE	SITUATION (Event, memory, attempt to do something, etc.)	BEHAVIOR(S)	EMOTIONS	THOUGHTS	RESPONSES

FIGURE 3.1. Thought Record. Copyright 1998 San Francisco Bay Area Center for Cognitive Therapy. Reprinted by permission.

Case-level formulations often accrue from information collected in situation-level and problem-level formulations (J. S. Beck, 1995). All formulations are considered hypotheses, and the therapist is constantly revising and sharpening the formulations as the therapy proceeds. This chapter focuses primarily on the cognitive-behavioral formulation at the level of the case.

FORMAT OF THE COGNITIVE-BEHAVIORAL CASE FORMULATION

The cognitive-behavioral case formulation has five components: Problem List, Diagnosis, Working Hypothesis, Strengths and Assets, and Treatment Plan (see Figure 3.2). We describe each in turn, both in general and for the case of Judy, a patient treated (by J. D.) at the San Francisco Bay Area Center for Cognitive Therapy. Judy was a 35-year-old single European American woman who was living alone and working as a teacher. She sought treatment because she felt "down, dissatisfied, and discouraged about my current life and future plans."

Problem List

The Problem List is an exhaustive list of the patient's difficulties, stated in concrete, behavioral terms. We recommend that clinicians make a comprehensive Problem List that includes any difficulties the patient is having in any of the following domains: psychological/psychiatric symptoms, interpersonal, occupational, medical, financial, housing, legal, and leisure. We (and others; see Nezu & Nezu, 1993; Turkat & Maisto, 1985) recommend that the therapist make a comprehensive Problem List for several reasons. An all-inclusive list is helpful as the therapist searches for themes or speculates about causal relationships, in order to develop a Working Hypothesis (see below) that describes relationships among problems. A comprehensive list ensures that important problems are not overlooked. Simply making a comprehensive Problem List for a complex case can help the therapist feel less overwhelmed by the patient's multitudinous problems; even if all the problems cannot be tackled in the therapy or in a given session, at least they are on the list and won't be forgotten. A typical Problem List for an outpatient has five to eight items.

It is not always easy or even possible to make a comprehensive Problem List. Sometimes this is because the therapist is unassertive or does not take the time to conduct a comprehensive assessment. Sometimes it is because patients are not willing or able to acknowledge problems that they

Cognitive-Behavioral Case Formulation and Treatment Plan

Name: _____
Identifying Information: _____

Problem List

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

Diagnosis

Axis I: _____
Axis II: _____
Axis III: _____
Axis IV: _____
Axis V: _____

Working Hypothesis

Schemata:

(Self) _____ (Other) _____
(World) _____ (Future) _____

Precipitant/Acitivating Situations: _____

Origins: _____

Summary of the Working Hypothesis:

(continued)

FIGURE 3.2. Form for recording a cognitive-behavioral case formulation, including a Treatment Plan. Copyright 1999 by San Francisco Bay Area Center for Cognitive Therapy. Reprinted by permission.

Strengths and Assets _____

Treatment Plan

Goals (measures):

1. _____
2. _____
3. _____
4. _____

Modality: _____ Frequency: _____
Interventions: _____

Adjunct Therapies: _____
Obstacles: _____

FIGURE 3.2. *(cont.)*

consider shameful or frightening, or that they do not consider to be problems.

The use of paper-and-pencil assessment tools can be helpful in some of these situations. Because substance abuse is often a problem that patients are reluctant to discuss, we ask patients at our center to complete a standard pretreatment assessment packet that includes a substance abuse scale. We use a modification of the CAGE questionnaire (Mayfield, McLeod, & Hall, 1974), to which we have added a few items to assess what substances the patient uses and how much and how often he or she uses them.

Careful observation can also reveal problem behaviors that patients may not mention directly. Bounced checks, last-minute cancellations, or frequent requests to reschedule appointments may point to financial problems or a chaotic lifestyle. A patient who is overly accommodating and compliant may have assertion difficulties.

When the therapist observes or suspects problems that the patient does not wish to acknowledge, the therapist must use his or her judgment to determine whether it is necessary to get a particular problem out on the table right away or whether a detailed discussion might be postponed. We find the categories Linehan (1993) uses to prioritize problems of patients with borderline personality disorder to be helpful in making this judgment. Linehan proposes that problems involving suicidal and parasuicidal behaviors, therapy-interfering behaviors (e.g., noncompliance with treatment) or "quality-of-life-interfering behaviors" (e.g., significant substance abuse, shoplifting, or homelessness—problems that, unless solved, will interfere

with the individual's ability to achieve any other goals) must be explicitly addressed early on. Less acute problems can be put on hold or ignored altogether.

We recommend that the format of each item on the Problem List consist of a one- to two-word description of the problem, followed by a short description of some typical behavioral, cognitive, and mood components of the problem when this is appropriate. This format is particularly important for describing psychological problems; some problems (medical, housing, legal, or financial problems, for example) are not readily described in terms of cognitions, behaviors, and moods. The behavioral component of a problem might include gross motor behaviors (e.g., avoiding driving across bridges), physiological responses (e.g., increased heart rate), or both. This format has its origins in Beck's cognitive theory, which describes clinical problems in terms of cognitive, behavioral and mood components.

