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Adult Depression

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Following a brief overview of the diagnostic criteria and epidemiology of major depressive disorder (MDD), we describe the current major empirically supported theories of depression and the therapies based on them. We begin the discussion of the assessment by describing diagnostic assessment tools. Next, we discuss using the general theories and therapies of depression described in the first part of the chapter to create a conceptualization and treatment plan for a particular patient. We conclude with a review of assessment tools and strategies for monitoring the process and outcome of therapy, and a brief discussion of some future directions of assessment of depression.

We focus this review on MDD, both because space is limited and because the empirical support for the tools we describe is strongest for MDD. However, many other mood disorders (including dysthymic disorder, adjustment disorder with depressed mood, schizoaffective disorder, bipolar disorder, and cyclothymic disorder) share features with MDD, and many of the assessment tools described below will be helpful in those cases. For a discussion of assessment issues related specifically to bipolar disorder, the reader may consult Chapter 6 in this volume by Johnson, Miller, and Eisner.

THE NATURE OF MAJOR DEPRESSIVE DISORDER

Diagnostic Criteria

MDD is an episodic mood disorder characterized by depressed mood or anhedonia (loss of interest and pleasure in life) that has persisted for most of the day, nearly every day, for at least 2 weeks and is accompanied by five or more of the following symptoms: weight gain or significant weight loss not associated with dieting, decrease or increase in appetite, insomnia or hypersomnia, psychomotor agitation or retardation (observable by others), fatigue or loss of energy, feelings of worthlessness, excessive or inappropriate guilt, diminished ability to think or concentrate, indecisiveness, or suicidality (American Psychiatric Association, 2000). The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning and are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism).

Epidemiology of Major Depressive Disorder

MDD is a prevalent and debilitating national health problem. In the National Comorbidity Survey Replication (Kessler, Chiu, Demler, Merikangas, & Walters, 2005), MDD had the highest lifetime and 12-month prevalence (17% and 7%, respectively) estimates of 14 major psychiatric disorders. MDD affects over 13 million individuals per year in the United States (Kessler et al., 2003). Estimates of the monetary cost of MDD exceed $43 billion a year in treatment and lost productivity—a toll slightly greater than the cost of heart disease (Greenberg, 1993; Stewart, Ricci, Chee, Hahn, & Morganstein, 2003). Mintz, Mintz, Arruda, and Hwang (1992) found that a disproportionate number of depressed individuals were unemployed (11%) or experienced profound impairment on the job (44%). According to the World Health Organization,

MDD accounted for the fourth greatest burden of all diseases worldwide and will move into "second place" by 2020 (Lopez & Murray, 1998). MDD is 1.5 times more common in women than men. Mood disorders are significantly less common among individuals of Hispanic and African ethnicity. MDD is associated with high rates of comorbidity with other psychiatric disorders. Comorbid anxiety disorders are common, with rates ranging from 37% with separation anxiety to 62% with generalized anxiety disorder. Other common comorbid conditions include substance abuse, pain, and other somatoform disorders, eating disorders, dementias, and personality disorders. There is a growing consensus that the long-term outcome of MDD is relatively poor (Fava, Rafanelli, Grandi, Conti, & Belluardo, 1998), with the risk of MDD becoming a chronic problem increasing substantially with each episode experienced (Solomon et al., 2000).

Theories of Depression

We describe several of the major behavioral, cognitive, emotion-focused, and interpersonal theories of depression and the therapies based on them. We present theories with a substantial evidence base that have given rise to evidence-based therapies. However, we do not review those evidence bases here. Some recent reviews are provided by Hollon, Stewart, and Strunk (2006), and Nathan and Gorman (2002).

Behavioral Models

Behavioral approaches view depression as resulting from an excess of maladaptive escape or avoidance behaviors and a dearth of behavioral responses capable of producing positive reinforcement (Ferster, 1973), Lewinsohn (1974) posited that depressed individuals lack, or have experienced life events or stressors that caused them to lose the ability to obtain positive reinforcers, and that until they learn to obtain positive reinforcement, they will be inactive, withdrawn, and dysphoric. Lewinsohn developed a therapy based on his theory that helps depressed individuals increase the positive reinforcement they experience by learning to identify and carry out positive activities, learn and practice relaxation, and improve their social skills.

Ferster (1973) proposed that depression arises and is maintained because individuals have oriented their lives in ~~search~~ of escape or avoidance instead of the pursuit of positive reinforcement. Ferster proposed a functional analytic approach to depression that focused on decreasing the reliance on escape or avoidance behaviors and expanding an individual's behavioral repertoire to increase the availability of positive reinforcements. Although Ferster never developed a manualized therapy, the essence of his model is well-represented in the work of Jacobson and colleagues who rekindled interest in this behavioral approach by conceptualizing depressed individuals as having developed a narrow repertoire of behavior that predominantly features escape or avoidance of aversive stimuli and consequences (Jacobson, Martell, & Dimidjian, 2001; Martell, Addis, & Jacobson, 2001). In contrast to cognitive theorists (described in the next section), these theorists view the symptom of rumination as an avoidance behavior that prevents adaptive approach behaviors. On the basis of this theory, Jacobson and colleagues developed a treatment for depression called behavioral activation (BA), which strives to promote a broader repertoire of behaviors and to reduce escape and avoidance behaviors, including rumination.

Cognitive Models

Cognitive models of depression include the learned helplessness and hopelessness theories (Abramson, Metalsky, & Alloy, 1989; Abramson, Seligman, & Teasdale, 1978), Beck's cognitive theory (Beck, 1967, 1976), the mindfulness-based model of Segal, Williams, and Teasdale (2002), and the theory of chronic depression developed by McCullough (2000). The reformulated learned helplessness theory (Abramson et al., 1978) and the hopelessness theory (Abramson et al., 1989) are cognitive diathesis-stress models of depression that follow from the original learned helplessness theory (Seligman, 1974). The reformulated helplessness theory and the hopelessness theory propose that individuals become depressed when they experience stressful life events and make internal, stable, and global attributions about the causes of negative events, and/or external, unstable, and specific attributions about the causes of positive events. Although the hopelessness and helplessness theories have not directly led to the development of a particular therapy, these theories certainly suggest interventions that can be imported from cognitive and behavioral therapies and can be useful in the case conceptualization

process (i.e., identification of pessimistic causal attributions, and the deficits in motivation/onset of depression symptoms that arise).

Beck's (1967, 1976) cognitive theory of depression, like the helplessness and hopelessness theories, is a diathesis-stress theory. That is, it proposes that depression results when a vulnerability factor in an individual (the diathesis) is triggered by a stressor. Beck's theory proposes that individuals who have negative and distorted schemas of the self, world, and future (the "negative cognitive triad") are at increased risk for depression when life events activate those schemas. Beck (1976) describes schemas as organized, enduring representations of knowledge and experience, generally formed in childhood, which guide the processing of current information. Beck's model views symptoms as comprised of emotions, automatic thoughts, and behaviors that are connected and influences one another. Cognitive therapy (CT) of depression (Beck, Rush, Shaw, & Emery, 1979), which was predicated on Beck's theory, is designed to help the patient modify his/her distorted *automatic thoughts* and maladaptive *behaviors* to reduce depressed feelings and emotional states, and to change or replace the problematic *schemas*, to reduce the person's vulnerability to future episodes of depression. The therapist may also help the patient change his/her *life circumstances* so as to reduce activation of problematic schemas.

Mindfulness-based cognitive therapy (MBCT; Segal et al., 2002) is based on the premise that previously depressed individuals are vulnerable for relapse or recurrence because dysphoria can reactivate patterns of thinking that can maintain and intensify the dysphoric states through escalating and self-perpetuating cycles of ruminative cognitive-affective processing (Teasdale, 1997, 1988). MBCT combines elements of traditional ~~CBT~~ for depression (Beck et al., 1979) with components of the mindfulness-based stress reduction program (MBSR) developed by Kabat-Zinn and colleagues (e.g., Kabat-Zinn, 1990) to provide individuals with metacognitive awareness of their thoughts, that is, "a cognitive set in which negative thoughts/feelings are experienced as mental events, rather than as the self" (p. 275) and by helping them develop the capacity to *decenter*, that is, to observe their thoughts and feelings as temporary, objective events in the mind rather than as true reflections of the self. (Fresco, Moore et al., ~~in press~~).

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McCullough (2000) proposed a cognitive theory of chronic depression that states (as do the learned helplessness and learned hopelessness theories described earlier) that the chronically depressed person lacks "perceived functionality," or "the ability to perceive a contingency relationship between one's behavior and consequences" (p. 71). Without perceived functionality the person loses the motivation to take action, with the result that she/he suffers a dearth of positive reinforcers and an excess of punishers. To address this deficit, McCullough developed the Cognitive-Behavioral Analysis System of Psychotherapy (CBASP). In CBASP, the therapist guides the patient through detailed examinations (assessment) of specific interpersonal interactions, and helps the patient learn to identify and remediate their passive and ineffectual behaviors. The goal is to teach patients that they actually do have the power to get what they want in interpersonal transactions.

