Chapter 15

Psychological Adjustment

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Introduction

Psychological assessment of mental health issues in research and clinical health settings is a complex and expansive endeavor. The choice of instrumentation and the reasons for the assessment depend on the setting, the referral or research questions, the utilization of results, and who has access to the results. Increasingly, mental health issues are screened and monitored by interdisciplinary treatment teams. Mental health measures are included in large-scale outcome studies of quality of life. Consequently, mental health measures are valued by health service providers and by outcome researchers and administrators at every level of health-care service delivery – all varying in their familiarity with psychological concepts and instrumentation.

Comprehensive reviews of the many instruments used in health psychology settings already exist (e.g., McDowell, 2006). In this chapter, we briefly discuss aspects of mental health assessment in clinical health settings and in research and we comment on the instruments that are often used. We reflect on the relative strengths and shortcomings of these instruments. We then briefly explore issues that will influence future mental health assessment and related policy.

Psychological Assessment in Health Psychology Clinical Practice and Research

In general, assessment of mental health and mood in health psychology research and clinical practice serves the following purposes: (a) to assess the impact of physical illness and the psychological well-being and quality of life in patients; (b) to assess suitability for and/or potential responsiveness to treatment; (c) to identify particular areas of strength or concern to be considered by the service provider(s) in treatment planning; (d) to assess response to treatment and services, and to evaluate treatment outcomes; and (e) to assess outcomes and issues as requested by third parties concerned with legal remedies or redress.

As this list conveys, the psychological assessment of mental health issues does not serve a single stakeholder. There are multiple clients involved in health-care service provision (Sweet, Tovian, & Suchy, 2013), as well as in health psychology research. Health psychology researchers may want to examine mental health and psychological well-being in a particular group of patients; use mental health as an indicator of adjustment in illness; study the impact of a physical health condition on emotional well-being or evaluate the effectiveness of an inter-
vention program in terms of psychological health. Health-care service providers want to know if an individual is a suitable candidate for complex and expensive procedures, and if the individual will respond well to services. Some services involve colleagues from other professions in a treatment team and information about a patient's behavioral tendencies and issues can inform their goals, objectives, and strategies for optimal outcomes. Policymakers (including health-care administrators, third-party payers, etc.) are concerned with measureable, verifiable outcomes to justify expense and continued service and to monitor quality of care and service provision. Finally, the potential for litigation and legal redress is a real and common aspect of psychological practice in several areas of care, requiring unique expertise in the assessment of issues of interest to all parties involved in the process.

Assessment strategies and instrumentation depend on the reasons for the assessment. For example, a comprehensive psychological evaluation is recommended prior to expensive, time-consuming, and intensive surgical procedures in which behavioral patterns and strict adherence to therapeutic regimens influence outcomes (e.g., organ transplantation, spinal surgeries). A comprehensive evaluation is usually warranted when psychological issues may complicate (or inform) legal decisions about malpractice or compensation for permanent, disabling injuries. In this scenario, instruments featuring indicators of malingering, response bias, and impression management are preferred. In addition, assessment of mental health and mood for research purposes depends on the specific aims of each study.

In clinical practice, time is a precious commodity for the patient and staff, and the reasons for assessment may be quite circumscribed. Interest in patient adjustment, as reflected in self-reported depression and distress, is often integral to primary care and chronic disease management programs, as well as a crucial topic in health psychology research. Brief yet reliable and valid instruments are required for this purpose.

In the following section, we review several instruments that are well suited for – and frequently used in – comprehensive evaluations, routine assessments, and mental health screenings, in monitoring mental health and studying response to treatments, and in research.

**Distress, Depression, and Anxiety Measures**

Measures of specific psychological problems, such as depression and anxiety, are essential elements of routine health psychology practice and research. The Symptom Checklist-90 Revised (SCL-90-R) and its shorter counterpart, the Brief Symptom Index (Derogatis & Savitz, 2000), are popular omnibus measures of distress often used to assess response to treatment. Other measures have a more specific, streamlined focus, such as the Beck Depression Inventories (now the BDI-II; Beck, Steer, & Brown, 1996) and the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). These measures appear in hundreds of studies of clinical practice, outcomes, and psychometric properties in the relevant literature. In many ways, these instruments represent a gold standard for assessing these issues with self-report measures. Generally, the best instruments feature attractive psychometric properties and correspond well with diagnostic criteria and/or relevant theoretical descriptions (e.g., Beck’s cognitive model of depression and anxiety; Beck, 1976). Good self-report instruments should take less time than structured diagnostic interviews and they do not require trained personnel for administration.

