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Adult Depression

Jacqueline B. Persons
David M. Fresco
Juliet Small Ernst

We begin this chapter with an overview of the current diagnostic criteria for major depressive disorder (MDD), the epidemiology of MDD, and current theories of and therapies for MDD. We review assessment tools for obtaining a diagnosis, developing a case conceptualization and treatment plan, and monitoring change in therapy. We conclude with a brief discussion of some future directions of assessment of depression.

We focus this review on MDD because space is limited and because the empirical support for the tools and theories and therapies we describe focuses most frequently on MDD. However, many other disorders, including persistent depressive disorder (dysthymia), premenstrual dysphoric disorder, substance/medication-induced depressive disorder, adjustment disorders, schizoaffective disorder, and bipolar and related disorders, as well as phenomena that are not disorders (e. g., grief), share features with MDD, and many of the assessment tools described here will be helpful in those cases. Chapter 9 in this volume addresses the assessment of bipolar disorder.

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 weight loss not associated with dieting, decrease or increase in appetite, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue or loss of energy, feelings of worthlessness, excessive or inappropriate guilt, diminished ability to think or concentrate, indecisiveness, or suicidality (American Psychiatric Association, 2013). The symptoms cause clinically significant distress or impairment in functioning, and they are not due to the direct physiological effects of a substance or a general medical condition.

Epidemiology of Major Depressive Disorder

MDD is a prevalent and debilitating national health problem. The National Comorbidity Survey Replication (NCS-R; Kessler, Chiu, Demler, Merikangas, & Walters, 2005) reported the lifetime prevalence of MDD in the United States at 16.2%, the highest rate of 14 major psychiatric disorders. The 2014 National Survey of Drug Use and Health found that 6.6% of adults suffered at least one major depressive episode in the past year, a figure that equates to roughly 15.7 million Americans (Center for Behavioral Health Studies and Quality, 2015). Many patients with MDD experience multiple episodes, with rates of recurrence up to 85% within a 15-year period (Hardeveld, Spijker, De Graaf, Nolen, & Beekman, 2010). The prevalence of depressive symptoms in the United States is widespread; 20.1% of the adults sampled in the National Health and Nutrition Examination Survey reported significant depressive symptoms (Shim, Baltrus, Ye, & Rust, 2011).

Depression is a leading cause of disability. MDD accounts for the third greatest burden of all diseases worldwide and the first greatest burden for middle- and high-income nations (World Health Organization, 2008). In the United States, estimates of the monetary burden of MDD, whether through direct (e.g., medical services) or

indirect costs (e.g., workplace presenteeism, or the act of working while sick), approached $210.5 billion in 2010 (Greenberg, Fournier, Sisitsky, Pike, & Kessler, 2015).

The lifetime prevalence of MDD is higher in women than in men in every age group (Pratt & Brody, 2014). MDD is more likely to occur in Whites compared to Hispanics or non-Hispanic Blacks (Kessler et al., 2003), although this pattern is reversed in dysthymia (called persistent depressive disorder in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* [DSM-5]; American Psychiatric Association, 2013; Riolo, Nguyen, Greden, & King, 2005) and may become insignificant when the factor of poverty is controlled for (Pratt & Brody, 2014). MDD is associated with high rates of comorbidity with other psychiatric disorders; the NCS-R reported rates of comorbidity as high as 59.2% with anxiety disorders, 24% with substance use disorder, and 30% with impulse control disorders. Other common comorbid conditions include pain and other somatoform disorders, eating disorders, dementias, and personality disorders.

Theories of Depression

A variety of systems of psychotherapy with ostensibly different mechanisms of action have been shown to be effective in treating major depression and/or reducing the likelihood of a relapse. Here, we briefly describe the major behavioral, cognitive, affect science, and interpersonal theories of depression and the therapies based on them. These theories and therapies identify mechanisms that cause and maintain symptoms of depression and that clinicians will want to assess to inform their case conceptualization and treatment plan and also to monitor the patient's progress during therapy. Comprehensive reviews of this literature are provided by Craighead, Johnson, Carey, and Dunlop (2015), DeRubeis, Siegle, and Hollon (2008), and Hollon, Stewart, and Strunk (2006).

We describe theories and mechanisms of depression using a "silo" approach that emphasizes distinctions among the theories and therapies of depression. However, as Mennin, Ellard, Fresco, and Gross (2013) note, these therapies are "blunt instruments"—that is, although they are intended to target certain mechanisms, they likely produce change in many others. Thus, for example, many change principles in our treatments, such as cognitive change (e.g., decentering and cognitive reframing) have a bidirectional relationship with behavior change (e.g., exposure and behavioral activation). Our motivation for emphasizing the distinctions among the models is to help clinicians solve clinical problems. For instance, many patients do not respond to treatment (response rates for evidence-based treatments range from 25% to 64%; Craighead et al., 2015). When treatment fails, using an alternate conceptual model can provide new intervention ideas (Persons, 1990, 2008; Persons, Beckner, & Tompkins, 2013).

Behavioral Models

Behavioral models of depression focus primarily on positive and negative reinforcement. For instance, Ferster (1973) conceptualized that depression arises and is maintained when individuals orient their lives in service of escape or avoidance instead of in the pursuit of positive reinforcement. Ferster proposed a functional analytic approach to treating depression that focused on decreasing the depressed individual's reliance on escape or avoidance behaviors and expanding the individual's behavioral repertoire to increase the availability of positive reinforcements. Similarly, Lewinsohn (Lewinsohn & Gotlib, 1995) posited that depressed individuals lack positive reinforcement or have experienced life events or stressors that caused them to lose positive reinforcers and that until they learn to obtain positive reinforcement, they will be inactive, withdrawn, and dysphoric. Lewinsohn's therapy helps depressed individuals increase the positive reinforcement they experience by learning to identify and carry out pleasant activities, practice relaxation, and improve their social skills. These early behavioral models gave rise to evidence-based treatments of depression, including behavioral therapy (Lewinsohn & Gotlib, 1995), behavioral activation (BA) (Dimidjian, Barrera, Martell, Muñoz, & Lewinsohn, 2011; Martell, Addis, & Jacobson, 2001), and the rumination-focused cognitive–behavior therapy developed by Watkins and colleagues (Watkins, 2016).

Cognitive Content Models

Beck and Bredemeier (2016) propose that depression results when individuals with negative and distorted schemas experience life events that activate those schemas. Beck defines schemas as organized, enduring representations of knowledge and experience, generally formed in childhood, which guide the processing of current information. Beck's model posits that emotions, automatic thoughts, and behaviors are connected and influence one another. Cognitive therapy of depression (Beck, Rush, Shaw, & Emery, 1979) helps the depressed patient modify distorted automatic thoughts and maladaptive behaviors and to change or replace the problematic schemas to reduce depressive symptoms and the person's

vulnerability to future episodes of depression. The therapy may also help patients change their life circumstances so as to reduce activation of problematic schemas.