Emotion Models

Historically, the prevailing theoretical approaches within clinical psychology, notably the psychodynamic and cognitive-behavioral traditions, viewed emotions in negative terms (cf. Mennin & Farach, 2006). However, clinical psychology is beginning to consider and understand the importance of emotional systems in adaptive human functioning and experience. Contemporary perspectives on emotion posit that there are multiple pathways to emotion generation and expression, including hard-wired or *lower-order* systems, and more controlled, *higher-order* systems. The two systems are viewed as separate but interacting, and responsible for different aspects of emotional experience (Clore & Ortony, 2000). Similarly, Gross (1998, p. 275) defines emotion regulation as "the process by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions." Researchers are also paying more attention to positive emotions, which are hypothesized to widen the array of thoughts and actions that come to mind and help the individual build new approaches to solve problems by helping them generate enduring personal resources (e.g., a social support network) (Frederickson, 2001).

We focus here on three applications of emotion theory to depression and its treatment. First, Beevers, Wenzlaff, Hayes, and Scott, (1999) reviewed evidence that depressed individuals use maladaptive emotion regulation strategies (in particular, they over-use

suppression), and describe strategies, many drawn from current cognitive-behavior and mindfulness-based therapies, to help depressed individuals improve their emotion regulation abilities.

Second, Gray (1973, 1982) proposed a theory of emotion that accounts for symptoms of depression and anxiety and for positive emotions. He described emotions as resulting from two affective-motivational systems, the Behavioral Activation System (BAS), and the Behavioral Inhibition System (BIS). The BAS responds to signals of reward and nonpunishment (safety signals) by facilitating approach and appetitive behavior, and positive affect like elation, and interest. An underactive approach system is seen as causing depression and anhedonia, and an overactive approach system is seen as causing mania and impulsivity. The BIS responds to stimuli that signify nonreward, punishment, novelty, and danger. It orients the organism's attention toward the stimulus, suppresses ongoing behavior, activates withdrawal behavior, and generates anxiety and other negative affect. Watson, Wiese, Vaidya, and Tellegen (1999) have theorized that the BAS and BIS operate in a mutually inhibitory way, with an underactivation of the BAS typically accompanied by an overactivation in the BIS. Consistent with Gray's two-system dimensional model, Watson and Clark (Watson et al., 1999) proposed that emotional states have two dimensions, which they label positive affect (PA or positive activation) and negative affect (NA or negative activation), where a high degree of positive activation results in states such as active, elated, enthusiastic, excited, and a high degree of negative activation results in states such as fearful, hostile, distressed, guilty.

Third, psychotherapy researchers have begun to point to the importance of working in therapy with all patients, including depressed patients, to promote (rather than dampen) emotional arousal. Samoilov and Goldfried (2000) posit that a vital part of psychotherapy is in-session emotional arousal that promotes "reorganization of underlying emotional themes, assimilation of new information, and formation of new implicit meaning structures" (p. 383). Further, this emphasis on emotion is evident and prominent in a variety of empirically supported treatments, including process experiential therapy (cf. Pos, Greenberg, Goldman, & Korman, 2003) and increasingly important from a behavioral (cf. Jacobson et al., 2001) and cognitive-behavioral perspective (cf. Hayes et al., ~~in press~~, Samoilov & Goldfried, 2000).

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Interpersonal Models

Interpersonal psychotherapy (IPT) was developed by the late Gerald Klerman and Myrna Weissman, and their colleagues as a treatment for MDD (Klerman, Weissman, Rounsaville, & Chevron, 1984). The interpersonal model of depression of Klerman et al. emphasizes the reciprocal relations between biological and interpersonal factors in causing and maintaining depression. Problems or deficits in one or more of four areas of interpersonal functioning (unresolved grief, interpersonal disputes, role transitions, and interpersonal deficits, e.g., social skills deficits or social isolation) are conceptualized as contributing to the onset or maintenance of depression, and the IPT therapist intervenes to address the patient's deficits in that area.

PURPOSES OF ASSESSMENT

We will discuss assessment for diagnosis, assessment for case conceptualization and treatment planning, and assessment for treatment monitoring and treatment outcome. Assessment of all of these phenomena can be affected by many factors, including medications or other treatment the patient is receiving, the patient's medical status, life stressors, and even his/her level of emotional arousal. There is some overlap in tools used to assess diagnosis, conceptualization and treatment planning, and treatment monitoring. For example, self-report measures of depressive symptoms are useful for assessing all of these phenomena.

ASSESSMENT FOR DIAGNOSIS

In addition to discussing diagnosis of MDD in this section, we will also briefly discuss diagnosis of other disorders and problems on Axis I, and we will also discuss diagnosis on Axes II, III, IV, and V. We take this approach because all of this information is needed to diagnose MDD (e.g., information about life stressors such as bereavement, are needed to determine whether the patient has MDD), and because this information is also needed to develop a case conceptualization and treatment plan and to monitor the process and outcome of treatment.

We encourage clinicians to use the tools described here (and summarized in Table 5.1) to obtain an

TABLE 5.1 Ratings of Instruments Used for the Purpose of Diagnosis

Instrument	*Norms*	*Internal Consistency*	*Inter-Rater Reliability*	*Test–Retest Reliability*	*Content Validity*	*Construct Validity*	*Validity Generalization*	*Clinical Utility*	*Highly Recommended*
Axis I and II Diagnosis									
SCID/SCID-II	A	NA	G	NA	G	G	G	E	✓
ADIS	A	NA	G	NA	G	G	G	E	✓
Depression Severity									
BDI-II	G	E	NA	E	E	E	E	E	✓
QIDS	E	E	NA	E	E	E	E	E	✓
Psychosocial and Environmental Problems									
LES	A	A	NA	G	G	A	A	A	
Functioning									
GAF	A	NA	A	A	G	G	G	G	✓
QOLI	G	E	NA	G	G	G	G	E	✓

Note: SCID = Structured Clinical Interview for DSM-IV; SCID-II = Structured Clinical Interview for DSM-IV Personality Disorders; ADIS = Anxiety Disorders Interview Schedule for DSM-IV Lifetime; BDI-II = Beck Depression Inventory-II; QIDS = Quick Inventory for Depression Severity; LES = Life Experiences Survey; GAF = Global Assessment of Functioning; QOLI = Quality of Life Inventory; A = Adequate; G = Good; E = Excellent; NA = Not Applicable.

accurate diagnosis, because the treatment efficacy, epidemiology, and psychopathology literatures are organized by diagnosis, and the clinician will want to draw on those literatures. In addition, our method for developing an individualized case conceptualization and treatment plan calls for the clinician to begin the process of conceptualizing and planning treatment for any particular case by relying on a template that is based on one or more of the disorder-focused theories of depression that we described earlier in the chapter.

Assessment of Depression

Semistructured Interviews

The Structured Clinical Interview for DSM-IV-TR (SCID; First, Spitzer, Gibbon, & Williams, 2002) is the most frequently used instrument for assigning a DSM-IV diagnosis or resolving issues of differential diagnosis. The Axis I SCID requires between 60 and 90 minutes to administer and allows the clinician to identify current and lifetime Axis I disorders. The SCID helps a clinician differentiate between unipolar and bipolar depression because it allows the clinician to assess the lifetime course of the disorder, not just a snapshot at one point in time. The SCID was fashioned after the traditional interview in which clinicians considered and tested several diagnostic hypotheses simultaneously. Each section begins with a YES/NO probe followed by queries that ask for elaborations. This strategy has two main advantages: (a) diagnostic decisions are known to the interviewer during the interview and (b) interviews are shorter, because irrelevant sections are not exhaustively probed. Ventura (1998) reported high inter-rater agreement for current diagnosis based on the SCID, with an overall weighted κ of .82. κ values for MDD are good to excellent (range = .80–91; Ventura, 1998). A streamlined clinician version of the SCID is available from American Psychiatric Publishing (www.appi.org). The research version is available from the New York State Psychiatric Institute (www.scid4.org) in an unbound hard copy version, paper version, or an electronic version that allows the clinician to evaluate just the diagnostic modules that are most relevant to his or her clinical setting. This website also provides citations to published studies attesting to the superior validity of the SCID relative to general clinical interviews.

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The Anxiety Disorders Interview Schedule, Lifetime Version for DSM-IV (ADIS-IV-L; Brown, Dinardo, & Barlow, 1994) is a semistructured interview for the diagnosis of DSM-IV anxiety, mood, somatoform, and substance related disorders. A 0–8 clinician severity rating (CSR) is assigned for each diagnosis based on the severity of the patient's distress regarding his or her symptoms and the degree of interference in daily functioning related to these symptoms. A CSR of 4 or higher is considered clinically significant. A disorder is designated as the principal diagnosis if it is given a CSR that is at least one point higher than any other clinically significant diagnosis. If the goal of the interview is simply to confirm the presence of current and lifetime diagnoses, the ADIS-IV-L takes roughly the same amount of time to administer as the SCID. However, the clinician may want to make use of the extensive probes for assessing the specific impairment associated with a particular disorder, the client's strengths, hypothesized etiological factors and situational antecedents, and a "Diagnostic Timeline" approach to assist the clinician in tracking the onset, remission, and temporal ordering of diagnoses that are unique features of the ADIS-IV-L. As shown in Table 5.1, the norms are adequate; the inter-rater reliability, content validity, construct validity, and validity generalization are good; and clinical utility is excellent. The ADIS is available from Graywind/Oxford University Press (www.oup.com).