Sometimes it is difficult to decide how to categorize problems on the Problem List. For example, procrastination could be categorized as a behavioral component of a psychological problem or as a work problem, because the procrastination interferes with the patient's functioning at work. Should this problem appear on the Problem List as "Procrastination," as "Work problems," or both? There is no clear-cut answer to this question; we recommend that therapists approach this situation in whatever way facilitates their work and communication with their patients. We often list a problem in both ways. For example, in the case illustration below, Judy's therapist listed a procrastination problem, as well as work and interpersonal problems. This was done because the patient herself described her problem as "procrastination," and so it was useful to state it this way on her Problem List. Then, as the therapist obtained details of the procrastination problem, it became clear that it occurred in both work and interpersonal arenas. Both these two domains were added to the Problem List, in part because procrastination was not Judy's only problem in those domains.

JUDY'S PROBLEM LIST

Here is Judy's Problem List as her therapist recorded it:

1. *Depressed, dissatisfied, passive.* Beck Depression Inventory at intake = 16. Thoughts: "My job is boring," "I'll never find a life partner," "I'm not happy with my life and I probably never will be." Behaviors: Procrastination, poor follow-through (takes fitful steps to join a gym, see friends more, find a better job, begin dating, but does not follow through).
2. *Disorganized, unfocused, and unproductive.* This happens daily at work (lesson planning, grading papers) and at home (household repair projects). Judy feels overwhelmed, has difficulty concentrating, thinks "I can't handle this quite right, so I'll move on to something else," and jumps from task to task with no overall plan or direction. As a result, she accomplishes less than she wants, and frequently feels dissatisfied and discouraged at the end of the day.
3. *Job dissatisfaction.* Judy states, "I'm bored, I don't like my job," and describes the work environment as stressful and unsupportive. She has many responsibilities but little authority or administrative support. She wants to find a better, more challenging job, but does not move forward to do this.
4. *Social isolation.* Judy has many friends but spends little time with them. Behaviors: Comes home from work, grades papers, prepares the next day's lesson, watches TV, goes to bed. Mood: Tired and discouraged. Thoughts: "I'm too tired to see anyone. I just want to go home and collapse. I have work to do anyway." On weekends she meets one or two friends for dinner, but she has not seen many friends for months, and she wants to go to "more interesting" events where she can meet new people. She often sleeps late, has difficulty accomplishing errands and work tasks, and then cancels evening social plans to stay home and finish them.
5. *No relationship.* Judy states, "I want to marry and have children, but I don't think I'll ever meet anyone." Mood: Hopeless, discouraged. Behaviors: She makes plans to answer personal ads and join a dating service but does not follow through; no dating except for casual get-togethers with a man who is not interested in a long-term relationship. Thoughts: "Why bother? I won't meet anyone decent. It probably won't work out anyway."
6. *Unassertive.* Judy frequently feels angry with others for not meeting her needs, but she does not speak up to express her needs. This happens with both coworkers and friends. Thoughts: "It won't matter if I say anything. I won't get what I want anyway. It will just lead to a confrontation, and I'll feel worse than if I hadn't said anything." Recent situations include a friend who repeatedly asks her for help and two coworkers who often ask her to take on additional menial tasks. Judy agrees to such requests, but then feels resentful.

Diagnosis

Psychiatric diagnosis is not, strictly speaking, part of a cognitive-behavioral case formulation. However, we include a section for Diagnosis in our formulation for several reasons. The Diagnosis can lead to some initial formulation hypotheses. For example, Beck's cognitive theory underpins a therapy for treatment of major depression that has been shown to be effective

in randomized trials. If our patient meets criteria for major depression, we might consider the hypothesis that Beck's theory can serve as the template for an idiographic formulation of her case. In addition, the diagnosis can give some information about helpful treatment interventions; the evidence-based therapist will want to rely on results of randomized trials, and randomized trials are generally organized around diagnoses.

DIAGNOSES FOR JUDY

Axis I: Dysthymic disorder
Axis II: None.
Axis III: None.
Axis IV: Socially isolated, occupational problems.
Axis V: Global Assessment of Functioning score = 60.

Working Hypothesis

The Working Hypothesis is the heart of the formulation. Here the therapist develops a minitheory of the case, adapting a nomothetic theory to the particulars of the case at hand. After showing how to develop a Working Hypothesis based on Beck's theory, we say a bit about how to develop a Working Hypothesis based on other cognitive-behavioral theories.

The Working Hypothesis also describes the relationships among the problems on the Problem List. Some problems result not from the activation of schemata, but from other problems. For example, a depressed man's marital problems may result not from schema activation, but from the depressive symptoms themselves, which cause him to withdraw from his wife and family. And some problems result entirely or in part from biological, environmental, or other nonpsychological factors, as in the case of medical problems or financial problems resulting from an employer's bankruptcy.

WORKING HYPOTHESIS BASED ON BECK'S COGNITIVE THEORY

Beck's cognitive diathesis theory states that external life events activate schemata to produce symptoms and problems. A Working Hypothesis based on Beck's cognitive theory describes the external events and schemata that are operative in the case at hand, and offers a summary statement describing the relationships among these components and among the problems on the Problem List. Separate subheadings can be used for the Schemata, Precipitants/Activating Situations, Origins, and Summary of the Working Hypothesis, as we detail here and illustrate for the case of Judy.