The Beck scales – the BDI-II and its parallel for assessing anxiety, the Beck Anxiety Inventory (BAI; Beck & Steer, 1993) – retain considerable popularity in clinical use as well as in re-
search despite a lack of correspondence with established diagnostic criteria. Although cut-off scores exist to suggest a possible diagnosis, the items and the instructional set contribute to a respectable sensitivity but undermine their specificity to diagnostic criteria (Coyne, 1994). The BAI, for example, assesses several somatic symptoms associated with anxiety in an attempt to differentiate it from depression (Julian, 2011). The BDI-II is an excellent tool for monitoring and studying responsiveness to treatment and eventual outcomes because the items are explicitly tied to the Beck cognitive model of depression (Beek, 1976). Thus, this theoretical foundation dictates strategic treatment approaches that target each symptom assessed by the BDI-II and clinicians can reasonably monitor the effectiveness of the treatment strategy in alleviating the intensity and presence of each symptom (Persons, 2008).

The Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) is another popular measure that screens for depression. This 20-item, self-report, free measure has greater emphasis on the affective components of depression. However, it, too, struggles with specificity (e.g., consider the items "I was happy" and "People were unfriendly"). Consequently, these scales tend to overestimate the presence of a depressive or anxiety disorder and they do not differentiate well between a possible anxiety and depressive disorder.

Another set of measures gaining popularity provides an interesting contrast in this regard. Taken from the PRIME-MD Patient Health Questionnaire (which was first validated in a study of 3,000 obstetric-gynecological patients in several clinics; Spitzer, Kroenke, & Williams, 1999), the PHQ measures of depression (the PHQ-9; Kroenke, Spitzer, & Williams, 2001) and anxiety (the GAD-7; Spitzer, Kroenke, Williams, & Löwe, 2006) closely parallel criteria for major depressive disorder and generalized anxiety disorder, respectively. These scales are available in many languages and freely obtained at http://www.phqscreeners.com/. The GAD-7 is used to screen for anxiety and track severity. It has evidenced good utility and strong psychometric properties in primary care and community settings (Spitzer et al., 2006).

Of the two scales, the PHQ-9 is most thoroughly studied and its algorithm for determining major depressive disorder demonstrates a level of sensitivity and specificity comparable to diagnostic interview systems (Kroenke et al., 2001). It is ideal for use in primary care and family practice settings, in remote and underserved sites, and with understudied and vulnerable populations. Understandably, then, the PHQ-9 has been widely used as a screening tool for depression in several countries and across a wide array of clinical settings and health conditions (e.g., brain injury, Farn et al., 2005; spinal cord injury, Bombardier, Richards, Krause, Tulske, & Tate, 2004). The PHQ-8 omits the suicidality item. It is recommended for use in community surveys (Kroenke et al., 2009). The PHQ-2 (Kroenke, Spitzer, & Williams, 2003) uses the first two items to screen for depression in primary care settings. A positive screen warrants a diagnostic evaluation for the possibility of a depressive syndrome (two-item "screeners" for depression lack specificity; Mitchell & Coyne, 2007).

The Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) was developed to assess anxiety and depression disorders among medical patients, focusing on affective and cognitive symptoms and minimizing somatic aspects that can confound self-report measures in these settings (including the PHQ-9; see Harroonian et al., 2014). The HADS has 14 items, seven each to assess depression and anxiety. It can take less than 10 min to complete and the instrument is available in several languages. Overall, the extant literature supports its psychometric properties among a wide variety of medical patients (Bjelland, Dahl, Tangen Haug, & Neckelmann, 2002) and across international boundaries (Hermann, 1997). Scores on both dimensions have demonstrated sensitivity to change. Researchers and clinicians should be aware that the anxiety component may have reduced validity among elderly patients (warranting con-
cern about its applicability with patients who have arthritic conditions; Julian, 2011), although the depression component does not appear to share this issue (Smarr & Keefer, 2011).