Self-Report Measures

Many self-report scales of depression have been developed, but we focus on two: the Beck Depression Inventory because, it is so widely used in randomized controlled trials, and the Quick Inventory of Depressive Symptomatology-Self-Rated (QIDS-SR), because it has good psychometric qualities and is easily available.

The Beck Depression Inventory, 2nd Edition (BDI-II; Beck, Steer, & Brown, 1996) is a 21-item self-report instrument that assesses the presence and severity of symptoms of depression. The BDI-II is the successor to the original BDI (Beck et al., 1979). The BDI-II retains the familiar 4-point scale for each item ranging from 0 to 3 used in the original version of the BDI, and retains the scoring system (each of the 21 items corresponding to a symptom of depression is summed to give a single score for the measure). The

BDI-II differs from the BDI in that, on two items, there are options to indicate either an increase or decrease of appetite and sleep, and patients are asked to consider each statement as it relates to the way they have felt for the past two weeks, to more accurately correspond to the DSM-IV criteria for MDD. Cut score guidelines for the BDI-II are given with the recommendation that thresholds be adjusted based on sample characteristics and purpose of the assessment. As shown in Table 5.1, the norms of the BDI-II are good, and the reliability and validity are excellent.

The QIDS-SR (Rush et al., 2003) is a 16-item self-report measure that is designed to assess the severity of depressive symptoms. The scale evaluates all the criterion symptom domains in the DSM-IV criteria for MDD. The QIDS-SR is a shortened version of the 30-item Inventory of Depressive Symptomatology (IDS-SR); the IDS-SR, in addition to assessing depressive symptoms, also assesses many symptoms of anxiety. The QIDS-SR and IDS-SR are, in turn, adaptations of clinician-rated versions of the IDS and QIDS. Both the QIDS and the IDS were designed to be maximally sensitive to symptom change. As indicated in Table 5.1, the norming, reliability, and validity of the QIDS-SR are excellent. Lamoureux et al. (2006) conducted ROC analysis in a sample of 125 primary care patients who completed the QIDS-SR and the SCID and concluded that a score of 11 on the QIDS-SR provided the best balance of sensitivity (Sn = .81) and specificity (Sp = .72) and correctly classified 75% of the sample as to their MDD status. The clinician-rated and self-rated versions of the IDS and QIDS as well as copious psychometric information about the scales are available free for download from the Internet (http://www.ids-qids.org). The measures are available in 13 languages.

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Assessment of Psychiatric Comorbidity

The SCID and ADIS, described above, are useful for assessing comorbid disorders, and the IDS, described above, assesses some anxiety symptoms. The Mood and Anxiety Symptom Questionnaire-Short Form (MASQ) (Clark & Watson, 1991; Watson & Walker, 1996; Watson et al., 1995), described in detail subsequently assesses depressive symptoms, anxiety symptoms, and positive emotions. Other tools for comorbid disorders and problems are described in other chapters of this volume.

Assessment of Axis II Disorders

Patients with MDD commonly suffer from personality disorders (i.e., Axis II diagnoses), which are discussed by Widiger (Chapter 19, this volume).

Assessment of Medical Comorbidity

Most mental health professionals do not have the training or expertise to directly assess medical problems. However, it is essential to assess them, as they can cause, exacerbate, or result from MDD. We recommend that the clinician asks the patient to obtain a physical examination if she/he has not had one in the last year to be certain that medical conditions that might be causing or contributing to depressive symptoms have been identified and are being treated. In some cases, a written report from the treating physician can be useful in guiding treatment for depression.

Assessment of Psychosocial and Environmental Problems

Axis IV of the DSM-IV-TR is used to identify psychosocial and environmental problems that may play a role "in the initiation or exacerbation of a mental disorder," may "develop as a consequence of a person's psychopathology," or may "constitute problems that should be considered in the overall management plan." (APA, 2000, p. 31). Assessment of these phenomena is particularly important in view of the fact that (a) most of the psychosocial theories described above propose that depression results from the triggering of diatheses by stressful life events and (b) depression often leads to negative psychosocial consequences for patients that are often a focus of treatment and/or can interfere with treatment.

The Life Experiences Survey (LES; Sarason, Johnson, & Siegel, 1978) is a self-report scale listing 57 events, with three blank spaces provided for write-in events. Participants are instructed to circle or write in events that happened to them during the past month, to provide the date on which the event occurred, and to indicate the type and extent of the impact the event had on their life. Impact is rated on a scale ranging from –3 (*extremely negative*) to 3 (*extremely positive*). The LES possesses good test–retest reliability (rs = .53–.88), is not contaminated by social desirability biases, and predicts a number of

stress-related dependent measures, including maladjustment (Sarason et al., 1978).

Assessment of Functioning

The Global Assessment of Functioning Scale (GAF, Axis V, DSM-IV-TR; American Psychiatric Association, 2000) is a single rating used to evaluate an individual's overall level of psychological, social, and occupational functioning. Values on the scale range from 1 (lowest level of functioning) to 100 (highest level of functioning), and are divided into ten 10-point intervals. Each interval is anchored with detailed, behaviorally oriented descriptors. Validation studies conducted with both inpatients and outpatients have indicated that the GAF correlates highly with validated measures of overall severity of illness and changes in severity and with therapists' and relatives' ratings of patient's functioning, and has good inter-rater reliability (Endicott, Spitzer, Fleiss, & Cohen, 1976).

The Quality of Life Inventory (QOLI; Frisch, Cornell, Villanueva, & Retzlaff, 1992). The QOLI assesses the degree to which an individual is satisfied with 16 areas of his or her life, including health, standard of living, friendships, relationship with family, and community. Each area is rated once on a 0–2 scale of importance to the individual's life and again on a scale of –3 to 3 of how satisfied the individual is in that area. The total score has been shown to be internally consistent, $\alpha = .98$, and has demonstrated good test–retest reliability; rs range from .80 to .91 (Frisch et al., 1992). QOLI scores were also positively correlated with scores on a clinician-administered life satisfaction interview, peer ratings of life satisfaction, and five self-report measures assessing life satisfaction and subjective well being.

Overall Evaluation

Clinicians in practice often neglect diagnosis. We emphasized its importance, especially the importance of a lifetime diagnostic assessment to distinguish between unipolar and bipolar mood disorder. The SCID and ADIS are both useful for this purpose. We also described two self-report measures of depressive symptoms (BDI and QIDS/IDS) that are useful in assessing the severity of depressive symptoms in all psychiatric patients. The BDI is supported by extensive normative and benchmarking data, but the QIDS/IDS are quickly catching up and are available free from the Internet. The psychometric qualities are excellent for the interview measures of diagnosis and the self-report measures of symptom severity, adequate for the measures of life stress, and good to excellent for the measures of functioning.

ASSESSMENT FOR CASE CONCEPTUALIZATION AND TREATMENT PLANNING

Assessment for case conceptualization and treatment planning requires two types of translation. One is from *disorder-level* (and sometimes *symptom-level*) conceptualizations and treatment plans to the *case-level* conceptualization and treatment plan. Most of the models we reviewed above are conceptualizations and therapies for a particular *disorder* (usually MDD). A few of the models also provide conceptualizations and interventions for *symptoms* (e.g., the BA formulation of rumination as avoidance behavior). A conceptualization (or formulation) at the level of the *case* is a hypothesis about the causes of *all* of the patient's symptoms, disorders, and problems and how they are related, and the case-level treatment plan describes all of the therapies the patient is receiving for these symptoms, disorders, and problems . The three levels (symptom, disorder, and case) are nested. A *disorder* consists of a set of *symptoms*, and a *case* consists of one or more disorders and problems. Thus, a case-level formulation generally consists of an extrapolation or extension of one or more disorder- and symptom-level formulations.

The second translation is from *nomothetic* to *idiographic*. A nomothetic formulation and treatment plan is *general* (e.g., that depression results from a dearth of positive reinforcers and can be treated by increasing the positive reinforcers an individual receives (Lewinsohn & Gotlib, 1995). An *idiographic* case formulation and treatment plan describes the mechanisms that are causing and maintaining the symptoms, disorders, and problems, and the plan for treating them in a *particular individual*. For example, the formulation that Joe's depressive symptoms of lack of enjoyment and satisfaction, reduced interest in others, inertia, fatigue, and anorexia result from the loss of intellectual stimulation, respect from clients and colleagues, and loss of income he suffered when he retired from his job as a criminal attorney; AQ9

accordingly, the plan to treat Joe's depressive symptoms involves helping him identify and access new sources of positive reinforcement.

General Issues about Idiographic Assessment

The psychometric qualities of idiographic assessment tools are rarely studied (Haynes & O'Brien, 2000). Moreover, often these assessments are simply the therapist's observations in the therapy session (e.g., the patient arrives 15 minutes late and does not apologize or explain) or rough-and-ready ratings, such as a count of the number of days that suicidal thoughts occurred, or a rating of intensity of depressed mood using subjective units of distress (SUDS) on a scale of 0–100. These data might be recorded in the clinician's progress note in the clinical record, on a paper-and-pencil log or in a personal digital assistant (PDA).