Schemata. In the first section of the Working Hypothesis, the therapist offers hypotheses about the schemata, or core beliefs, that appear to be causing or maintaining the problems on the Problem List. These are generally negative beliefs. Patients may also hold positive schemata, but the negative ones are usually the ones that cause the problems on the Problem List, so they are the ones itemized in this section of the formulation.

Beck's theory emphasizes the importance of understanding patients' beliefs about self, others, world, and future. The therapist may wish to provide hypotheses about all four of these types of beliefs or to focus on only two or three (the goal is clinical utility, not exhaustive explanation). We find the patient's views of self and others to be particularly clinically useful. The patient's views of others can be helpful to the therapist because the therapist is, of course, an "other," and this component of the formulation can allow the therapist to make some predictions about distortions that may arise in the patient's views of the therapist.

A patient probably has multiple views of self, others, world, and future. For example, Judy had two prominent views of others—one apparently learned from experiences with her mother (passive/weak/helpless), and one learned from her father (angry/critical/attacking). She viewed some people as weak and fragile, others as potentially hostile and attacking, and still others as having both sets of qualities. Judy held a general belief that subsumed these two: a view of others as unsupportive of her.

The therapist may also find it useful to specify some conditional beliefs, stated in "if–then" terms, in this part of the formulation. An example is "If I speak up, others will get angry and withdraw from me" (see Beck, Freeman, & Associates, 1990).

Precipitants and Activating Situations. In the second section of the Working Hypothesis, the therapist specifies external events and situations that activate schemata to produce symptoms and problems. The term "Precipitants" refers to larger-scale, molar events that precipitated an episode of illness or the patient's decision to seek treatment. An example is a poor work evaluation that activated, for a computer salesperson, a downward spiral into a clinical depression.

The term "Activating Situations" refers to smaller-scale events that precipitate negative mood or maladaptive behaviors. Typical examples of Activating Situations for a patient whose depression had its onset following receiving a poor work evaluation included driving to work in the morning, attending meetings with his boss, and meeting with a client who was critical of him and his firm's products.

It is not always easy to draw a distinction between Precipitants and Activating Events, and this distinction is not always crucial for treatment-

planning purposes. The main goal is to say something in this section of the formulation about the types of external events and situations that are problematic for the patient.

We believe it is important to assess external events and situations for several reasons. First, the cognitive theory states that psychopathological symptoms and problems are not due simply to intrapsychic events; they arise from the *activation*, by external events, of internal structures (schemata). As a result, we expect a "match" between the patient's schemata and the external events activating them. For example, Beck (1983) states that autonomous types of individuals (who believe "I must be successful in order to be a worthwhile person") are vulnerable to depression when they experience failure. If this theory is correct (and some evidence supports it; see Hammen, Ellicott, Gitlin, & Jamison, 1989), then the therapist can gain some information about what schemata the patient holds by examining the external events that appear to play a role in activating the schemata.

Information about which situations are problematic for the patient is also helpful when intervening, as it is important to design interventions that can be utilized in those situations. Finally, although it is not much discussed in the literature, we find that it is useful to work with patients not just to change their reactions to external situations, but sometimes to help them change the situations themselves. Some activity-scheduling interventions can be conceptualized in this way. For example, an engineer reported that he functioned poorly in a work environment in which he was isolated and required to function independently; he functioned much better when he worked as part of a team. An important part of treating this young man's depression involved helping him take assertive action to obtain the type of work environment in which he flourished.

Origins. In the third section of the Working Hypothesis, the clinician briefly describes one or a few incidents or circumstances in the patient's early history that account for how the patient might have learned the Schemata or functional relationships listed in the Working Hypothesis. The Origins section can also include modeling experiences, or failures to learn important skills and behaviors, as in the case of a patient who has significant social skills deficits due in part to growing up in a family in which both parents themselves had marked social skills deficits.

Summary of the Working Hypothesis. In a summary statement, the therapist tells a story that describes the relationships among the components of the Working Hypothesis (Schemata, Precipitants/Activating Situations, and Origins), tying them to the problems on the Problem List. The Working Hypothesis can be described either verbally, or in a kind of a flow

chart—as illustrated in Haynes (1992) and Nezu et al. (1997), and as we demonstrate below in the case of Judy.

WORKING HYPOTHESIS FOR JUDY

Schemata. Judy's schemata about self, others, world, and future were as follows:

"*I* am undeserving, emotionally disabled, inadequate, incapable of success."
"*Others* are undependable, unsupportive, won't come through for me. They are angry/critical/attacking or passive/weak/helpless."
"The *world* is unrewarding, demanding, scary."
"The *future* is ultimately unrewarding."

Precipitants and Activating Situations. Judy's Precipitants were watching others achieve goals and make major life transitions (e.g., getting a promotion or a new job, getting married, having a child). The experience of attending the wedding of a close friend pushed Judy into therapy.