McCullough (2000) proposed a cognitive theory of chronic depression that states 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 he or she 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 his or her 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.

Cognitive Process Models

A signature characteristic of many forms of psychopathology, including MDD, is repetitive or perseverative thought or negative self-referential processing (NSRP) (e.g., Mennin & Fresco, 2013; Olatunji, Naragon-Gainey, & Wolitzky-Taylor, 2013; Watkins, 2008). The tendency to engage in repetitive negative thinking may reflect a maladaptive cognitive reactivity associated with the inability to disengage from aversive and conflicting emotional and somatic experiences (Borkovec, Alcaine, & Behar, 2004; Mennin & Fresco, 2014; Newman & Llera, 2011; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008), which in turn further reinforces the use of these self-evaluative processes. NSRPs, in turn, can result in considerable deficits in cognitive and behavioral responding (e.g., Lissek, 2012; Whitmer & Gotlib, 2012), as well as an inferior treatment response and more frequent relapse (e.g., Jones, Siegle, & Thase, 2008). Here, the problem is not so much the content of the thought but, rather, the process of thinking and the individual's rigidity or difficulty regulating where to place his or her attention. Essentially, these processes are enacted to create control and predictability, but instead these individuals can find themselves vacillating between a worried or ruminative mind and chronically distressed body and, subsequently, reinforcing the use of these self-evaluative processes when they are momentarily effective at staving off the aversive experience of strong emotional responses (Borkovec et al., 2004; Mennin & Fresco, 2013, 2014; Newman & Llera, 2011; Nolen-Hoeksema et al., 2008; Olatunji et al., 2013; Watkins, 2008).

Perfectionism and self-criticism are additional forms of NSRPs that confer vulnerability for depression, maintain depressive symptoms, and interfere with treatment. Behavioral activation (Martell et al., 2001), cognitive therapy (Beck et al., 1979), and rumination-focused cognitive–behavioral therapy (CBT; Watkins, 2016) target NSRP in MDD.

One biobehavioral capacity associated with reductions in destructive self-referentiality and that can be enhanced with treatment is *decentering*, defined as a metacognitive capacity to observe items that arise in the mind (e.g., thoughts, feelings, and memories) with healthy psychological distance, greater self-awareness, and perspective-taking (Bernstein et al., 2015; Fresco, Moore, et al., 2007; Fresco, Segal, Buis, & Kennedy, 2007; Safran & Segal, 1990). Bernstein and colleagues (2015) proposed that decentering is composed of three interrelated metacognitive processes: meta-awareness, disidentification from internal experience (i.e., experiencing sensations, emotions, and thoughts from a third-person perspective), and reduced reactivity to thought content (i.e., less impact on attention, emotion, cognitive elaboration, motivation, etc.). Most of the evidence supporting the construct of decentering is derived from a well-validated self-report measure that we describe later in the chapter (Fresco, Moore, et al., 2007). Decentering is associated with acute and enduring treatment effects for patients suffering from MDD (Fresco, Segal, et al., 2007) and generalized anxiety disorder (GAD; with and without MDD) (Hoge et al., 2015; Mennin, Fresco, Heimberg, & O'Toole, 2017; Mennin, Fresco, Ritter, & Heimberg, 2015; Renna, Quintero, Mennin, & Fresco, 2017).

AQ: Please provide reference for Mennin & Fresco, 2013.

Emotion Models

Emotion models of psychopathology draw from basic and translational findings in affective neuroscience that identify two core systems that regulate thoughts and behaviors (e.g., Gray & McNaughton, 2000). The approach or reward system motivates actions toward goals and rewards, and produces positive emotions such as enthusiasm and pride. By contrast, the security system motivates avoidance of aversive outcomes or punishments and is linked with negative emotions. Optimal reward learning requires us to assign value to possible rewarding and punishing stimuli, make predictions about when and where we might encounter these stimuli, and take behavioral actions that are informed by these predictions (O'Doherty, 2004).

Reward learning is further defined in terms of consummatory pleasure (i.e., "liking"), which refers to the hedonic impact that a reward produces, and anticipatory pleasure (i.e., "wanting"), which refers to the incentive salience associated with a particular reward (Berridge, Robinson, & Aldridge, 2009; Sherdell, Waugh, & Gotlib, 2012). Reward learning is impaired in individuals suffering from MDD. For example, depressed individuals fail to distinguish between options yielding large versus small rewards (Forbes, Shaw, & Dahl, 2007). Similarly, depressed individuals, especially when they are ruminating, are more prone to misconstrue the likelihood and intensity of a potentially punishing situation (Whitmer, Frank, & Gotlib, 2012). Finally, depressed patients, especially when their clinical presentation includes comorbid anxiety disorders, may struggle with the valuation of stimuli in their lives given that most situations are marked with cues for both threat and reward (Stein & Paulus, 2009).

Two additional neurobehavioral systems are commonly impaired in MDD. The *default network* (DN; e.g., Raichle et al., 2001), which serves autobiographical, self-monitoring, and social cognitive functions, is associated with adaptive and maladaptive forms of self-referential mentation. Psychiatric disorders are often marked by excessive activation of the DN, thereby reducing activation of neural regions associated with executive control (e.g., Whitfield-Gabrieli & Ford, 2012) and emotion regulation (e.g., Brewer et al., 2011; Whitfield-Gabrieli & Ford, 2012). In addition, the *salience network* (SN; e.g., Craig, 2009; Menon, 2015)—which governs our attention to the external and internal world (Menon & Uddin, 2010), integrates sensory, emotional, and cognitive information, and is associated with optimal communication, social behavior, and self-awareness (Menon, 2015)—is disrupted in many forms of psychopathology, especially when there is excessive activity in the neural regions associated with the DN (e.g., Hamilton, Chen, & Gotlib, 2013; Paulus & Stein, 2010; Yuen et al., 2014). Thus, depression is marked by abnormalities in the interplay of the reward, default, and salience networks, which lead to the clinical features that are commonly the targets of treatment.

This neurobehavioral model of depression opens many doors for clinicians who use empirically-supported treatments to treat MDD. The behavioral and cognitive approaches, described previously, all possess intervention principles that target threat and reward deficits (e.g., exposure and behavioral activation), salience network deficits (e.g., cue detection and self-monitoring), and excessive default network activation (e.g., cognitive interventions). In addition, building from a solid foundation of traditional and contemporary CBT principles and informed by basic and translational findings in affect science, emotion regulation therapy (ERT; Fresco, Mennin, Heimberg, & Ritter, 2013; Mennin & Fresco, 2013, 2014) was developed to specifically target the hypothesized neurobehavioral deficits of commonly co-occurring disorders such as GAD and MDD. ERT is a theoretically derived, evidence-based treatment that teaches clients skills of attention and metacognitive regulation so they can develop optimal behavioral repertoires associated with threat and reward learning. ERT has demonstrated promising preliminary clinical efficacy in open-label and randomized clinical trials (Mennin, Fresco, Heimberg, & O'Toole, 2017; Mennin, Fresco, Ritter, & Heimberg, 2015; Renna et al., 2017).