We use three strategies to strengthen idiographic assessment tools and strategies. First, as described below, we use evidence-based nomothetic formulations and therapies as templates for the idiographic formulation and treatment plan (Haynes, Kaholokula, & Nelson, 1999); these tell the clinician which phenomena to assess. Second, we recommend that the clinician rely on basic principles of behavioral assessment, including collecting data at multiple time points, from multiple observers, using multiple methods (Haynes & O'Brien, 2000). Finally, we recommend that clinicians work collaboratively with the patient to collect data to monitor the progress and process of treatment, to be sure that the targets of assessment are helpful to the treatment process (Hayes, Nelson, & Jarrett, 1987).

Case Conceptualization

A case conceptualization is a hypothesis about the mechanisms causing and maintaining one or more of a particular patient's symptoms, disorders, and problems; the formulation might also include biological mechanisms. The case-level conceptualization accounts for *all* of the patient's symptoms, disorders, and problems, not just the depressive symptoms or disorders. The formulation describes the *symptoms/disorders/problems*, the *mechanisms* causing them, the *precipitants of the symptoms/disorders/problems*, and the *origins of the mechanisms*. It also describes the *relationships among the symptoms, disorders, and problems*.

Symptoms/Disorders/Problems

We recommend developing a comprehensive problem list that describes all of a patient's symptoms, disorders, and problems—that is, all of the difficulties and deficits the patient has across these domains: psychological/psychiatric symptoms, interpersonal, occupational, school, medical, financial, housing, legal, leisure, and mental health or medical treatment. We focus primarily on strategies for assessing depression and related problems; the other chapters of this volume describe strategies for assessing other disorders and problems.

The problem list overlaps considerably with Axes I–IV of a DSM diagnosis. It will likely include the Axis I depressive disorders, either stated as the disorder, or by listing its symptoms. The problem list will also include any significant Axis II disorders or symptoms, important Axis III disorders, and problems described in Axis IV. Thus, all the assessment tools described earlier for diagnosis are helpful in formulating a problem list.

However, the problem list differs from diagnosis because, in the problem list, the clinician begins to translate the DSM information into terms that facilitate conceptualization and intervention from the point of view of one or more nomothetic models described earlier. Thus, for example, a cognitive-behavior therapist might describe a patient's symptoms of depression in the problem list by identifying some of their behavioral, cognitive, and emotions aspects. For example, Joan, a patient treated by the first author, reported depressive symptoms that included emotions of sadness, lack of satisfaction in anything, disgust in herself, irritability, and guilt, cognitions that included, "I'm a failure," "I'm a bad mother," "I'm lazy and unproductive," "I'm boring and uninteresting," and behaviors of inactivity, procrastination, and avoidance of social contacts.

The main strategies used to collect a comprehensive problem list are the clinical interview, self-report measures, observations of the patient's behavior, and communications with family members or other treatment providers. A good general strategy is the "funnel" approach (Mash & Hunsley, 1990), in which the clinician begins with a broad-based assessment of all the important domains before obtaining more

detailed information about problems and disorders that are identified by the broad-based screen. We focus here on the use of self-report tools and direct observation; (Turkat, 1987) provides an excellent discussion of the use of the clinical assessment interview to obtain a case conceptualization.

Self-Report Measures

The tension that always confronts the clinician is the pressure to move quickly to address the patient's current concerns while taking the time to obtain the information needed to develop a good formulation and treatment plan. Self-report tools help resolve this tension by allowing the clinician to collect considerable information quickly. The clinician can send these to the patient in the mail before the initial interview and ask the patient to bring the completed materials to the initial interview or send them in advance of the interview. To construct a problem list, the therapist will want to use self-report measures of depression (described above) as well as self-report measures of other problems the patient has described in the telephone contact before the initial interview or that emerge during the initial interview; useful measures are described in other chapters of this volume.

Observation

Direct observation can alert the therapist to problems (e.g., a disheveled appearance, or poor eye contact) that patients may not acknowledge, recognize, or verbalize. For example, the first author observed that a depressed patient, Sam, had a verbal report (of intense distress) that was discrepant from his facial expression (of calm). When the therapist pointed this out, Sam noted that the failure of his facial expression to reflect his internal distress was contributing to his marital problems; he and his wife had had a recent major blowup resulting from her feeling uncared about when he appeared blasé and unconcerned when he said goodbye as she was being wheeled into surgery. In this case, the therapist's observation of the patient's behavior in the therapy session contributed to a conceptualization hypothesis about the relationship between Sam's depressive symptoms and his marital difficulties.

Assessing Hypothesized Mechanisms

The decision about what phenomena to assess for case conceptualization purposes flows from the nomothetic model(s) the therapist uses to conceptualize the patient's depression, and the models the therapist uses are typically based on his orientation or training. When the therapist's orientation admits several possible models (e.g., cognitive and behavioral), the decision about what phenomena to assess may also be based on results of some initial assessments, as in the case of the cognitive-behavior therapist who elects to first consider using Beck's cognitive model to conceptualize the case of a patient whose chief complaint is, "I have a ton of negative thoughts." Of course, as she/he collects more assessment data, the clinician may find that another model provides a better fit for the patient's case (Haynes et al., 1999).

We describe measures for assessing the mechanisms of the behavioral, cognitive, emotion-focused, and interpersonal models of depression described above; these measures are summarized in Table 5.2. As already observed, there is quite a bit of overlap among the models. Thus, for example, clinicians who use Beck's cognitive model, the BA model, or Lewinsohn's behavioral model may wish to assess the patient's activity level using the Activity Schedule described in the Behavioral Mechanisms section below. Symptoms and mechanisms also overlap. For example, an Activity Schedule assesses both a symptom (behavioral inactivity) and a mechanism (e.g., pleasant events). We describe assessment of phenomena such as pleasant events and automatic thoughts here in the mechanism section, even though they can also be seen as aspects of symptoms.

Behavioral Mechanisms

The Activity Schedule presented originally by Beck et al. (1979; see also pp. 126–127 of Persons, Davidson, & Tompkins, 2001 for a version that clinicians may reproduce for clinical use) is essentially a calendar that allows the patient to log his or her activities during each day of the week. It is ideal for assessing how the patient spends time and can also be used to track behavioral homework assignments, such as recording pleasant activities. The Activity Schedule can be useful to clinicians who are conceptualizing and treating depression using any of the behavioral, cognitive, emotion-focused or interpersonal models described earlier.

The Pleasant Events Schedule

The Pleasant Events Schedule (PES; MacPhillany & Lewinsohn, 1982) published in Lewinsohn, Munoz,

TABLE 5.2 Ratings for Instruments Used for the Purpose of Case Conceptualization and Treatment Planning

Instrument	*Norms*	*Internal Consistency*	*Inter-Rater Reliability*	*Test–Retest Reliability*	*Content Validity*	*Construct Validity*	*Validity Generalization*	*Clinical Utility*	*Highly Recommended*
Case Conceptualization (Hypothesized Mechanism)									
PES	G	G	NA	G	G	G	A	G	✓
CBAS	A	A	NA	U	A	A	A	A	
DAS	A	E	NA	G	G	A	A	G	✓
ASQ	A	A	NA	A	G	G	A	A	
EQ	A	G	NA	U	G	G	A	G	✓
EDCS	A	A	NA	U	A	A	U	A	
ERQ	A	G	NA	U	A	G	A	A	
MASQ	A	G	NA	U	G	G	A	G	✓
SAS-SR	A	A	NA	A	G	A	G	G	
Treatment Planning									
GAS	A	NA	A	A	NA	A	A	E	✓

Note: PES = Pleasant Events Schedule; CBAS = Cognitive and Behavioral Avoidance Scale; DAS = Dysfunctional Attitude Scale; ASQ = Attributional Style Questionnaire; EQ = Experiences Questionnaire; EDCS = Emotion Dysregulation Composite Scale; ERQ = Emotion Regulation Questionnaire; MASQ = Mood and Anxiety Questionnaire; SAS-SR = Social Adjustment Scale-Self Report; GAS = Goal Attainment Scaling; A = Adequate; G = Good; E = Excellent; U = Unavailable; NA = Not Applicable.

Youngren, and Zeiss (1986) is a self-report inventory of 320 potentially reinforcing activities. Respondents assign ratings for each event for the frequency of occurrence over the past 30 days on a 3-point scale ranging from 0 (*not happened*) to 2 (*happened often*; seven or more times) and a pleasantness rating on a 3-point scale ranging from 0 (*not pleasant*) to 2 (*very pleasant*). The PES has been used extensively in research related to the behavioral model of depression with generally good reliability and adequate to good validity (e.g., Grosscup & Lewinsohn, 1980; MacPhillany & Lewinsohn, 1982; Nezu, Ronan, Meadows, & McClure, 2000). The PES and supporting materials can be downloaded free of charge at http://www.ori.org/research/scientists/lewinsohnP.html.