As for Judy's Activating Situations, in general these were situations in which she felt stuck and unable to take action to achieve her goals, and situations in which she felt resentful and overburdened when she did not assert herself with others. Examples included looking at the personal ads, looking at her "to-do list" for the day, and being asked for help she didn't want to give.

Origins. Judy's father was dependent on alcohol; he was prone to unpredictable angry outbursts and to verbal and occasional physical abuse directed at his wife and children. He repeatedly ridiculed Judy and told her she was stupid and crazy, especially if she tried to assert herself. Judy's mother appeared fragile and helpless; she modeled passive, avoidant behaviors.

Summary of the Working Hypothesis. Judy's Working Hypothesis proposed that when she was faced with taking actions to further her goals, her schemata that she was incapable and damaged were activated. She had learned from her mother's passive behaviors and from her father's abusive ones that she was damaged and incapable of taking action. When these schemata were activated, she became passive and inactive, with the result that she did not achieve her goals and felt dissatisfied and discouraged. This pattern occurred repeatedly in both work and social situations, and led to the difficulties she experienced in both those settings. A flow chart depicting Judy's Working Hypothesis is presented in Figure 3.3.

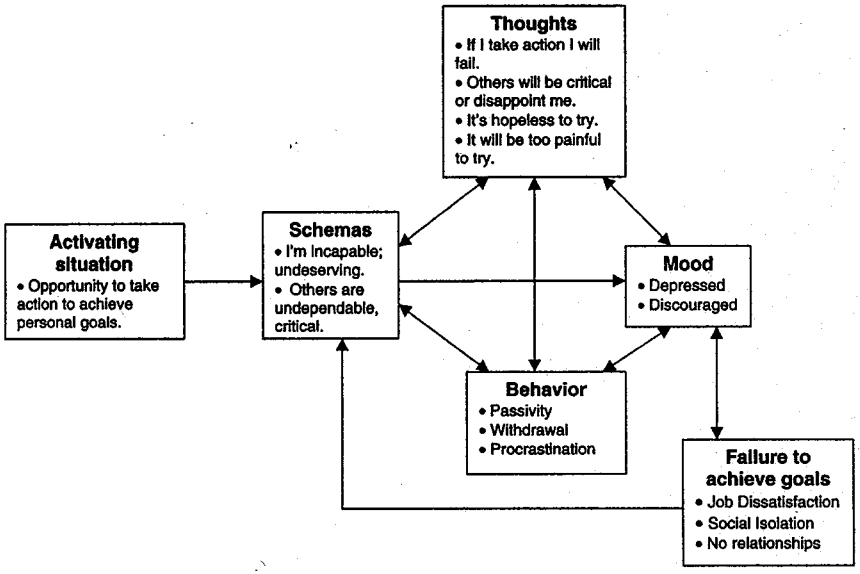

FIGURE 3.3. Judy's Working Hypothesis.

WORKING HYPOTHESES BASED ON OTHER COGNITIVE-BEHAVIORAL THEORIES

A Working Hypothesis based on Beck's cognitive theory will specify the activating events, the schemata, and some typical behaviors/automatic thoughts/moods arising when the schemata are activated. Other cognitive-behavioral theories can also serve as templates for individualized case conceptualizations (see Nezu et al., 1997; Koerner & Linehan, 1997).

Behavioral analysis offers a particularly powerful and well-developed alternative to cognitive conceptualization schemes. A functional-analytic approach to case conceptualization treats psychopathological behaviors as serving a function and as caused and controlled by contingencies in the environment (Haynes & O'Brien, 2000), in contrast to the structural view of psychopathology utilized in Beck's model, which views psychopathological symptoms as caused by underlying structures (schemata). Concretely, this means that the functional analyst attempts to understand the functions and causes of problem behaviors by collecting information about environmental antecedents and consequences, not by hypothesizing underlying causal schemata. Useful formulations often include both cognitive (structural) and functional hypotheses. In Judy's case, for example, her withdrawal and avoidance behavior could be seen, in a structural hypothesis, as a set of behaviors resulting from activation of her schemata about herself and others, and, in a functional hypothesis, as serving the function of allowing her to avoid situations she expected would be unpleasant.

Strengths and Assets

Strengths and Assets can include good social skills, the ability to work collaboratively, a sense of humor, a good job, financial resources, a good support network, regular exercise, intelligence, personal attractiveness, and/or a stable lifestyle. We recommend that therapists collect information about strengths and assets for several reasons. This type of information can assist the therapist in developing a Working Hypothesis; for example, in Judy's case, the therapist's observation that Judy had excellent social skills ruled out the possibility that a major social skills deficit might be contributing to her social isolation. Utilizing the patient's strengths can enhance the Treatment Plan; one of us (J. B. P.) recently treated a young man who made excellent use of his strong spiritual beliefs when he was learning to resist urges to perform obsessive–compulsive rituals. A clear assessment of Strengths and Assets can also assist the therapist in setting realistic treatment goals.

JUDY'S STRENGTHS AND ASSETS

The therapist listed these Strengths and Assets for Judy: Stable lifestyle; bright; excellent social skills; a good support network of girlfriends.