Interpersonal Models

Interpersonal psychotherapy (IPT) was developed by Klerman, Weissman, and their colleagues as a treatment for MDD (Klerman, Weissman, Rounsaville, & Chevron, 1984). The interpersonal model of depression emphasizes the reciprocal relations between biological and interpersonal factors in causing and maintaining depression. The IPT theory proposes that 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]) contribute to the onset and/or maintenance of depression, and the IPT therapist intervenes to address the patient's deficits in that area. Lewinsohn's behavioral model and McCullough's CBASP also included proposals that depressed individuals have interpersonal skills deficits, and the therapies based on those models included skills training elements.

Relapse Prevention Models

Depression is a recurrent disorder, and relapse rates are high (Hollon et al., 2006). Mindfulness-based cognitive therapy (MBCT; Segal, Williams, & Teasdale, 2013) is predicated on the premise that intervention principles that are effective in eliminating symptoms of depression may not be ideally suited to prevent future episodes. MBCT posits that previously depressed individuals are vulnerable for relapse or recurrence because dysphoria can reactivate patterns of thinking that 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 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 ways to ward off emotion-cued spirals into rumination. In particular, MBCT seeks to improve former depressed patients' focused and flexible attention and ability to decenter (van der Velden et al., 2015).

PURPOSES OF ASSESSMENT

We discuss assessment for diagnosis, for case conceptualization and treatment planning, and for monitoring progress in treatment. The clinician working with a depressed patient is likely to choose one or more of the behavioral, cognitive, emotion-focused, interpersonal, or relapse-prevention models to guide the therapy, and the choice of assessment tools for case conceptualization and treatment planning and progress monitoring will likely depend on the model or models the clinician chooses. Assessment tools for diagnosis, in contrast, are independent of the model guiding treatment. There is significant overlap in the tools we describe for assessing diagnosis, conceptualization and treatment planning, and treatment monitoring. For example, measures of depressive symptoms are useful for diagnosis, conceptualization and treatment planning, and monitoring progress in treatment.

ASSESSMENT FOR DIAGNOSIS

Semi-Structured Interviews

The most frequently used instrument for assigning a diagnosis is the Structured Clinical Interview (SCID), recently updated for DSM-5 (First, Williams, Karg, & Spitzer, 2015). The SCID-5 requires between 60 and 90 minutes to administer and allows the clinician to identify current and lifetime psychiatric disorders. The SCID-5 was fashioned after the traditional interview in which clinicians consider and test 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: (1) Diagnostic decisions are known to the interviewer during the interview, and (2) interviews are shorter because irrelevant sections are not exhaustively probed. The SCID-5 allows the clinician to assess the lifetime course of the disorder, not just a snapshot at one point in time, and this is particularly important because without a longitudinal assessment, it can be difficult or impossible to distinguish between a unipolar and bipolar mood disorder. The DSM-5 version of the SCID is still relatively new, and studies evaluating its psychometric properties are not yet available. In a study of the use of the SCID to diagnose MDD based on the DSM-IV-TR (American Psychiatric Association, 2000), Ventura (1998) reported high inter-rater agreement for current diagnosis based on the DSM-IV-TR SCID, with an overall weighted κ of .82. Kappas for MDD have been found to be good to excellent (range = .80 to .91; Ventura, 1998). A streamlined clinician version of the SCID-5 is available exclusively from American Psychiatric Publishing (https://www.appi.org/products/structured-clinical-interview-for-dsm-5-scid-5).

The Anxiety and Related Disorders Interview Schedule for DSM-5–Lifetime Version (ADIS-5L; Brown & Barlow, 2014) is a semi-structured interview for the diagnosis of current and past DSM-5 anxiety, mood, obsessive–compulsive, trauma, and related disorders (e.g., somatic symptom and substance use). A 0 to 8 clinician severity rating (CSR) is assigned for each diagnosis based on the severity of the patient's distress about his or her symptoms and the degree of interference in daily functioning due to the 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-5L takes roughly the same amount of time to administer as the SCID-5. 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 track the onset, remission, and temporal ordering of diagnoses that are unique features of the ADIS-5L. Studies evaluating the psychometric properties of the ADIS-5L are not yet available, but as detailed in Table 7.1, the norms of the ADIS-IV are adequate; the inter-rater reliability, content validity, construct validity, and validity generalization are good; and clinical utility is excellent.

Self-Report Measures

Many self-report scales of depressive symptoms are available to support diagnostic assessment. We review two: the Quick Inventory of Depressive Symptomatology–Self-Rated (QIDS-SR) and the Patient Health Questionnaire-9

TABLE 7.1 Ratings of Instruments Used for Diagnosis

Instrument	*Norms*	*Internal Consistency*	*Inter-Rater Reliability*	*Test–Retest Reliability*	*Content Validity*	*Construct Validity*	*Validity Generalization*	*Treatment Sensitivity*	*Clinical Utility*	*Highly Recommended*
Diagnosis										
SCID-5/ SCID-5-PD	A	NA	G	NA	G	G	G	E	E	✓
ADIS-5L	A	NA	G	NA	G	G	G	E	E	✓
Depression Severity										
QIDS	E	E	NA	E	E	E	E	E	E	✓
PHQ-9	E	E	NA	E	E	E	E	E	E	✓

Note: SCID-5 = Structured Clinical Interview for DSM-5; ADIS-5L = Anxiety and Related Disorders Interview Schedule for DSM-5–Lifetime Version; QIDS = Quick Inventory for Depression Severity; PHQ-9 = Patient Health Questionnaire 9; A = Adequate; G = Good; E = Excellent; NA = Not Applicable.

(PHQ-9). We do not review the Beck Depression Inventory Second Edition (BDI-II; Beck, Steer, & Brown, 1996), despite its wide use in research, because the scales we chose to review are largely free, easy to access, and sufficient to meet clinicians' needs.

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-5 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. As indicated in Table 7.1, the norming, reliability, and validity of the QIDS-SR are excellent. Lamoureux et al. (2010) conducted receiver operating characteristic analysis in a sample of 125 primary care patients who completed the QIDS-SR and the SCID and concluded that a score of 13 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 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 online (http://www.ids-qids.org). The measures are available in 13 languages.