The Cognitive–Behavioral Avoidance Scale (CBAS; Ottenbreit & Dobson, 2004) is a 31-item self-report measure that assesses four first order factors of cognitive and behavioral avoidance that are relevant to behavioral models of depression. The overall measure demonstrates good internal consistency ($\alpha = .91$) and the first order factors of cognitive nonsocial (e.g., "While I know that I have to make some important decisions about school/work, I just do not get down to it."), cognitive social (e.g., "I just wait out tension in my relationships hoping that it will go away."), behavioral nonsocial (e.g., "I avoid trying new activities that hold the potential for failure.") and behavioral social (e.g., "I avoid attending social activities.") have internal consistencies ranging from .75 to .86. The CBAS is a relatively new measure, and thus, extensive validity data are not yet available. Until new published studies in clinical samples emerge, the validity is best regarded as adequate.

The therapist who is using Lewinsohn's behavioral theory or BA theory to conceptualize depression will want to collect information about the antecedents and consequences of target behaviors, especially of rumination, depressed mood, withdrawal, and passivity. Tomes have written on the topic of collecting data about the antecedents and consequences of problem behaviors for behavioral analysis (Haynes & O'Brien, 2000; Kazdin, 2001; Watson & Tharp, 2002). Sometimes the clinician can obtain this information by interview, carefully asking about the target behaviors identified in the case conceptualization, but typically, data must be collected between AQ10 sessions to bring out the factors controlling a target behavior. Patients can record this information on a diary card, or log them on their PDA, perhaps even in response to a timer that prompts them to do so. To identify antecedents, the patient can identify the following: where, when, with whom, what was going on, what thoughts were you having, what sensations did you have in your body, what feelings were you having, what were you doing? To identify consequences, the patient can identify: external events that occurred, emotional reactions, valence of the experience, bodily sensations, and behavioral reactions.

Cognitive Mechanisms

To assess the automatic thoughts described by Beck's theory, the therapist can use a self-monitoring diary (such as the *Daily Record of Dysfunctional Thoughts*, Beck et al., 1979) forms provided by Greenberger and Padesky (1995), or the *Thought Record* (Persons et al., 2001) that provides places for the depressed patient to identify an activating situation, the emotions, behaviors, and automatic thoughts triggered by that situation, and coping responses (both thoughts and behaviors) that can be used to alleviate distress. Emotions, behaviors, and automatic thoughts are typically obtained by simply asking the patient to report them while recalling the specific concrete event that triggered them. Beck (1995) offers strategies for eliciting this information when a direct and straightforward approach fails, including asking patients to report images and asking them to vividly imagine and recreate the event that triggered negative painful emotions. Research measures of automatic thoughts that may also be useful clinically include the Automatic Thoughts Questionnaire-Negative (ATQ-N; Hollon & Kendall, 1980) and the Automatic Thoughts Questionnaire-Positive (ATQ-P; Ingram & Wisnicki, 1988).

The Dysfunctional Attitude Scale (DAS; Weissman & Beck, 1978) consists of two 40-item, factor-analytically derived questionnaires that tap into the depressed person's unrealistic, distorted, and illogical beliefs about the self, world, and future. It is the most widely used research tool to assess the schemas described in Beck's cognitive theory. Form A of the DAS is the more widely used of the two measures. Weissman and Beck (1978) reported excellent internal consistencies ($\alpha > .90$) across several samples. The content validity of the measure is good, and construct and generalization validities are adequate (Nezu et al., 2000). Two criticisms of the DAS have been raised: first (Hollon, Kendall, & Lumry, 1986) reported that

DAS scores were elevated in nondepressed psychiatric populations (such as schizophrenia and bipolar patients), suggesting that these cognitions are not specific to unipolar depression and, second, many studies have found that DAS scores of remitted depressed subjects were not different from a nonpsychiatric control group—suggesting that dysfunctional attitudes are mood-state dependent (Persons & Miranda, 1992). Nevertheless, if the clinician is aware of these weaknesses, the measure can be clinically useful.

The Attributional Style Questionnaire (ASQ; Peterson et al., 1982) is a self-report inventory that assesses causal attributions described by the helplessness and hopelessness theories. The scale asks respondents to rate six hypothetical positive and six hypothetical negative events that can be further divided into categories of achievement and interpersonal. Participants are asked to vividly imagine a hypothetical negative or positive event, identify the one major cause if that event were to actually occur, and rate that cause along attributional dimensions. Each dimension is scored on a one to seven Likert-type scale with the higher end representing a response endorsing internal, global, or stable causes and the lower end representing external, specific, and unstable causes. Generally, a Composite Negative (CN) score is computed by summing or averaging the values of the 18 internal, stable, and global items for the negative events. A similar Composite Positive (CP) score from the positive hypothetical event items is also computed. Alternatively, to be more consistent with hopelessness theory (Abramson et al., 1989), a generality score is computed by averaging the values of the 12 stability and globality items across negative events to produce a score that ranges from 1 to 7. The ASQ has demonstrated adequate internal consistency (α = .70–.75; Sweeney, Anderson, & Bailey, 1986). Recently, Fresco, Alloy, and Reilly-Harrington (2006) assessed a large sample of college students for current and lifetime psychopathology and reported adequate to good internal consistency for CN (α = .79) and CP (α = .82). The CN composite also demonstrates adequate test–retest reliability (r = .70–.73; Colin, Sweeney, & Schaeffer, 1981; Peterson et al., 1982; Sweeney et al., 1986) in both psychiatric and undergraduate populations. The validity of the measure is adequate (Nezu et al., 2000).

AQ11 The Experiences Questionnaire (EQ; Fresco, Moore et al., ~~in press)~~ is an 11-item self-report measure of decentering. Fresco et al. used both exploratory and confirmatory factor analysis techniques to examine the factor structure of the measure in two consecutive large samples of college students and a sample of depressed patients. The measure showed good internal consistency, ranging from α = .81 to .90, and good concurrent and discriminant validity. In a study of patients with MDD randomly assigned to either CT or antidepressant medication treatment (ADM; Fresco, Segal et al., ~~in press)~~ found that CT responders evidenced significantly greater gains in decentering as compared to CT nonresponders or ADM patients (irrespective of responder status). Further, among acute treatment responders, high posttreatment decentering, as compared to low posttreatment decentering was associated with a more durable treatment response in the subsequent 18 months. AQ12

The Coping Style Questionnaire (CSQ; McCullough, 2001) was developed to facilitate the process of teaching patients in CBASP to learn to identify and make needed behavioral and cognitive changes to achieve the outcomes they desire in their interpersonal interactions. The CSQ is not so much a questionnaire as it is a form the patient completes for a particular unsuccessful (or successful) interpersonal interaction; the CSQ helps the patient and therapist to identify and remediate the patient's maladaptive interpretations and behaviors in the situation.

Emotion-Focused Mechanisms

The Emotion Dysregulation Composite Scale (EDCS; Mennin, Holaway, Fresco, Moore, & Heimberg, ~~in press)~~ is a 46-item self-report measure assessing the dimensions of heightened intensity of emotions, poor understanding of emotions, negative reactivity to emotions, and maladaptive management of emotions. The EDCS was derived with exploratory and confirmatory factor analysis from several existing self-report measures of emotion regulation and emotional intelligence. Mennin et al. (in press), in a large, unselected sample of college students, found that the subscales had acceptable to good internal consistency and that all four facets of emotion dysregulation significantly predicted concurrent levels of self-report depression symptoms. Further, negative reactivity and poor understanding of emotions remained statistically significant after controlling for concurrent levels of social anxiety and general anxiety. AQ13

The Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) is a 10-item rationally derived

measure of two aspects of emotion regulation: reappraisal and suppression. The reappraisal subscale, consisting of 6 items, assesses the ability to modify or change the emotions one experiences (e.g., "I control my emotions by changing the way I think about the situation I'm in"). The suppression subscale, consisting of 4 items, assesses the ability to avoid or prevent the expression of emotions (e.g., "I control my emotions by not expressing them"). Fresco, Moore et al. (in press) reported the internal consistency was good for both the reappraisal subscale ($\alpha = .84$) and the suppression subscale ($\alpha = .82$). The reappraisal scale was significantly and positive correlated with decentering ($r = .25$), but was uncorrelated with depression symptoms ($r = .14$) or depressive rumination ($r = .14$). Conversely, the suppression subscale was significantly and negatively correlated with decentering ($r = -.31$) and significantly and positively correlated with depression symptoms ($r = .39$), and depressive rumination ($r = .31$). The ERQ is available free on the Internet (http://www-psych.stanford.edu/~psyphy/).

The MASQ (Clark & Watson, 1991; Watson & Walker, 1996; Watson et al., 1995) is a 62-item instrument designed to assess discrete dimensions of depression and anxiety symptoms as proposed by Clark and Watson's (1991) tripartite model. Items are rated on a 1 ("not at all") to 5 ("extremely") Likert-type scale and are divided into four subscales: General Distress Anxious Symptoms (GDA), General Distress Depressive Symptoms (GDD), Anxious Arousal (AA), and Anhedonic Depression (AD). The GDA subscale is comprised of 11 items indicative of anxious mood, but provides little discrimination from depressed mood. The GDD subscale is comprised of 12 items indicative of depressed mood, but provides little discrimination from anxious mood. The AA subscale contains 17 items detailing symptoms of somatic tension and hyperarousal, and the AD subscale contains 8 items assessing depression-specific symptoms, such as a loss of interest in pleasurable activities and low energy, and 14 reverse coded items assessing positive emotional experiences. The AA and AD subscales evidence relatively low zero correlations with one another ($r = .25 = .38$), whereas the GDA and GDD subscales evidence more overlap ($r > .50$) (Watson et al., 1995). The MASQ has been used primarily in research contexts. However, we mention it here because it is one of the few measures of positive emotions available that also assesses anxiety and depression in a manner that provides excellent concurrent and discriminant validity (Watson & Walker, 1996). Inquiries about the MASQ can be directed to David B. Watson, PhD (david-watson@uiowa.edu).