Treatment Plan

Strictly speaking, the Treatment Plan is not part of the formulation—it stems from and is based on the formulation, particularly the Problem List and the Working Hypothesis. We include the Treatment Plan in the case formulation to stress the point that the Treatment Plan is based directly on the formulation. For example, if the therapist hypothesizes that a patient's social anxiety is due in part to social skills deficits, the Treatment Plan for that patient will include social skills training. If, instead, the social anxiety appears to result from Schemata such as "If I speak up for myself, others will get angry and attack me" and from avoidance of social situations, the Treatment Plan will include cognitive restructuring, behavioral exposure, and behavioral experiments to test out the Schemata and automatic thoughts.

The Treatment Plan component of the formulation has six components: Goals, Modality, Frequency, Interventions, Adjunct Therapies, and Obstacles. The Goals and Obstacles sections are particularly important, and we describe each in some detail.

GOALS

The Problem List often suggests treatment goals; that is, the Goals may be seen as ways to solve the problems on the Problem List. If this is the case, is it necessary to develop both a Problem List and a list of treatment Goals? We believe it is, for two reasons. First, note that, as we have discussed earlier, patient and therapist do not always agree about the contents of the Problem List. The therapist's Problem List sometimes includes items that the patient does not view as problems. In contrast, we recommend that patient and therapist strive to develop a list of treatment Goals they can both agree on. Goals are difficult enough to reach when patient and therapist are in complete agreement about them! Second, most patients are not eager to solve all of their problems; generally they seek treatment to address one or two particularly important or distressing problems. Furthermore, most insurance companies don't want to pay for patients to solve all their problems, either. Finally, patients often have the ability to solve some problems on their own after some difficult ones are addressed in treatment.

When the therapist is specifying treatment Goals, it is important to state how progress toward the Goals will be measured. Often measurement can be done via a simple count (e.g., number of panic attacks, or number of days per week the patient exercises). Self-report inventories can also be used. At our center we routinely use the Beck Depression Inventory (Beck, Ward, Mendelsohn, Mock, & Erbaugh, 1961), the Burns Anxiety Inventory (Burns, 1998), and the Yale–Brown Obsessive–Compulsive Inventory (Goodman, Price, Rasmussen, et al., 1989) to monitor weekly progress. And, in line with our idiographic approach to treatment, we often develop idiographic measures for assessing an individual patient's problems. Self-monitoring (see Cone, 1999, devoted to self-monitoring) is ideal for this purpose. An extensive discussion of strategies for measuring patient progress is beyond the scope of this chapter (see Bloom, Fischer, & Orme, 1995).

OBSTACLES

In the last component of the Treatment Plan formulation, the therapist uses the case formulation proper—particularly the Problem List, Schemata, and Working Hypothesis—to make predictions about difficulties that might arise in the therapeutic relationship or other aspects of the treatment. Sometimes items on the Problem List, such as financial problems, major interpersonal conflicts, and difficulty working collaboratively with others, can alert the therapist to problems that are likely to occur in and interfere with therapy.

The rationale for this section of the formulation is that an early awareness of potential difficulties can help patient and therapist cope more effectively with them. For example, one of us (J. D.) recently treated Anne, a patient whose Problem List included job instability. A discussion of Anne's job difficulties in therapy led to the hypothesis that Anne had problems tolerating situations when results were not immediately gratifying. This hypothesis suggested that she might be prone to terminate therapy prematurely if results were not immediate. Anne and her therapist were able to discuss this potential obstacle to treatment very early in treatment and to address it by setting realistic therapy goals, monitoring Anne's urges to terminate therapy prematurely, and clarifying treatment expectations regularly.

JUDY'S TREATMENT PLAN

The therapist recorded Judy's Treatment Plan as follows.

Goals:

1. Reduce depressive symptoms, especially procrastination (measured via Beck Depression Inventory and a log of steps taken toward certain goals).
2. Increase ability to prioritize and organize at work and at home.
3. Find a more satisfying job (measured directly).
4. Increase time spent with friends (measured via number of social events/week with friends).
5. Begin dating in an effort to meet a husband (measured via number of dates/week with eligible men).
6. Increase assertiveness (measured via a log of assertive behaviors).

Modality: Individual cognitive-behavioral therapy.

Frequency: Weekly.

Initial Interventions:

Teach the formulation (to provide rationale for interventions).
Activity scheduling (work tasks, socializing, dating, job search).
Cognitive restructuring (Thought Records, behavioral experiments).
Assertiveness training.
Schema change interventions.

Adjunct therapies: Pharmacotherapy is an option if Judy does not respond to cognitive-behavioral therapy.

Obstacles:

Procrastination predicts problems with homework compliance.
Unassertiveness predicts Judy may have difficulty being assertive with the therapist (e.g., saying "No" to homework assignments she doesn't want to do).
"I'm incapable of succeeding" predicts Judy may have difficulty taking action to achieve her goals and may get discouraged when setbacks occur.

USING THE CASE FORMULATION IN TREATMENT

As we have indicated earlier, the role of the formulation is to assist the therapist in the treatment process. The primary role of the formulation is to guide the therapist in treatment planning and intervening. Thus treatment interventions ought to target Treatment Goals, ought to capitalize on the patient's Strengths and Assets, and should flow clearly from the Working Hypothesis.