The PHQ-9 (Kroenke, Spitzer, & Williams, 2001) is a 10-item self-report measure designed for screening, diagnosing, and/or monitoring depressive symptoms over a 2-week period. The first 9 items assess specific depressive symptoms using a 4-point Likert scale of 0 (*not at all*) to 3 (*nearly every day*), and these items are summed for a total score. The PHQ-9 items correspond closely with the DSM-5 diagnostic criteria for MDD. The 9th item assesses suicidal ideation and intent, and it is useful for risk assessment and intervention. A 10th item (nonscored) assesses the degree of functional interference from depressive symptoms. Clinical interpretation guidelines categorize a score of 0 to 4 as normal, 5 to 9 as mild, 10 to 14 as moderate, 15 to 19 as moderately severe, and 20+ as severe depressive symptoms. The psychometric properties of the PHQ-9 have been evaluated in two studies of 3,000 patients in eight primary care clinics (Spitzer et al., 1999) and 3,000 patients in seven obstetric clinics (Spitzer, Williams, Kroenke, Hornyak, & McMurray, 2000). Scores on the PHQ-9 have demonstrated high internal consistency, test–retest reliability, and diagnostic validity (Kroenke et al., 2001), and the measure shows good specificity and sensitivity in grading and diagnosing depression severity (Pettersson, Boström, Gustavsson, & Ekselius, 2015). It is available copyright-free at http://www.phqscreeners.com.

In addition to the traditional paper-and-pencil method, measures of depressive symptoms can be administered electronically with software programs or through mobile apps downloaded from the web. Electronic assessment can offer advantages, such as automated scoring and charting of the data and remote data collection. However, limitations include risks of loss of privacy and confidentiality. In addition, if patients complete depressive inventories remotely, the clinician must have a plan for alerting the patient of the need to contact the clinician directly if immediate intervention is needed to address suicidality.

Overall Evaluation

Excellent measures with strong psychometric properties are available for diagnostic assessment of the depressed patient. Although it is tempting to minimize or omit

diagnostic assessment altogether, we encourage the clinician to take the time to do this because diagnosis has treatment implications. In particular, it is important to distinguish between MDD, a unipolar mood disorder for which psychotherapy alone is often sufficient, and bipolar mood disorder, which generally requires pharmacotherapy plus psychotherapy (Craighead et al., 2015).

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 treatments to the *case-level* conceptualization and treatment plan. Most of the models we reviewed previously are conceptualizations and therapies for the *disorder* of 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 treatment plan describes all of the therapies the patient is receiving for those symptoms, disorders, and problems.

The second translation is from *nomothetic* to *idiographic*. A nomothetic formulation and treatment plan is stated in *general terms* (e.g., that depression results from a dearth of positive reinforcers and can be treated by increasing the individual's positive reinforcers). An *idiographic* case formulation and treatment plan describes a *particular individual*.

Case Conceptualization

A case conceptualization is a hypothesis about the *mechanisms* causing and maintaining a particular patient's *symptoms*, *disorders*, and *problems*; the *precipitants of the symptoms/disorders/problems*; and the *origins of the mechanisms*. We focus here on psychological mechanisms, but the formulation might also include biological mechanisms. We describe tools and strategies for assessing all the elements of the formulation.

Symptoms/Disorders/Problems

The case conceptualization accounts for all of the patient's symptoms, problems, and disorders. We recommend that the clinician conduct a broad-based assessment of the following domains: psychiatric symptoms and disorders and treatment difficulties (e.g., multiple providers or inadequate treatment); medical symptoms and disorders and treatment difficulties; and interpersonal, occupational/school/homemaking satisfaction and functioning, financial difficulties, housing difficulties, and legal problems.

To obtain a comprehensive diagnostic assessment, the clinician can use the measures described in the Assessment for Diagnosis section. Additional tools for assessing many of the depressed patient's comorbid psychiatric disorders, and symptoms that may not meet full criteria for a disorder, are described in other chapters of this volume.

Many MDD patients have a medical problem (Moussavi et al., 2007). MDD and medical problems can cause or exacerbate one another, and MDD often impedes the patient's ability to obtain and adhere to treatment for the medical problems. Thus, we recommend that clinicians ask their patients to obtain a physical examination if they have not had one in the past year. MDD is also commonly comorbid with psychosocial and environmental problems, such as marital problems, occupational dissatisfaction, and similar, which can cause, exacerbate, and/or result from MDD. Lack of satisfaction and difficulties functioning in domains such as work, relationships, and leisure can appear on the problem list element of the case conceptualization and/or might be precipitants.

We recommend three tools that assess functioning difficulties. The first is the Outcome Questionnaire-45 (OQ-45; Lambert et al., 1996), which is described in the section titled Assessment for Treatment Monitoring and Treatment Outcome.

The second is the World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0; World Health Organization [WHO], 2001), a 36-item self-report assessment of patient difficulties during the past 30 days in six domains: understanding and communicating, getting around, self-care, getting along with people, life activities (household/school/work), and participation in society. The measure was designed for both initial assessment and progress monitoring. The WHODAS 2.0 is designed to be simple and relatively quick to administer (5–20 minutes, depending on whether the 12- or the 36-item form is used). The WHODAS 2.0 has been administered to diverse global populations and has demonstrated excellent test–retest reliability (intraclass correlation coefficient = .98), internal consistency, and concurrent

validity, both with similar measures and with clinician ratings of functioning (Üstün et al., 2010). This measure is free for clinicians to reproduce and use with their clients. Scoring guidelines are provided both in the DSM-5 and on the WHO website (http://www.who.int/classifications/icf/whodasii/en).

Third, item 10 of the PHQ-9 provides a quick assessment of global functioning by inquiring about the degree of functional interference of the individual's depressive symptoms. Ratings range from *not difficult at all* to *extremely difficult.*

Psychological Mechanisms

We describe here and summarize in Table 7.2 several measures for assessing the mechanisms from many of the theories of depression reviewed above.

Behavioral Mechanisms

The Activity Schedule (presented originally in Beck et al., 1979; see also pp. 126–127 of Persons, Davidson, & Tompkins [2001] for a version that clinicians may reproduce) is essentially a week-long hourly calendar in which patients log or plan activities. It is ideal for assessing how the patient spends time as well as for use tracking behavioral homework assignments, such as recording pleasant activities.

The Pleasant Events Schedule (PES; MacPhillany & Lewinsohn, 1982), published in Lewinsohn, Munoz, 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 during 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 scores have good reliability and adequate to good validity (Grosscup & Lewinsohn, 1980; MacPhillamy & Lewinsohn, 1982; Nezu, Ronan, Meadows, & McClure, 2000). The PES and supporting materials can be downloaded free of charge at http://www.ori.org/scientists/peter_lewinsohn.