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Interpersonal Mechanisms

Weissman and Bothwell (1976) developed the Social Adjustment Scale-Self-Report (SAS-SR), a 54-item self-report measure that assesses six social role areas. The domains are work/homemaker/student, social and leisure activities, relationships with extended family, marital partner role; parental role, and role within the family unit. Internal consistency of the measure is adequate ($\alpha = .74$). The measure has good known-groups validity, distinguishing samples from the community, of patients with depression, and patients with schizophrenia, from one another on the basis of total score. The SAS-SR is available for purchase from Multi-Health Systems, Inc. (www.mhs.com).

Precipitants

Hypothesized precipitants of the current depressive episode are important to assess because most of the nomothetic formulations of depression are diathesis-stress models, proposing that *symptoms* and *problems* result from the activation of psychological and/or biological *diatheses* by one or more *stressors*. Stressors can be internal, external, biological, psychological, or some combination of these. Measures of psychosocial stressors were described above in the section that discusses the assessment of Axis IV of the DSM (Psychosocial and Environmental Problems). In addition, the clinician will want to ask the patient about precipitants of the current and previous depressive episode in the clinical interview, perhaps by conducting a formal illness history timeline to identify triggers of episodes of mood disorder (Frank, 2005).

Origins

The *origins* part of the formulation offers a hypothesis about how the patient learned or acquired the hypothesized mechanisms of the formulation. So, for example, within a helplessness theory formulation, origins focus on the events or experiences that taught the patient that outcomes were independent of his behaviors. Origins can be one or more external environmental events (e.g., the death of a parent, or early abuse or neglect), cultural factors, or biological

factors (e.g., an unusually short stature that might elicit teasing from peers), including genetics.

To generate hypotheses about how patients acquired the conditioned maladaptive responses, learned the faulty schemas, developed an emotional vulnerability or emotion regulation deficit, and/or acquired a biological or genetic vulnerability, it is essential to collect a family and social history that identifies key events and factors in the patient's upbringing and development, especially a history of early traumas, neglect, and abuse. In addition, the clinician will want to obtain a family history of depression and other psychiatric disorders, which can shed light on both biological and psychosocial causes of the problematic mechanisms in question.

Tying All the Elements Together

After collecting all the information described above, the clinician uses it to lay out a brief formulation that describes what *mechanisms*, activated by what *precipitants*, caused by what origins, are causing what *symptoms, disorders, and problems*, and *how all the patient's symptoms, disorders, and problems are related*. The formulation accounts for all of the patient's problems and their relationships in the most parsimonious way, with the fewest mechanisms (Persons, 1989). So, for example, a formulation for a depressed patient, Peter, read:

> As a result of many experiences in childhood and adolescence when he was brutally teased and humiliated by his family, especially his older brother (ORIGINS), Peter learned the schema "I'm inadequate, a loser," and "Others are critical, attacking, and unsupportive of me" (MECHANISM HYPOTHESES). These schema were activated by a recent poor performance evaluation at work (PRECIPITANT). As a result, Peter has experienced symptoms of anxiety and depression at work, with which he has coped by avoiding tackling important work projects and withdrawing from collegial interactions with both peers and superiors at work. The avoidance, although negatively reinforced by the immediate reduction in anxiety it produces, has had some negative consequences, causing Peter to miss some deadlines, which has resulted in criticism from his colleagues and boss, and led to increased symptoms of sadness, feelings of worthlessness, self-criticism and self-blame, low energy, difficulty working, and loss of interest in others. Peter is using drugs and alcohol at home in the evening. This use is negatively reinforced by the immediate reduction in anxiety and depression it produces, but exacerbates Peter's pre-diabetic medical condition" (SYMPTOMS AND PROBLEMS AND HOW THEY ARE RELATED).

Psychometrics of Idiographic Case Conceptualizations

Two studies of the inter-rater reliability of cognitive case formulations of depressed patients showed that clinician raters identified approximately 65% of patient's problems on a criterion problem list developed by the investigator; inter-rater reliability coefficients of schema ratings were .72–.76 when ratings were averaged over five judges (Persons & Bertagnolli, 1999; Persons, Mooney, & Padesky, 1995). Two uncontrolled trials show that naturalistic (often including adjunct therapy, including pharmacotherapy) cognitive-behavior therapy of depressed (Persons, Bostrom, & Bertagnolli, 1999), and depressed anxious patients (Persons, Roberts, Zalecki, & Brechwald, 2006) guided by a cognitive-behavioral case formulation and weekly progress monitoring produced outcomes similar to those of depressed patients who received CBT or CBT plus pharmacotherapy in the randomized controlled trials.

Treatment Plan

To develop an initial treatment plan, the clinician works with the patient to set treatment goals, develop an intervention plan, and make decisions about treatment modality (e.g., individual vs. group), frequency, and adjuncts (Persons, in preparation). AQ15

The Intervention Plan

The heart of the treatment plan is the intervention plan. The intervention plan identifies the changes in the mechanisms described in the case conceptualization that the treatment will attempt to produce. For example, for the case of Peter, described above, the therapy sought to change the negative automatic thoughts, maladaptive behaviors, and schemas that caused his symptoms of depression and anxiety.

Treatment interventions usually focus on symptoms, and are guided by the formulation of the

symptoms. Thus, BA identifies the symptom of rumination as avoidance behavior and uses interventions to promote behavioral approach and re-engagement with one's environment, whereas Beck's model typically tackles ruminations by helping patients change the content of their thoughts. Thus, often the clinician carries out interventions that target overt symptoms, but interventions are generally guided by and done in the service of changing the underlying mechanisms that are hypothesized to cause and maintain the symptoms.

As this discussion indicates, a good formulation is needed to make a good treatment plan. However, other factors are also important, and we mention them briefly but do not describe details of assessing them because they are not specific to assessment of depression. These factors include the patient's upbringing and personal history, treatment history, strengths and assets, values and preferences, readiness to change, and social supports, as well as the availability and cost of treatment options in the community where the patient lives. We do focus here in some detail on assessment of treatment goals, as good assessment of goals is indispensable to the process of monitoring outcome and progress, which we take up later in the chapter.

Setting Treatment Goals

Goal Attainment Scaling

Clinicians who wish to take a systematic approach to assessing idiographic treatment goals can use goal attainment scaling (Kiresuk & Sherman, 1968), which is an appealing measure because it has both nomothetic and idiographic features and allows for assessment of affirmatives (goals and objectives that are positively valued by the patient) rather than negatives (psychopathology). Goal Attainment Scaling (GAS) calls for patient and therapist to identify, at the outset of treatment, 3–5 goals that will be the focus of treatment. A 5-point scale is used to define the outcome level for each goal, as follows: −2 (much less than expected), −1 (somewhat less than expected), 0 (expected level of outcome), +1 (somewhat more than expected), or +2 (much more than expected). Before treatment, a behavioral or other specific referent is chosen to define each level of outcome. For example, for Joan's goal to "reduce irritable outbursts toward her daughter," she and her therapist agreed that the expected outcome level (score of 0) was that she reduce the outbursts to once per month. Scores are assigned to each goal, at a predetermined time or at the end of treatment, by the patient and therapist who work together, or, if data are being collected for program evaluation purposes, by an independent evaluator. If needed, a single summary score summarizing the patient's overall progress can be calculated, typically by averaging the scores across all scales. Thus, the GAS does not so much measure absolute change in a content area, but, instead represents a measure of perceived ability to change a particular problem, or, stated a bit differently, the amount of change that occurred relative to what was expected or predicted.

The reliability and validity of the GAS are adequate (see Table 5.2). Cardillo and Smith (1994a, 1994b) reported inter-rater reliability coefficients in the range of $r = .52–.99$ over a range of types of populations and raters (see also a review by Lambert, 1994). In a sample of Veterans Administration hospital patients, Cardillo and Smith (1994b) found that the GAS was related to change during treatment and that the content of goals on the GAS showed good concordance with goals selected by a three-person team who reviewed the patients' clinical records. Haynes and O'Brien (2000, p. 124) described the measure as "informally standardized" because general outlines, but not precise procedures, for obtaining GAS scores are provided, and variations in the methods can affect the reliability and validity of the scores.

Overall Evaluation

We describe here (and in Table 5.2) measures to assess the psychological mechanisms detailed by the major current evidence-based theories that the therapist can use to aid in the process of case conceptualization. The therapist's choice of measure will generally be dictated by the theory she/he is using to conceptualize the case. However, the psychometrics of individualized case conceptualization (Bieling & Kuyken, 2003; Haynes, Leisen, & Blaine, 1997) and treatment planning are weak, and this is true not only for depression, but for most other disorders and problems. Therefore, we recommend that clinicians rely on basic principles of behavioral assessment, and collect idiographic data (as described in the next section) to test their formulation of hypotheses and monitor treatment progress for each case they treat.