One test of a formulation is the success of the treatment plan it drives. Judy did achieve her treatment goals. Her Beck Depression Inventory score decreased to a consistent score of 6 to 8. She learned coping strategies to follow through with initiatives she began, and to counter giving up when she had setbacks. She functioned more effectively, was more organized, and accomplished more. She resumed her previous level of interactions with her girlfriends; she found a more fulfilling job; and she began dating and married 2 years after beginning therapy. She reported feeling happier and more optimistic about her future because she was more confident in her ability to take action, even if it meant tolerating some discomfort. To accomplish these goals, Judy attended weekly therapy sessions for just over one year, followed by monthly sessions for 5 months to help her maintain her gains. After her therapy ended, she returned twice for a series of 8 to 10 sessions when she got stuck and paralyzed by demanding situations (e.g., tackling a complex legal and interpersonal problem).

We provide some detailed information about the ways in which the formulation was helpful to Judy's therapist at various points in the therapy.

1. *Constructing a Problem List clarified treatment Goals.* Judy initially described her unhappiness in vague terms, complaining of feeling "stuck, depressed, and unsatisfied with life." Judy's vague, amorphous statement of her predicament was part of what made it so hard for her to solve it. As the therapist asked questions to concretize the mood, behavioral, and cognitive components of her complaint, the Problem List emerged. A clear Problem List led to a clear list of treatment Goals. The explicit description of Judy's difficulties was an important first step in treating them.

2. *The formulation helped the therapist maintain a clear focus while working on multiple problems.* Judy had many problems: She felt depressed and discouraged, she had interpersonal problems, and she was unhappy at work. The formulation was particularly useful in this case because it clarified the central theme of the case and helped the therapist maintain a clear focus to the therapy. Judy's Working Hypothesis proposed that when she was faced with taking actions to further her goals, her schemata that she was incapable and damaged were activated, causing her to become passive and inactive, with the result that she did not achieve her goals and felt dissatisfied and discouraged. Moreover, Judy's mood, behavioral, and cognitive responses to schemata activation led to consequences (not achieving goals) that strengthened the problematic schemata ("I'm incapable and damaged."). This pattern occurred repeatedly in both work and social situations.

Keeping this central theme in mind, the therapist sometimes used the therapy session to take up work issues and sometimes addressed interpersonal and social issues, but always focused on the maladaptive pattern described in the Working Hypothesis. Rather than seeing each of the problems on Judy's Problem List as separate and choosing unique interventions for each, the therapist used the formulation to see Judy's main task in therapy as overcoming the maladaptive pattern described in the Working Hypothesis in all of the arenas where it interfered with her functioning. The therapist used the formulation to design interventions to help Judy learn to take actions toward her Goals, and to persist and follow through even when she felt uncomfortable and believed things were hopeless. The therapist used the formulation to maintain a clear focus in the therapy, even while working on multiple problems simultaneously.

3. *The formulation helped the patient play an active and collaborative role in treatment.* With a shared formulation, patient and therapist are working collaboratively as a formidable team. Therefore, we recommend that the therapist share, as early in treatment as possible, as much of the formulation as possible. Judy's therapist laid out a key part of Judy's formulation in one of the very first sessions of therapy. In that session, when Judy learned that cognitive therapy involved learning skills to identify and change cognitions and behaviors, she became discouraged and said, "I won't be able to do this therapy. It won't help, and then I'll feel even more like a failure." The therapist used a Thought Record (a situation-level formulation) to show Judy how these thoughts caused her to feel discouraged and tempted to give up on the therapy. Using the "downward arrow" technique (see Burns, 1980), Judy identified the belief that she was "emotionally disabled" because of her childhood experiences and therefore could not succeed at anything she tried. The

therapist showed Judy how her view of herself as disabled and her tendency to feel discouraged and to give up when she encountered challenges threaded through many of her presenting problems.

Through this important therapy session and many others like it, Judy came to understand the formulation clearly. She assumed an active role in her treatment, working hard to identify and test the Working Hypothesis. Judy became adept at identifying Activating Situations, the Schemata that became activated in those situations, and the maladaptive responses she made when activated. She gained a sense of control and hope when she saw that she was capable of recognizing her maladaptive pattern when it occurred. In fact, feelings of self-efficacy engendered in this way helped Judy counter her view of herself as incapable.

4. *The case formulation helped the therapist understand and manage her own negative reactions to the patient.* The therapist found it both gratifying and frustrating to work with Judy. Judy made progress in therapy—but inconsistently. She often failed to follow through with her homework assignments and came to therapy sessions feeling discouraged and deflated, stalled and stuck. When this happened, the therapist herself sometimes felt frustrated and discouraged. Careful attention to her own reactions helped the therapist identify her own maladaptive thoughts: "Maybe Judy *is* incapable of doing better," and "Maybe she's not motivated enough to work on getting better."

To handle this maladaptive thinking, it was helpful to the therapist to review the formulation. When she did this, she noticed that she was succumbing to the patient's maladaptive Schemata ("Judy is defective and incapable," "The future is hopeless and bleak"). This recognition helped the therapist feel less frustrated when Judy did not do her homework or make smooth progress in treatment. In fact, the formulation allowed the therapist to predict (see the predicted Obstacles in Judy's Treatment Plan, above) early that Judy would have trouble doing her homework. The ability to anticipate the homework noncompliance problem made it easier for the therapist to manage the noncompliance when it occurred.