**Posttraumatic Stress Disorder**

Clinicians as well as researchers must be aware of the possible presence of posttraumatic stress disorder (PTSD) following traumatic events and injury (Wiseman, Foster, & Curtis, 2013). Although several instruments are available to assess PTSD, two instruments warrant particular comment. The four-item Primary Care Posttraumatic Stress Disorder Screen (PC-PTSD; Prius et al., 2004) is recommended for settings in which time demands prevent a comprehensive assessment. Endorsement of any of the four items – assessing re-experiencing, emotional avoidance, behavioral avoidance, and hyperarousal – constitutes a positive result. It was the first PTSD screening instrument developed with a primary care sample. It has acceptable properties with trauma patients with some acceptable loss in sensitivity (Hanley, deRoon-Cassini, & Brasil, 2013).

The Hanley et al. study (2013) compared the PC-PTSD with the PTSD Symptom Checklist-Civilian Version (PCL-C; http://www.ptsd.va.gov/professional/assessment/adult-srptsd-checklist.asp). The PCL-C has 17 items to assess specific PTSD symptoms. It has considerable reliability and validity as well as sensitivity and specificity among several Veteran samples and among survivors from motor vehicle accidents and sexual assault (Orsillo, 2001).

**Personality Traits**

While personality is not directly a measure of psychological adjustment or mental health, such measures are frequently used in both clinical and research settings. The Big Five model (John & Srivastava, 1999) describes dimensions or domains of personality in five factors: openness, conscientiousness, extraversion, agreeableness, and neuroticism. Research has shown that the Big Five are associated with health status, health behaviors, and health outcomes (Costa & McCrae, 1987; Goodwin & Friedman, 2006; Weiss & Costa, 2005). Neuroticism in particular has been the most researched trait. While findings are somewhat inconsistent, it has been shown to be associated with mortality and an increase in symptom reporting (Costa & McCrae, 1987; Wilson et al., 2005). Conscientiousness is another trait that has shown strong links in health and illness as well. Findings on this trait suggest that conscientiousness is related to reduced rates of mental and physical disorders among adult populations (Goodwin & Friedman, 2006) and better medication adherence (Molloy, O’Carroll, & Ferguson, 2014). Although personality traits are not assessed as heavily in health psychology practice or research, it is important to note their potential role in the field.

**Comprehensive Psychological Assessment**

Psychologists often rely on omnibus measures to obtain information about behavioral tendencies, issues, and general adjustment in an efficient, reliable, valid, yet comprehensive fashion. The best instruments feature indicators of response sets, test-taking attitudes, and potential malingering. The instruments in this select group include objective measures of personality: the Minnesota Multiphasic Personality Inventory (MMPI-2; Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989), the various versions of the Millon Clinical Multiaxial Inventory
(now the MCMII-III; Millon, 2006) and the Personality Assessment Inventory (PAI; Morey, 1991).

With a long history of use in medical settings, the MMPI may be the most frequently used instrument in clinical health psychology in many countries. Hundreds of studies have examined the MMPI profiles (and scale scores) among persons with chronic pain syndromes and this research base provides a rich empirical trove of information about differential responses to and implications for treatment and rehabilitation. The MMPI-2 is used to evaluate candidates for spinal surgery (Block, Ben-Porath, & Marek, 2013) and organ transplant surgeries (Olbrisch, Benedict, Ashe, & Levenson, 2002). It is the most frequently used multidimensional objective personality instrument in evaluations of candidates for bariatric surgery (Fabricatore, Cramer, Wadden, Sarwer, & Krausucki, 2006). Although a summary is beyond the scope of this chapter, much of the relevant literature indicates that individual characteristics assessed by the MMPI/MMPI-2 are associated with distress, functional impairment, observed pain behaviors, medication use, and return to work. Scales 1 (Hypochondriasis), 2 (Depression), and 3 (Hysteria) are sensitive to symptom over-reporting and reflect current intensity of distress, impairment, self-reported pain, and degree of comfort with a sick or disabled role (Keller & Butcher, 1991).

Two other multidimensional instruments have shown considerable utility in clinical health psychology: the MCMII-III (Millon, 2006) and the PAI (Morey, 1991). Normative data were used in developing the MMPI-2 and the PAI and both convert raw scores to scaled T scores based on norms. All versions of the MCMI, however, were normed on psychiatric patients with known diagnoses. Millon did not assume that psychopathological behaviors would be normally distributed throughout the sample (let alone people in general), although certain conditions would share specific features (e.g., schizophrenia could share paranoid tendencies). Consequently, the MCMI-II is a criterion-referenced measure. Psychologists must exercise great caution in using the MCMI-II with individuals who have no prior evidence of psychopathology, including personality disorder characteristics, and using the MCMI with “normal” individuals is inadvisable.