The Snaith–Hamilton Pleasure Scale (SHAPS; Snaith et al., 1995) is a 14-item, self-report measure designed to assess an individual's hedonic capacity. It assesses "liking" as opposed to "wanting" (discussed previously). The SHAPS asks the patient to rate his or her ability to experience pleasure in the past few days with items such as "I would enjoy my favorite television or radio program" or "I would enjoy being with my family or close friends." Ratings range from *definitely agree* to *strongly disagree.* Nakonezny et al. (2015) found that in a large sample of adults meeting criteria for MDD, SHAPS scores demonstrated high internal consistency ($\alpha = .91$). The measure showed good construct validity; it was significantly

TABLE 7.2 Ratings for Instruments Used for Case Conceptualization and Treatment Planning

Instrument	*Norms*	*Internal Consistency*	*Inter-Rater Reliability*	*Test–Retest Reliability*	*Content Validity*	*Construct Validity*	*Validity Generalization*	*Treatment Sensitivity*	*Clinical Utility*	*Highly Recommended*
Symptoms/Disorders/Problems										
WHODAS 2.0	E	G	E	A	E	G	E	G	E	✓
Behavioral Mechanisms										
PES	G	G	NA	G	G	G	A	NA	G	✓
SHAPS	G	E	NR	NR	G	G	G	A	A	
PTQ	NR	E	G	G	G	G	G	NR	A	✓
Cognitive Mechanisms										
FMPS	A	E	NR	NR	G	G	G	G	G	
EQ	A	G	NA	NR	G	G	A	NR	G	✓
ACS	A	G	E	A	G	G	NR	NR	G	
Emotion-Focused Mechanisms										
ERQ	A	G	NA	NR	A	G	A	NR	A	
AIM	A	G	NR	G	G	G	NR	NR	G	
Interpersonal Mechanisms										
SAS-SR	A	A	NA	A	G	A	G	NA	G	

Note: WHODAS 2.0 = World Health Organization Disability Assessment Schedule 2.0; PES = Pleasant Events Schedule; SHAPS = Snaith–Hamilton Pleasure Scale; PTQ = Perseverative Thinking Questionnaire; FMPS = Frost Multidimensional Perfectionism Scale; EQ = Experiences Questionnaire; ACS = Attentional Control Scale; ERQ = Emotion Regulation Questionnaire; AIM = Affect Intensity Measure; SAS-SR = Social Adjustment Scale–Self-Report; A = Adequate; G = Good; E = Excellent; NA = Not Applicable; NR = Not Reported.

negatively correlated ($r = -.65$) with ratings of quality of life. SHAPS totals were only modestly positively correlated with four measures of depressive symptoms ($r = .48$ to .55), a finding that may indicate that hedonic capacity reflects a "related but distinct construct from depression" (Nakonezny et al., 2015, p. 6). The measure was sensitive to change (Snaith et al., 1995). The SHAPS is published in Snaith et al. (1995), and the publisher gives permission to readers to reproduce the scale from the journal article for personal use or research.

The Perseverative Thinking Questionnaire (PTQ; Ehring et al., 2011) is a 15-item self-report scale that assesses content-neutral repetitive negative thinking, including rumination and worry. The PTQ assesses five characteristics of perseverative thinking: repetitive ("The same thoughts keep going through my mind again and again"), intrusive ("Thoughts come to my mind without me wanting them to"), difficult to disengage from ("I can't stop dwelling on them"), unproductive ("I keep asking myself questions without finding an answer"), and capturing mental capacity ("My thoughts prevent me from focusing on other things"). Scores on the PTQ have demonstrated excellent internal consistency ($\alpha = .95$ in both German and English language versions), satisfactory test–retest reliability ($r = .69$ at 4-week retest for the German language version of the scale), good convergent validity compared to similar measures of rumination or worry, and good predictive validity when correlated with measures of anxiety and depression (Ehring et al., 2011). The PTQ is reproduced in the appendix of Ehring et al. (2011), which is available online at http://www.sciencedirect.com/science/article/pii/S000579161000114X. Clicking the link within the text that reads "under a creative commons license" on that web page will provide access to the PTQ through the creative commons.

To identify antecedents and consequences of a target behavior to help identify the function of the behavior, clinicians can devise a paper-and-pencil or a computer-based/smartphone-based log. The patient can track each instance of the target behavior (e.g., exacerbation of depressed mood, rumination, or suicidality), antecedents of the behavior (events, thoughts, emotions, bodily sensations, and behaviors), and consequences of the behavior (events, thoughts, emotions, bodily sensations, and behaviors) and then review with the therapist to develop a hypothesis about the function the target behavior might serve. Guidance on collecting assessment data for a functional analysis is provided in multiple sources, including Haynes, O'Brien, and Kaholokula (2011) and Kazdin (2013).

Cognitive Mechanisms

A self-monitoring diary, such as the Daily Record of Dysfunctional Thoughts (Beck et al., 1979) or the forms provided by Greenberger and Padesky (1995) or Persons et al. (2001), can be used to assess the automatic thoughts described by Beck's theory. 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. J. S. Beck (1995) offered 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 re-create the event that triggered negative painful emotions.

The Frost Multidimensional Perfectionism Scale (FMPS; Frost, Marten, Lahart, & Rosenblate, 1990) is a 35-item measure grouped into six subscales: Concern Over Mistakes, Personal Standards, Parental Expectations, Parental Criticism, Doubts About Actions, and Organization. Respondents rate on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) such items as "If I fail at work/school, I am a failure as a person" or "Even when I do something very carefully, I often feel that it is not quite right." The FMPS scores have demonstrated good internal consistency ($\alpha = .77$ to .93; Frost et al., 1990) and good convergent validity compared to other similar measures of perfectionism (Stober, 2000). The measure is reprinted in Appendix B of Antony, Orsillo, and Roemer (2001).

The Experiences Questionnaire (EQ; Fresco et al., 2007) is an 11-item self-report measure of decentering. This measure asks the patient to rate the frequency with which he or she is currently having certain experiences, such as "I remind myself that thoughts aren't facts" or "I can observe unpleasant feelings without being drawn into them." Ratings range from 1 (*never*) to 5 (*all the time*). Fresco et al. used both exploratory and confirmatory factor analysis techniques to examine the EQ factor structure in two large samples of college students and a sample of depressed patients. Scores on the measure showed good internal consistency, ranging from $\alpha = .81$ to .90, and good concurrent and discriminant validity. The EQ has consistently shown sensitivity to treatment change in trials for MDD and GAD (Fresco, Segal, et al., 2007; Hoge et al., 2015; Mennin, Fresco, Ritter, & Heimberg, 2015; Mennin, Fresco, et al., 2017; Renna et al., 2017). The EQ is also correlated with a recently developed objective measure of distancing that complements the assessment of decentering (Shepherd, Coifman, Matt, & Fresco,

2016). The EQ is available from Fresco upon request via e-mail (fresco@kent.edu).