The formulation also explained why Judy had difficulty doing her homework. The formulation explained that Judy had difficulty doing her homework for the same reasons she had many of the other difficulties on her Problem List: Her Schemata about being defective and incapable became activated, and these caused her to get uncomfortable and discouraged and pull back. Remembering this formulation helped the therapist maintain her equilibrium when Judy didn't do her homework. Homework noncompliance became just another problem to work on in treatment.

To summarize, Judy's therapist used the formulation to clarify treatment goals, to help maintain a clear focus while working on multiple problems, to facilitate the patient's playing an active and collaborative role in treatment, and to help the therapist understand and manage negative reactions to working with Judy. Additional examples of the clinical utility of the formulation are provided by O'Brien and Haynes (1995), Tompkins (1999), Turkat (1980), and Turkat and Maisto (1985), among others.

ROLE OF THE INDIVIDUALIZED CASE FORMULATION IN EVIDENCE-BASED PSYCHOTHERAPY

The Tension between Formulation-Driven Treatment and Treatment Supported by Randomized Controlled Trials

We hold the value that the clinician has a professional and ethical responsibility to provide treatment that has been shown to be effective in controlled studies—ideally, in randomized controlled trials (RCTs). The thoughtful reader, however, will have noticed that most RCTs utilize standardized protocols that do not require the therapist to develop an individualized case formulation. There is a tension between RCT-validated treatment and treatment based on an individualized formulation. We propose several resolutions to this tension, and we offer guidelines for using a case formulation in an evidence-based approach to treatment.

One resolution of the tension between standardized-protocol-based and individualized-formulation-based treatment is the recognition that standardized protocols also rely on a formulation, albeit a nomothetic (general) one rather than an idiographic (individualized) one (Haynes et al., 2000). For example, Beck's cognitive therapy is based on the formulation that depression results from activation of schemata by life events, giving rise to distorted cognitions, maladaptive behaviors, and depressed mood. Cognitive therapy alleviates negative mood by changing behaviors, automatic thoughts, and schemata, as described in the protocol published by Beck et al. (1979). Moreover, as the therapist carries out the protocol, he or she individualizes it to address the particular activating events, maladaptive behaviors, automatic thoughts, and schemata that are problematic for his or her patient. Therefore, the therapist basing his or her treatment on an individualized case formulation is, in part, simply formalizing what is done informally by the therapist using a standardized protocol.

A second resolution of the tension between RCT-validated standardized treatment and individualized-formulation-driven treatment involves drawing a distinction between disorders and patients. Standardized proto-

cols and individualized-formulation-driven treatments are complementary, not conflicting. Standardized protocols treat disorders; formulation-driven therapies treat patients. This distinction is similar to the distinction in medicine between the "disorder" and the "predicament." The "predicament" is the "social, psychological, and economic fashion in which the [medical] patient is situated in the environment" (Sackett et al., 1991, p. 4). The case formulation (particularly the Problem List component) gives the therapist a comprehensive view of the case as a whole that allows him or her to understand not just one or two of the patient's disorders, but a broad view that includes the patient's predicament.

Third, an individualized formulation facilitates the therapist's use of a standardized protocol by helping the therapist understand and manage difficulties that arise in the use of the protocol, including noncompliance, ruptures in the patient–therapist relationship, and similar problems, as we have illustrated above (see also Tompkins, 1999). The formulation allows the therapist to understand and manage these types of difficulties in a systematic, thoughtful way, rather than by applying hit-or-miss strategies.

Fourth, many patients do not meet the selection criteria utilized in the RCTs (at least those done to date). To treat these patients, the therapist extrapolates from the standardized protocol—or, in the case of patients with multiple problems, two, three, or more standardized protocols. The use of an individualized case formulation provides a systematic method for carrying out this extrapolation.

Finally, the ability to develop an individualized treatment plan based on a conceptualization is invaluable when working with patients who have not been treated successfully with the RCT-validated therapies, or who seek treatment for a disorder or problem for which no protocol is available. Without a formulation, the therapist is reduced to attempting a random series of therapy interventions. The case formulation provides a systematic method for developing a hypothesis (the formulation) about the mechanisms causing a patient's symptoms and problems, developing a treatment plan based on the formulation, and evaluating the outcome of the treatment plan. If results are poor, rather than simply attempting (blindly) some different interventions, the therapist can reformulate the case, develop a new treatment plan based on the reformulation, and again monitor outcome. Thus the case formulation method entails a hypothesis-testing approach to treatment—a systematic, scientific approach to the treatment of cases where protocols are unavailable or have proved unhelpful.

Clearly, the individualized-formulation-based approach to treatment has many advantages. However, it must be acknowledged that little empirical evidence supports the utility of developing a formal case conceptualization to guide treatment. Persons, Bostrom, and Bertagnolli (1999) have provided some initial data demonstrating the utility of the use of an individualized-formulation-driven approach to cognitive-behavioral therapy for depression. More research of this sort is needed. Haynes et al. (1997) reviewed the literature and concluded that the incremental treatment utility of the individualized formulation has been convincingly demonstrated for self-injurious behaviors, but not for other behavioral problems.