The PAI has fewer items (344) than the MMPI-2 (567). Items are written at a fourth-grade reading level and take approximately 50 min to complete. It contains four validity scales (infrequency, inconsistency, negative impression, positive impression) and 11 clinical scales (e.g., depression, somatic complaints, antisocial features, schizophrenia). The PAI also has five treatment consideration scales (e.g., aggression, treatment rejection) and two interpersonal scales (warmth, dominance) that provide clinically relevant information. Scales have a face valid quality and they reflect a relative intensity on each specific dimension. Unlike the MMPI-2 and the MCMI-III, PAI items were selected on theoretical and statistical grounds and the subscales have no item overlap. The lack of item overlap between scales means, for example, that high scores on the somatization scale will not affect scores on other scales, an issue that often occurs when using the MMPI-2 with medical patients who have reasonable physical and somatic concerns.

The PAI has been used to evaluate symptom clusters among persons with chronic pain syndromes (Karlin et al., 2005) and traumatic brain injury (Demakis et al., 2007), and among candidates for bariatric surgery (Corsica, Azarbad, McGill, Wool, & Hood, 2010). The Negative Impression validity scale significantly characterized individuals seeking compensation for mild traumatic brain injury (Whiteside, Galbreath, Brown, & Turnbull, 2012). The Treatment Index differentiated completers from noncompleters of an outpatient chronic pain treatment program, and the Treatment Rejection scale also contributed to the predictive model (Hopwood, Creech, Clark, Meagher, & Morey, 2008).
The Eysenck Personality Questionnaire (EPQ; Eysenck & Eysenck, 1975) is an established measure of personality traits and has been used for both clinical and research purposes. The EPQ takes special interest in a person’s temperament, with the theory largely based on genetics and physiology. Three traits of temperament are assessed: psychoticism, extraversion, and neuroticism. Due to criticisms of low reliability to the psychoticism dimension, the EPQ-R was developed and it is the current form (EPQ-R; Eysenck, Eysenck, & Barrett, 1985).

**Well-Being and Optimal Adjustment**

An intense interest in quality of life as a critical outcome for persons with a chronic health condition preceded the relatively recent interest in positive psychology. Persons with chronic and debilitating conditions were often the focal point of this attention, as psychological issues among these individuals were associated with recurring and largely preventable secondary complications. Chief among the earliest instruments was the omnibus Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36; Ware, Snow, Kosinski, & Gandek, 1993). Additional information about SF-36, as well as the assessment of quality of life, can be found in Chapter 14 of this volume.

More germane to our current discussion is the utility of life satisfaction and subjective well-being measures. The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) may be the most popular measure of life satisfaction. The SWLS has five items that are rated on a 1 (strongly disagree) to 7 (strongly agree) Likert-type scale. Higher scores reflect greater life satisfaction. The SWLS is free for use and is available in several languages (see http://internal.psychology.illinois.edu/~edienet/SWLS.html). In one of the largest studies to evaluate well-being scales, poor health was significantly associated with lower SWLS scores among community-residing adults (N=5,399; Kobau, Sniezek, Zack, Lucas, & Burns, 2010).

**Resilience**

There is evidence that certain “pre-injury” personality characteristics may help individuals resume prior levels of life satisfaction following disability onset (Boyece & Wood, 2011). Other work reveals that a certain percentage of individuals remain resilient throughout the first year of traumatic and severe disability, consistently reporting low levels of depression and anxiety despite the radical changes they experience (Bonanno, Kennedy, Galatzer-Levy, Lude, & Elström, 2012). The concept of resilience may be one of the most captivating in contemporary health psychology. It is also quite elusive for clinicians. The prevailing model of resilience, and the one that has been supported across several clinical populations, identifies resilient individuals in sample-specific analytic procedures that categorize those who are consistently lower in distress over a period from those who are distressed (e.g., Bonanno et al., 2012). These studies also examine differences that may occur between resilient individuals and those who are not (such as stress appraisals, coping, mood; Bonanno, Westphal, & Mancini, 2011). Despite the empirical support for this model, it has limited utility for practitioners who want to identify resilient characteristics in psychological evaluations of individuals in clinical settings. This, in part, explains the widespread usage of the 25-item Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003). The authors describe resilience as the embodiment of “personal qualities that enable one to thrive in the face of adversity... a multidimensional characteristic that varies with context, time, age, gender and cultural origin” (Connor & Davidson, 2003).
The psychometric properties of the CD-RISC are among the best in comparisons with other available resilience measures (Windle, Bennett, & Noyes, 2011).