ASSESSMENT FOR TREATMENT MONITORING AND TREATMENT OUTCOME

In addition to monitoring *outcome* of therapy (Kazdin, 1993), the therapist also monitors the *process* (i.e., what is going on in the therapy?), and, moreover, monitors process and outcome in a way that allows patient and clinician to test hypotheses about the relationships among them—for example, to test the hypothesis that an increase in the number of a depressed patient's pleasurable activities is associated with a decrease in severity of depressive symptoms (Persons, in press). The *process* has two parts: *the therapeutic relationship*, and *mechanisms of change*. The clinician and patient can monitor outcome and process at three time points: at each therapy session, within the session, and over longer time periods. We discuss each in turn, focusing primarily on monitoring at each therapy session. Measures useful for monitoring outcome and process are summarized in Table 5.3.

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Session-by-Sesssion Monitoring

Assessing Outcome

To monitor idiographic target behaviors and goals, the therapist can give the patient a daily log to track a particular behavior or symptom or problem, such as bout of depressed mood, arrival on time at work, social activities, crying jags, or similar. This log can be used in conjunction with, or instead of, the GAS. Joan's clinician gave her a form to monitor irritable outbursts with her son, noting the date, time, situation, content, and intensity (scored 1, "a harsh word," to 10, "a full-blown outburst, the worst I've ever had or could imagine having").

As described earlier, the QIDS-SR and the BDI-II are useful for monitoring change in depressive symptoms across the course of treatment.

Combined measures of symptoms and functioning have been developed to monitor change during treatment for depressed (and indeed for nearly all psychiatric patients). The three best established and most studied of these are the Outcome Questionnaire-45 (Lambert et al., 1996), the clinical outcomes in Routine Evaluation Outcome Measure (CORE-OM; Barkham et al., 2001), and the Treatment Outcome Package (TOP; Kraus, Seligman, & Jordan, 2005). One of the strongest features of all three measures is that they allow the clinician to compare outcomes of his or her patients to outcomes of large benchmarking samples that have been established for all of the measures. However, although the CORE-OM scales are available on the Internet (www.coreims.co.uk) and can be freely photocopied, the benchmarking feature is not yet available to users in the United States, and therefore we review the OQ-45 and the TOP here.

The OQ-45 (Lambert et al., 1996) is a 45-item self-report scale that assesses four domains: subjective discomfort, interpersonal relations, social role performance, and positive aspects of satisfaction and functioning. Respondents answer each question in the context of their experience over the past week using a 5-point Likert scale. The clinician obtains a total score on the measure and subscale scores on the first three domains listed above, and uses the scoring manual or software package to classify each client as an improver, nonresponder, or deteriorator on the basis of benchmarking data from a large sample of clients that Lambert and his colleagues have collected. Internal consistency for the undergraduate sample and for a sample of 504 Employee Assistance Program clients was .93 for each sample (Lambert et al., 1996). The total score on the measure has good test–retest reliability (.84) over an interval of 3 weeks for a sample of 157 undergraduates. The measure is sensitive to change in clients and stable in untreated individuals (Vermeersch, Lambert, & Burlingame, 2000). Repeated testing does not, itself, produce changes in scores (Durham et al., 2002). Concurrent validity coefficients for the total score range from .55 to .88 on several measures of psychopathology (Lambert et al., 1996). The measure has good treatment utility, as Lambert and colleagues (Lambert et al., 2003) have shown that psychotherapy patients have better treatment outcome when clinicians use the information to adjust treatment as necessary (i.e., when the patient is classified as a nonresponder or deteriorator). There is also some evidence that obtaining additional data on the therapeutic alliance and the patient's readiness for change can be useful in adjusting treatments to enhance patient's outcome (Whipple et al., 2003). The measure is available from the American Professional Credentialing Services LLC.

The TOP is a 93-item scale that assesses functioning, quality of life, and mental health symptoms and is intended to provide a theory-neutral core battery for outcome monitoring in clinical and research settings across all diagnoses and levels of care. Respondents

TABLE 5.3 Ratings of Instruments Used for the Purposes of Treatment Monitoring and Treatment Outcome Evaluation

Instrument	*Norms*	*Internal Consistency*	*Inter-Rater Reliability*	*Test–Retest Reliability*	*Content Validity*	*Construct Validity*	*Validity Generalization*	*Treatment Sensitivity*	*Clinical Utility*	*Highly Recommended*
Monitoring Outcome										
BDI-II	G	E	NA	E	E	E	E	E	E	✓
QIDS	E	E	NA	E	E	E	E	E	E	✓
OQ-45	G	E	NA	G	A	G	G	G	E	✓
TOP	G	A	NA	G	G	A	E	G	A	✓
GAF	A	NA	A	A	G	G	G	G	G	✓
QOLI	G	G	NA	E	G	G	G	G	E	✓
Monitoring Therapeutic Relationship										
WAI	E	E	NA	A	G	G	G	G	G	✓
HAq-II	E	E	NA	G	G	G	G	G	G	✓

Note: BDI-II = Beck Depression Inventory-II; QIDS = Quick Inventory for Depression Severity; OQ-45 = Outcome Questionnaire-45; TOP = Treatment Outcome Package; GAF = Global Assessment of Functioning; QOLI = Quality of Life Inventory; WAI = Working Alliance Inventory; HAq-II = Helping Alliance Questionnaire-II; A = Adequate; G = Good; E = Excellent; NA = Not Applicable.

indicate the presence of symptoms in the last month on a 6-point Likert scale. Items are divided into 11 subscales. Psychometrics of the measure was presented by Kraus et al. (2005). Internal consistency for the 11 subscales ranged from .53 (for the mania subscale) to .93 (for the depression subscale) in a sample of psychiatric inpatients. Test–retest reliability over one week in 53 community mental health center clients who provided data before receiving treatment was high, ranging from .87 to .94, except for the mania subscale (where reliability was .76). Validity of the measure is mixed. Convergent validity for some scales is excellent (the depression subscale correlates .92 with the BDI), and poor for others (the psychosis subscale correlates –.28 with the MMPI-2 schizophrenia scale). The measure did a good job of distinguishing patients from nonpatients. In logistic analyses, 80–89% of participants were correctly classified as patients or members of the general population. The measure's sensitivity to change appears adequate.

The GAF (Endicott et al., 1976) and the QOLI (Frisch et al., 1992) have good treatment sensitivity.

Monitoring the Therapeutic Relationship

Deteriorations in the quality of the relationship between patient and clinician can be difficult to detect, but they are vital to address, because they can lead to unilateral termination by the patient. Castonguay, Goldfried, Wiser, Raue, and Hayes (1996) found that alliance ruptures were common in CT for depression, especially during sessions in which the clinician focused on challenging negative cognitions of the patient. Safran, Muran, Samstag, and Stevens (2001) suggested that clinicians should be aware that patients often have negative feelings about the therapy, should look for subtle indications of ruptures, and take the initiative to explore what is transpiring.

The CB clinician traditionally informally assesses the quality of the therapeutic relationship at each session by asking the patient for feedback about the session at the end of the session (Beck et al., 1979). Objective scales to measure the therapeutic relationship include the Working Alliance Inventory (WAI; Horvath & Greenberg, 1986; Tracey & Kokotovic, 1989) and the Revised Helping Alliance Questionnaire (HAq-II; Luborsky et al., 1996).

The WAI assesses factors common to all treatments associated with the collaborative efforts of the patient and therapist. The 12-item patient version of the WAI assesses three integrated components: Goals (the outcomes of therapy agreed upon by patient and therapist), Tasks (the therapeutic processes that take place during sessions), and Bond (the key elements of rapport—trust, acceptance, and confidence), as well as a total score (Horvath & Greenberg, 1989). The WAI demonstrates excellent internal consistency (α = .93; Horvath & Greenberg, 1989) and good validity (Fischer & Corcoran, 1994), with patient ratings serving as better predictors than therapist ratings (Tryon & Kane, 1990).

The HAq-II is a 19-item self-report scale that measures the alliance between patient and therapist. Internal consistency for the scale is excellent (α = .90) and test–retest reliability has been found to be r = .78 over three sessions (Luborsky et al., 1996). Concurrent validity demonstrated by correlations between the HAq-II and the California Psychotherapy Alliance Scale ranged between r = .59 and r = .71. In a demonstration of the measure's treatment utility, Whipple et al. (2003) showed that outcome of psychotherapy (on the OQ-45) was positively related to the clinician's obtaining weekly feedback of the patient's HAq-II scores. The HAq-II is available for download on the Internet at http://www.uphs.upenn.edu/psycther/HAQ2QUES.pdf.

Assessing Mechanism

Here the goal is to measure the treatment targets that are described in the case formulation, such as frequency of pleasant events, distorted thoughts, positive thoughts, use of decentering skills, rumination, activity level, and interpersonal interactions. The measures described in the section titled Mechanisms can be used for this purpose. In addition, simple counts and logs can also be used. For example, when Joan was working in therapy on increasing her positive thoughts about herself and her experience, she tallied them on a golf-score counter each day, and wrote the daily tally on a log that she brought to her therapy session.