It is also important to acknowledge that the process of developing an individualized case formulation is not without risks and costs. One risk is that therapists will develop idiosyncratic formulations based on fad, lore, or unreliable clinical judgment (Wilson, 1998). These factors may explain the findings of Schulte, Kunzel, Pepping, and Schulte-Bahrenberg (1992), who reported that patients suffering from anxiety disorders who were treated with a standardized exposure-based treatment had better outcomes than those who received individualized treatment.

To reduce the risks of therapeutic work based on an case individualized formulation and to strengthen its empirical foundation, we recommend the following three procedures:

1. *Adopt an RCT-validated formulation as an initial Working Hypothesis.* We recommend that therapists adopt, as the initial Working Hypothesis for a case, one of the nomothetic formulations utilized in the RCT-validated therapies for the disorder or disorders being treated. If therapy based on these formulations fails, treatments based on untested formulations can be attempted.

2. *Have patients provide informed consent for treatment.* Before patients can provide informed consent for treatment, therapists must provide patients with information about the results of the initial assessment, treatment options and the efficacy evidence supporting each option, and treatment recommendations. In Judy's case, this meant letting her know that she met diagnostic criteria for dysthymia and describing available treatment options, including pharmacotherapy.

In many cases, especially when a patient does not meet the criteria that patients studied in RCTs met, the therapist develops a treatment plan by extrapolating from the protocols used in the RCTs. The therapist must inform the patient that this is what is being done. When the therapist extrapolates from a protocol developed for another problem or population (as in Judy's case, where interventions were drawn from Beck's protocol for treatment of major depression, as protocols for treating dysthymia have not yet been published), it is particularly important to provide informed consent for treatment. Informed consent is also particularly important if the therapist's treatment plan is based on a unique formulation that has not been studied in a controlled trial. In this case, the therapist must explain this to the patient and provide a rationale for the proposed treatment plan. The formulation can be helpful in providing a rationale for an individualized treatment plan.

3. *Monitor outcome.* RCT-validated treatments have been shown to produce a good outcome for the average case. In contrast, the clinician treats the unique, individual case. To ascertain whether the treatment is helpful to the individual patient, outcome must be carefully monitored.

In evidence-based formulation-driven psychotherapy, the clinician conducts the treatment of each case as an $n = 1$ experiment (see Barlow, Hayes, & Nelson, 1984), using a recursive process illustrated in Figure 3.4. The clinician begins by collecting data (assessment) in order to develop a hypothesis about the mechanisms causing and maintaining the patient's problems (the case formulation). The formulation is used to derive a treatment plan. As treatment proceeds, the clinician collects additional data to assess the outcome of therapy based on the formulation, and revises the formulation and treatment plan if the treatment plan based on the original formulation is unsuccessful.

The clinician who utilizes these three methods while conducting treatment guided by an individualized case formulation is, in our view, providing evidence-based formulation-driven psychotherapy. We encourage clinicians who adopt the case conceptualization methods described in this chapter to embed them in an evidence-based framework of this sort.

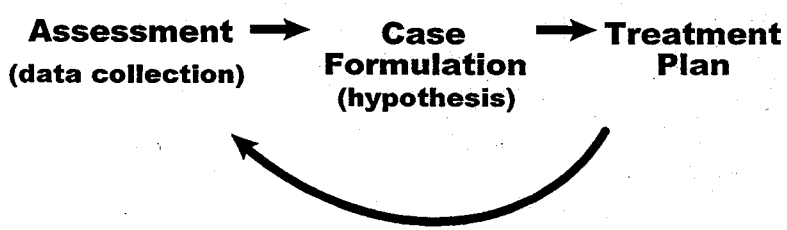

FIGURE 3.4. Recursive model linking assessment, hypothesis generation, treatment, and repeated assessment. Copyright 1999 by the San Francisco Bay Area Center for Cognitive Therapy. Reprinted with permission.

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4

Cognition and Clinical Science

FROM REVOLUTION TO EVOLUTION

RICK E. INGRAM
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In 1986, Ingram and Kendall wrote that "the 'cognitive revolution' is over. No longer is it rebellious to argue for the existence of cognition, defend its importance in human functioning, or justify it as a legitimate and productive focus of study" (p. 3). They further noted that "cognitive concepts have become firmly entrenched in the vernacular of clinical researchers and clinicians alike. Indeed, cognitive psychology has become mainstream psychology" (p. 3). In the intervening years, little evidence has emerged to contradict this conclusion. With but a few exceptions (e.g., Hawkins, 1994), the field is not engaging in behaviorally motivated debates about the scientific legitimacy of cognition; nor has it again become fashionable to argue that cognition makes little meaningful contribution to either functional or dysfunctional behavior. Although other approaches to understanding behavior have gained, or regained, enthusiasm among theorists and researchers (e.g., Baldwin, 1992; Bowlby, 1988; Westin, 1991), they have served to complement the cognitive approach (Ingram, Miranda, & Segal, 1998; Safran & Segal, 1990) rather than to replace it as an important factor in psychological science. Efforts to understand the link between cognition and behavior thus remain strongly embedded in the mainstream of psychology.