The Attentional Control Scale (ACS; Derryberry & Reed, 2002) is a 20-item self-report measure that assesses an individual's ability to focus and shift attention. The items of the ACS are divided among the capacities to (a) focus attention ("When concentrating, I can focus my attention so that I become unaware of what's going on in the room around me"), (b) shift attention ("It is easy for me to alternate between two different tasks"), and (c) control thought flexibly ("I can become interested in a new topic very quickly when I need to"). The client rates these items on a scale of 1 (*almost never*) to 4 (*always*); higher scores indicate greater overall attentional control. ACS scores have been found to be negatively correlated with trait anxiety and positively correlated with indices of positive emotionality, such as extraversion (Derryberry & Reed, 2001). Scores on the measure have demonstrated good internal consistency (α = .88; Derryberry & Reed, 2001), good content validity, and adequate test–retest reliability (r = .61; Fajkowska & Derryberry, 2010). The ACS is available in Derryberry and Reed (2002) and is free for clinicians.

Emotion-Focused Mechanisms

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 et al. (2007) reported that internal consistency was good for scores on both the reappraisal subscale (α = .84) and the suppression subscale (α = .82). The reappraisal scale was significantly and positive correlated with decentering (r = .25), but it was uncorrelated with depression symptoms (r = .14) and 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 https://www.ocf.berkeley.edu/~johnlab/measures.htm.

The Affect Intensity Measure (AIM; Larsen, 1984) is a self-report measure designed to assess the intensity of an individual's characteristic emotional reactions to typical life events. The items of the AIM describe such events as "I get upset easily" or "When I'm happy, I feel like I'm bursting with joy." The individual rates how often he or she experiences such reactions on a scale from 1 (*never*) to 6 (*always*). Weinfurt, Bryant, and Yarnold (1994) conducted factor analyses and described the four basic factors of the AIM as positive affectivity, negative reactivity, negative intensity, and serenity (or positive intensity). Rubin, Hoyle, and Leary (2012) found that scores for items comprising the negative reactivity and negative intensity factors were positively correlated with measures of neuroticism, negative affect, and depression and negatively correlated with self-compassion. The AIM scores have good internal consistency, test–test reliability, and criterion-related validity (Larsen, Diener, & Emmons, 1986). The scale is available to clinicians and researchers for free at http://internal.psychology.illinois.edu/~ediener/AIM.html.

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 domains: 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 scores on the measure has been found to be adequate (α =.74). The measure has good known-groups validity, distinguishing samples from the community, 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. (https://www.mhs.com/MHS-Assessment?prodname=sas-sr).

Precipitants

Precipitants of episodes of MDD can be internal, external, biological, or psychological stressors or some combination of these. The WHODAS 2.0 and the Social Adjustment Scale, described previously, can be used to assess precipitants. The clinician can also use the illness history timeline as described in Frank (2005) to identify events that precipitated episodes of illness.

Origins

The origins part of the formulation offers a hypothesis about how the patient learned or acquired the

hypothesized mechanisms of the formulation. 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. Information about origins can point to mechanism hypotheses (e.g., early abuse can lead to views of self as bad or worthless). To generate hypotheses about how the patient acquired the conditioned maladaptive responses, learned the faulty schemas, or developed an emotion regulation difficulty, the therapist can conduct a clinical interview that asks the patient to identify key events and factors in his or her upbringing and development, including early trauma, neglect, and abuse (e.g., Wiersma et al., 2009) and early loss, that are known to serve as vulnerability factors for depression. 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 patient's symptoms.

Developing an Initial Case Conceptualization

After assessing all the elements of the case conceptualization using the methods described previously, the clinician works with the patient to build a model describing how all the elements are related. The model is a hypothesis, and one that is revised frequently as treatment proceeds. Figure 7.1 provides an example for the case of Thea that was developed using this strategy, with notes about some of the standardized assessment tools that were used to develop the formulation of her case.

Alternate strategies for developing a case conceptualization have also been developed. Kuyken, Fothergill, Musa, and Chadwick (2005) showed that clinicians who used the method described by J. S. Beck (1995) to develop a case conceptualization agreed fairly well with one another and with a benchmark formulation created by Judith Beck when they were given the task of identifying the patient's presenting problems, but agreement was worse when the clinicians were called on to

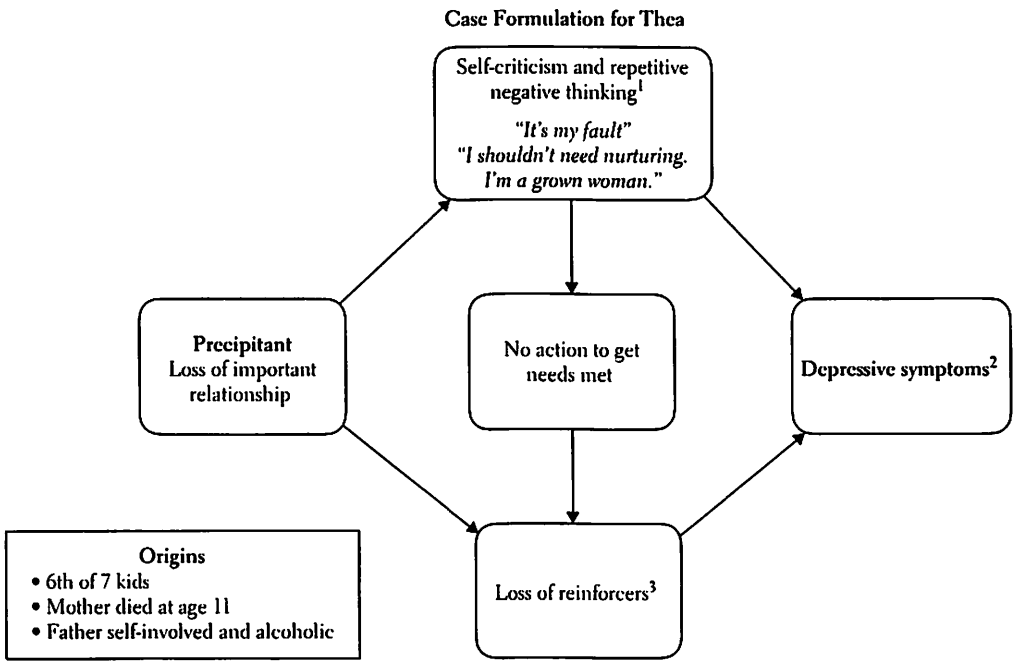

FIGURE 7.1 Conceptualization of the Case of Thea

make inferences (e.g., about the patient's schemas). In an initial assessment of the psychometric properties of the Collaborative Case Conceptualization Rating Scale (CCC-RS) developed by Christine Padesky, Kuyken et al. (2016) reported that the scale had excellent internal consistency, split-half, and inter-rater reliability and that the scores were moderately correlated with other measures of related phenomena.

The Treatment Plan

A treatment plan includes several elements: the goals of treatment; the frequency and modalities of treatment provided by the clinician who is writing the treatment plan; and adjunct therapies, if any, that are provided by other clinicians. We describe tools for assessing treatment goals and progress toward the goals in the section titled Assessment for Treatment Monitoring and Treatment Outcome.