Putting It All Together

It is daunting to try to monitor outcome, the therapeutic relationship, and mechanisms at each therapy session. Fortunately, these phenomena often overlap. Thus, for example, in Joan's case, the count of positive

thoughts was a measure both of mechanism and outcome. To ease the data collection process, patients at the first author's center arrive five minutes early for each session and complete the BDI and other measures relevant to their care (e.g., a self-report measure of anxiety), which are kept in the waiting room, and present them to the clinician, who scores and plots the measure(s) at the beginning of the session. The session-by-session data plot is kept at the front of the clinical record to remind the clinician to review the measure with the patient and plot the score at the beginning of each session; the notion here, of course, is that the outcome data feed into and inform the nature of the session (Persons, 2001). The clinician can ask the patient to bring the alliance scale to the next session, or to leave it in a drop-off box in the waiting room after the session.

Monitoring during the Therapy Session

Most monitoring during the therapy session happens simply by observation (e.g., patient's facial expression, nonverbal behaviors, and emotional arousal (Samoilov & Goldfried, 2000), and even the clinician's emotional responses (e.g., feeling pulled by the patient to step forward and solve a problem, cf. McCullough, 2000). Sometimes more systematic measures can be used, such as collecting a report on a simple 0–100 scale of intensity of depressed mood or of the urge to quit therapy. To track *outcome* during the therapy session, the clinician can monitor symptoms that are relevant to the patient's treatment goals, including passivity, assertiveness, personal hygiene, disorganization, irritability, and promptness. These data often complement the patient's self-report. To monitor the *therapeutic relationship*, the clinician carefully monitors the "feel" of the patient–clinician interaction at every moment, attending to the patient's behaviors as well as to the clinician's emotional responses. The clinician can also assess the relationship by asking about it directly: "I'm noticing that about five minutes ago you and I seemed to get into a sort of a tussle. Did you notice that?" Data on *mechanisms* can be collected during the therapy session in several ways, including on some of the intervention forms that are described in the Mechanisms section. For example, during a cognitive restructuring intervention, the therapist can ask the patient to rate his/her degree of belief in his/her automatic thoughts, before and after the intervention, his/her degree of belief in the coping responses, and the intensity of distress before and after the intervention to monitor the process of change. These ratings can readily be recorded with a Thought Record.

Long-Term Monitoring

A long-term progress review can be done at a predetermined time (e.g., after 10 sessions), in response to data generated by the weekly monitoring (e.g., if no progress is being made), or at the end of treatment. In contrast to session-by-session and within-session monitoring, which often focuses in detail on one or two treatment targets or mechanisms, a long-term progress review examines progress on all of the treatment goals and takes account not just of what is going on in the psychotherapy but in the adjunct therapies as well. If GAS (Kiresuk, Smith, & Cardillo, 1994) is being used, the clinician and patient can, together, rate each goal that was set at the beginning of treatment. If weekly outcome or process measures have been collected, they can be reviewed. In conjunction with assessing the degree to which the treatment goals have (or have not) been accomplished, patient and clinician can also discuss the process: their therapeutic relationship and the mechanism of change (i.e., factors that appear to have played a causal role in any change that has, or has not occurred). The goal of this discussion is to obtain some answers to the questions: Has progress occurred? If so, what produced it? What has impeded progress? What would need to happen to get more progress?

Overall Evaluation

Monitoring outcome and process during treatment is demanding; however, patients generally like doing this task, and Whipple et al. (2003) have shown that therapist's review of weekly outcome and process data improves patient outcomes. If monitoring only one of these, we recommend that clinicians monitor outcome, collecting a weekly score on the QIDS or BDI and plotting the score at each session. A visual record of the data on a plot is a key part of the use of monitoring data. Without it, the therapist can easily accumulate a stack of measures in the clinical record that do not inform the treatment process. Nevertheless, caution is indicated in the frequent use of self-report measures. Longwell and Truax (2005) and Sharpe and Gilbert (1998) have shown that repeated

administration of the BDI consistently resulted in a lower score, even when research participants were not depressed and were not receiving treatment. Although the reasons for this drop are unclear (and may include socially desirable responding, mood-state congruent effects, or regression to the mean), clinicians who use the scale repeatedly must be aware of the possibility of measurement reactivity. In addition, the measures are quite transparent, and therefore, the patient who wants to communicate distress, poor progress, or recovery to the clinician can do so without much difficulty. If the scores on self-report measures are surprisingly high or low, the clinician can use the case formulation to aid in interpreting the score (e.g., the patient who is excessively concerned about pleasing the clinician may obtain an unduly low score).

CONCLUSIONS AND FUTURE DIRECTIONS

A rich body of measures is available for the assessment of depression. Nevertheless, there is much room for improvement. Inexpensive web-based systems of measures with good psychometric properties that are inexpensive and easily available to clinicians are urgently needed and are now being developed (Percevic, Lambert, & Kordy, 2004). In this review, we were often unable to rate assessment tools for treatment sensitivity and clinical utility, as these qualities of assessment tools have not received much attention in the literature (except in Sackett, Richardson, Rosenberg, & Haynes, 1997). However, we expect the field to pay increasing attention to the sensitivity and specificity of assessment tools, which in turn, will increase the clinical utility of the measures. Interest in positive psychology (Seligman, Steen, Park, & Peterson, 2005), as well as a focus on patients' goals and values (see Hayes, Strosahl, & Wilson, 1999; Linehan, 1993), is likely to increasingly influence assessment and treatment of depression. Much more information is needed about idiographic assessment, especially the treatment utility of case conceptualization (Bieling & Kuyken, 2003). Efforts to increase the numbers of clinicians who make daily use of good quality assessment tools are needed. Finally, we need more and better tools to assess mechanism, especially to capture constructs like schema that are not readily available for self-report. Improved tools for measuring underlying processes of change will allow us to improve our understanding of the mechanisms causing depression and thus to improve our treatment of this devastating disorder.

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AQ1: In the sentence "Lewinsohn, ..." the words "lack or have experienced" seem contradictory. Kindly confirm if this can be retained as is; or else please rephrase the same suitably.
AQ2: Please affirm the change of the word "service" to "search" in the sentence "Ferster,1973 proposed ... .
AQ3: Please expand CBT.
AQ4: Please update the reference Fresco et al., in press.
AQ5: Please provide complete reference details for "Pos, Greenberg, Goldman, & Korman, 2003".
AQ6: Please update the reference Hayes et al. (in press)
AQ7: "Ventura et al., 1998" has been changed to "Ventura, 1998". Please clarify.
AQ8: Please provide expansion for ROC.
AQ9: We have inserted the words "loss of" before "income" in the sentence For example, ...". Pease confirm if this is in order.
AQ10: Please confirm if in the sentence "Sometimes the clinician ... target behavior." the wordings "to flesh out the factors" be changed as "to bring out the factors."
AQ11: Please update Fresco, Moore et al. in press.
AQ12: Please update the reference Fresco, Segal et al., inpress.
AQ13: Please update the reference Mennin et al. (in press).
AQ14: Please check the sentence 'The AA and AD ...'.
AQ15: Please update the reference Persons, in preparation.
AQ16: Please confirm if the expansion included for GAS is correct.
AQ17: Please update the reference Persons, in press.
AQ18: Please update in press reference "Fresco, D. M., Moore, M. T., van Dulmen, M., Segal, Z. V., Teasdale, J. D., Ma, H., et al. (in press). Initial psychometric properties of the Experiences Questionnaire: A self-report survey of decentering. Behavior Therapy."
AQ19: Please update the reference "Fresco, D. M., Segal, Z. V., Buis, T., Kennedy, S., Gemar, S., Hood, K., et al. (in press). Relationship of post treatment decentering and cognitive reactivity to relapse of major depressive disorder. Journal of Consulting and Clinical Psychology".
AQ20: Please update in press reference "Hayes, A. M., Feldman, G. C., Beevers, C. G., Laurenceau, J.-P., Cardaciotto, L., & Smith, J. L. (in press). Two patterns of change in the treatment of depression: The rapid response and the depression spike. Journal of Consulting and Clinical Psychology".
AQ21: Please provide complete details for the reference "Lamoureux, B. E., Linardatos, E., Haigh, E. A. P., Fresco, D. M., Bartko, D., Logue, E., et al. (2006). Screening for major depressive disorder in a primary care medical population with the Quick Inventory of Depressive Symptomatology-Self-Report."
AQ22: Please provide volume number and page range for the reference "Mennin, D. S., Holaway, R. M., Fresco, D. M., Moore, M. T., & Heimberg, R. G. (in press). Delineating components of emotion dysregulation in anxiety and mood psychopathology. Behavior Therapy."
AQ23: Please update in preparation reference "Persons, J. B. (In preparation). Case formulation-driven cognitive-behavior therapy. New York: Guilford Press."
AQ24: Please provide in press reference "Persons, J. B. (in press). Psychotherapists collect data during routine clinical work that can contribute to knowledge about mechanisms of change in psychotherapy. Clinical Psychology: Science and Practice."