Overall Evaluation

Many psychometrically sound standardized measures, described previously, are available to assess patients' symptoms and problems and the psychological mechanisms described by the major current evidence-based theories of depression in order to develop an idiographic case conceptualization. As discussed previously, the clinician may also elect to use idiographic tools such as a log to monitor antecedents and consequences of target behaviors in order to develop a functional analysis of a problem behavior or symptom. However, the psychometric qualities of idiographic assessment tools are rarely studied (Haynes & O'Brien, 2000), and it can also be challenging for the clinician to incorporate nomothetic data into an idiographic formulation. Figure 7.1, which describes the case of Thea, provides an illustration of the clinician's use of nomothetic measures to assist in developing the formulation of the case. Additional details are provided in Persons, Brown, and Diamond (in press).

Another challenge is that there is little information about the reliability and validity of the case conceptualization, although contributions in this area are increasing (Bucci, French, & Berry, 2016; Persons & Hong, 2016). To strengthen their idiographic assessment data and the conclusions they draw from them, we recommend that clinicians rely on basic principles of behavioral assessment (Haynes et al., 2011) and collect data (as described in the next section) to test their formulation hypotheses and monitor treatment progress for each case they treat.

ASSESSMENT FOR TREATMENT MONITORING AND TREATMENT OUTCOME

As therapy proceeds, the therapist monitors the *outcome* of therapy to evaluate the patient's progress and identify the need for a change in the treatment plan if the patient is not responding. The therapist also monitors the *process* of therapy to evaluate whether the therapy is being delivered as planned and the targeted psychological mechanisms are changing.

Monitoring Outcome

To monitor changes in depressive symptoms during treatment, we recommend the QIDS-SR (described previously) and the Depression Anxiety Stress Scales (DASS; described later in this section) because they are brief, free, and have been demonstrated to have treatment sensitivity. Whatever tool the clinician uses to monitor outcome, it is essential to use it starting in the very first session because there is good evidence that a large proportion of the change in depressive symptoms happens very early in treatment (Ilardi & Craighead, 1994), and some evidence that patients who do not show early change (Crits-Christoph et al., 2001) or who remain severely symptomatic at week 4 of treatment (Persons & Thomas, 2016) are very unlikely to remit. Evidence that sudden gains, a large shift in symptoms between one session and the next, predict outcome (Aderka, Nickerson, Boe, & Hoffman, 2012) also highlights the usefulness of monitoring outcome at every session. The clinician likely will also want to monitor symptoms of anxiety, substance use, and other comorbid difficulties identified as goals to change during treatment. Sources of measures for this purpose include other chapters in this volume, Nezu et al. (2000), and Beidas et al. (2014).

The DASS (Lovibond & Lovibond, 1995) is a self-report scale that includes three subscales assessing symptoms of depression (low positive affect, hopelessness, and anhedonia; e.g., "felt downhearted and blue" and "difficult to work up the initiative to do things"), anxiety (panic and physiological arousal; e.g., "felt I was close to panic" and "trembling"), and stress (high negative affect; e.g., "hard to wind down" and "rather touchy"). Respondents rate each item to reflect how much it applies to their experience over the preceding week on a Likert scale ranging from 0 ("did not apply to me at all") to 3 ("applied to me very much").

The scale is available in two versions, one with 21 items and one with 42 items. The DASS is quick to complete,

suitable for most adult outpatients, and responsive to changes due to treatment (Brown, Chorpita, Korotitsch, & Barlow, 1997). The DASS scores have been reported to have good test–retest reliability, high internal consistency, and adequate convergent and discriminant validity with other measures of anxiety and depression (Antony, Bieling, Cox, Enns, & Swinson, 1998; Brown et al., 1997). The three subscales measure largely independent constructs, which is consistent with the tripartite model (Clark & Watson, 1991) on which the DASS is based (Brown et al., 1997).

The measure is in the public domain. Detailed information can be found in the DASS manual (Lovibond & Lovibond, 1995) as well as at http://www2.psy.unsw.edu.au/groups/dass. The measure's sensitivity to change and coverage of the three domains of positive affect, negative affect, and physiological arousal/panic make it especially useful for monitoring progress. Its main weakness as a progress-monitoring tool for the depressed patient is the fact that it does not assess suicidality.

Combined measures of symptoms and functioning have been developed to monitor change during psychotherapy for adult psychiatric patients receiving treatment for any problem or disorder, including depression. The most studied of these is the OQ-45 (Lambert et al., 1996), a 45-item self-report scale that assesses subjective discomfort, interpersonal relations, social role performance, and positive aspects of satisfaction and functioning. The measure includes an item that assesses suicidality, which is particularly important when working with depressed patients. Respondents answer each question in the context of their experience during the past week using a 5-point Likert scale. The scoring manual or software package classifies each client, at each assessment point, as an improver, nonresponder, or deteriorator based on benchmarking data from a very large sample of clients. The software tool plots the score over time. Internal consistency for a sample of 504 Employee Assistance Program clients was .93 (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). The measure has good treatment utility, as Lambert and Shimokawa (2011) 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). Using the Clinical Support Tool that the measure provides to help the clinician assess factors that are known to be tied to poor outcome of psychotherapy (the therapeutic alliance, social support, and the patient's readiness for change) has been shown to lead to improved outcomes of cases classified as deteriorators (Whipple et al., 2003). The measure is available from American Professional Credentialing Services.

Measures that assess a broad spectrum of the adult patient's treatment goals and monitor progress toward the goals, and have been shown to be psychometrically sound, are rare. We located two measures: one that was designed for this purpose and one that was designed for monitoring treatment progress in youths.

Goal Attainment Scaling (GAS; Kiresuk & Sherman, 1968) measures changes in idiographic goals due to mental health treatment. GAS calls for patient and therapist to identify, at the outset of treatment, three to five goals that will be the focus of treatment, and the expected level of progress on each goal, and to evaluate later in treatment whether the expected progress has been made. GAS is widely used in program evaluation, has both nomothetic and idiographic features, and allows for assessment of affirmatives (goals and objectives that are positively valued by the patient). Limitations of the measure include the fact that the GAS measures the amount of change relative to what was expected or predicted, and its psychometric properties are not consistently impressive (Kiresuk, Smith, & Cardillo, 1994).

The Top Problems measure was created by Weisz et al. (2011) to identify problems and monitor severity of those problems over the course of treatment in a sample of multiply comorbid youths receiving psychotherapy for anxiety, mood, and/or conduct problems. Weisz et al. reported that the measure had good psychometric properties in their sample, and the measure appears easy to adapt to adults.

Monitoring Process

Process has two parts: the *elements of the therapy* that are viewed as important to producing changes in mechanisms and symptoms and the *psychological mechanisms* that are hypothesized to cause and maintain the symptoms of depression (e.g., engagement in pleasant activities and self-distance).

Elements of the Therapy

The therapist can use his or her clinical record to document and monitor the degree to which the treatment plan is being delivered as planned (e.g., to monitor the

frequency of sessions and the patient's participation in recommended adjunctive therapies). Homework compliance has been shown to predict outcome of psychotherapy (Kazantzis, Whittington, & Dattilio, 2010), indicating the importance of monitoring that aspect of therapy. To monitor homework, the therapist can work with the patient to develop a paper-and-pencil or other tool, locate an app, or develop his or her own tracking form.

The Therapeutic Relationship

A large body of evidence shows that the therapeutic relationship predicts outcome of psychotherapy (Norcross, 2011) and thus points to the importance of monitoring this aspect of treatment.

We review two measures of the therapeutic relationship. The Revised Helping Alliance Questionnaire (HAq-II; Luborsky et al., 1996) is a 19-item self-report scale assessing the alliance between patient and therapist. Both patient and therapist versions of the scale have been developed. Internal consistency for both patient and therapist versions of the scale has been found to be excellent (α = .90 to .93), and test–retest reliability of the patient version 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 .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 on the patient's HAq-II scores. The HAq-II is available for download on the Internet at http://www.med.upenn.edu/cpr/instruments.html.

The Session Alliance Inventory is a six-item measure developed by Falkenström, Hatcher, Skjulsvik, Larsson, and Holmqvist (2015) and is designed for administration at every psychotherapy session. The measure is a shortened version of Horvath and Greenberg's (1989) Working Alliance Inventory. Falkenström et al. reported that the measure has good psychometric properties (Table 7.3) and Falkenström, Ekeblad, and Holmqvist (2016) showed that improvements during one therapy session predicted reductions in depressive symptoms in the subsequent therapy session. The measure is published in Falkenström et al. (2015).

Psychological Mechanisms

The measures described in the section titled Mechanisms can be used to monitor changes in mechanisms, particularly the measures that are rated in Table 7.3 as sensitive to change. Simple counts and logs can also be used. For example, when Thea was working in therapy on increasing her positive thoughts about herself and her experiences, 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.

Overall Evaluation

Many measures are available to monitor the outcome and process of treatment. Monitoring both process and outcome allows the therapist to test hypotheses about the relationships between process and outcome that guide clinical decision-making. For example, the therapist can assess whether an increase in a depressed patient's

TABLE 7.3 Ratings of Instruments Used for 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*
Outcome										
QIDS	E	E	NA	E	E	E	E	E	E	✓
OQ-45	G	E	NA	G	A	G	G	G	E	✓
DASS	E	E	NA	G	E	E	G	E	G	✓
GAS	A	NA	A	A	NA	A	A	G	E	✓
Therapeutic Relationship										
HAQ-II	E	E	NA	G	G	G	G	G	G	✓
SAI	NR	E	NR	NR	E	E	G	E	E	✓

Note: QIDS = Quick Inventory for Depression Severity; OQ-45 = Outcome Questionnaire-45; DASS = Depression Anxiety Stress Scales; GAS = Goal Attainment Scaling; HAQ-II = Helping Alliance Questionnaire-II; SAI = Session Alliance Inventory; A = Adequate; G = Good; E = Excellent; NA = Not Applicable; NR = Not Reported.

pleasurable activities is associated with a decrease in severity of depressive symptoms.

Monitoring outcome and process during treatment is demanding; however, it is particularly important when treating depression because the nonresponse rate is high, even for the evidence-based treatments, and patients appear to have better outcomes when their therapists collect and review symptom-monitoring data during treatment (Lambert, Harmon, Slade, Whipple, & Hawkins, 2005; Whipple et al., 2003). Hence, we recommend that therapists monitor depressive symptoms, including suicidality, at every session and review a plot of the data. A visual record of the data on a plot that clearly displays the time course of symptom change 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 does not inform the treatment process. The therapist will likely elect to assess mechanisms less frequently, depending on the sensitivity of the measure (see Table 7.3) and the therapist's hypothesis about how quickly the mechanism is likely to change.

Measures with strong psychometric properties that can be used to monitor changes in symptoms and the psychological mechanisms that the therapist conceptualizes as causing and maintaining the patient's symptoms and problems are available, and we summarize them in Table 7.3. However, almost no measures with strong psychometric properties are available to monitor the patient's progress toward accomplishing his or her idiographic treatment goals. In part, this lack reflects the challenges of evaluating the psychometric properties of idiographic tools. However, even the standardized measures that are available do not quite measure progress toward therapeutic goals; as described previously, GAS assesses the discrepancy between expected and actual goal attainment, and the Top Problems measure assesses the severity of the problems for which the patient seeks treatment; neither assesses the degree to which the patient has accomplished his or her treatment goals.

CONCLUSIONS AND FUTURE DIRECTIONS

Many strong measures of symptoms, diagnosis, and psychological mechanisms are available to aid the clinician who is treating the depressed patient. Here, we describe several key gaps in the field. One is the dearth of measures available to assess idiographic phenomena, including the case conceptualization and the patient's treatment goals. The field's slowness to develop measures for these phenomena and to develop strategies for evaluating idiographic assessment tools may have its origin in the tradition of treatment development that has stressed the creation of standardized therapies that target single disorders. As a result, researchers have developed tools to assess disorders and symptoms, but they have been slow to develop measures to assess functioning and a broad spectrum of patient goals. The field's recent shift to focus less on disorders and more on transdiagnostic mechanisms (e.g., Cuthbert & Insel, 2013) and to highlight the importance of personalizing treatment (Fisher & Bosley, 2015) has already led to positive developments in this arena, as shown by the Top Problems tool developed by Weisz et al. (2011) to identify and monitor progress in problems identified in a sample of multiply-comorbid youths receiving psychotherapy.

Another important gap is that few clinicians use assessment tools in psychotherapy to monitor their patients' progress in treatment (Hatfield & Ogles, 2004). The importance of clinicians' monitoring of their patients' progress is highlighted by a meta-analysis (Harkin et al., 2016) showing that monitoring goal progress promoted goal attainment, especially when outcomes were reported to another person or made public and when information was physically recorded in some way. This gap likely results from a failure to train clinicians to do progress monitoring. Research to learn more about why clinicians do not monitor their patients' progress and how obstacles to monitoring progress can be overcome is needed.

Finally, clinicians encounter many impediments to gaining access to evidence-based assessment tools. Many tools are difficult to learn about and retrieve, and are copyright protected and expensive, and some ask the clinician to submit evidence of expertise in testing that is purportedly needed to administer and interpret the measure. One element of a solution to this problem might include the requirement that researchers who develop an assessment tool using federal funding be asked to post it on an easily accessible website, in the same way that data and manuscripts produced by federally funded grants are disseminated. The future of assessment is likely the Internet. Free and inexpensive web-based measures with excellent psychometric properties that are easy for clinicians to access and use are urgently needed.

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