Yet the authors of the CD-RISC offer no real theoretical model for their concept of resilience, leaving clinicians and researchers with a relatively face-valid, self-report measure and little guidance for working with respondents who have low scores. Considerable evidence indicates that CD-RISC scores correlate with measures of distress in predictable directions (e.g., among women experiencing infertility; Sexton, Byrd, & von Kluge, 2010). Ironically, perhaps the most elegant and empirically supported theory of resilience presents psychologists with the opposite problem. A resilient personality prototype, according to the Block and Block (1980) theory of ego control and ego resiliency, develops from healthy attachment during infancy and childhood and is characterized by a capacity for effective adaptation to change and conflict. Other personality prototypes, undercontrolled and overcontrolled, develop in response to unhealthy attachments. These personality prototypes are mapped out with behavioral ratings (in studies of children; Caspi & Silva, 1995) and with self-report measures of the Big Five or other normal personality traits (e.g., the Big Five Inventory, John & Srivastava, 1999; the NEO-PI, Costa & McCrae, 1985; the Multidimensional Personality Questionnaire; Tellegen & Waller, 2008). Resilient individuals are often typified by low neuroticism and above average scores on the other factors. Undercontrolled individuals are characterized by low conscientiousness, a moderate level of neuroticism, and low agreeableness. High neuroticism, low extraversion, and average scores on the other factors characterize overcontrolled individuals.

Longitudinal research has found that behavioral ratings related to temperament of children predict emotional, behavioral, and health outcomes in adulthood (Caspi & Silva, 1995; Chapman & Goldberg, 2011). There is some evidence resilient prototypes may have a decreased cardiovascular disease risk in middle age (Chapman & Goldberg, 2011). Resilient individuals report more adaptive, proactive problem-solving styles following the onset of a severe physical disability and they report a greater sense of acceptance at medical discharge than overcontrolled individuals do (Berry, Elliott, & Rivera, 2007). Also, children with an undercontrolled personality prototype have a greater risk of injury than other children (Berry & Schwebel, 2009).

**Positive Affect**

Positive affect is a common characteristic of resilience across these different approaches. Positive emotionality may facilitate well-being, social ties, and motivation, and there is some indication it may be associated with brain glucose metabolism in an adaptive and perhaps protective manner (Volkow et al., 2011). Negative affectivity is associated with increased health complaints under routine and stressful conditions (Watson & Pennebaker, 1989). The Positive and Negative Affective Schedule (PANAS; Watson, Clark, & Tellegen, 1988) efficiently measures both dimensions. The PANAS has supportive psychometric properties (Crawford & Henry, 2004) and it is often included in studies of well-being (e.g., Kobau et al., 2010).

Positive and negative emotions can also be efficiently assessed with Visual Analog Scales (VAS). Separate VAS for depression, anxiety, anger, fear, and frustration can be reliably assessed on a 150-mm (or 100-mm) line with instructions to indicate along the scale the intensity of each feeling at that moment (or other time frame). Each VAS can be anchored by the descriptors none and the most severe imaginable (e.g., Harkins, Price, & Braith, 1989). The same approach is used to assess specific positive emotions (see Stern, 1997). Tactile adaptations have been made for patients in a low vision clinic (Dreer et al., 2008).
Comments and Conclusions: Promise and Participation in the Future

More changes will occur in the assessment of psychological adjustment in the clinic and in the community. The assessment of adjustment will be refined and improved, and these instruments will evaluate the success and cost effectiveness of services. Change is already in the works: The National Institutes of Health supports an ongoing project (PROMIS) to produce standardized patient-oriented outcome measures for use in research and clinical protocols (see http://www.nihpromis.org/). Measures of several dimensions discussed in this chapter are being tested in several projects (e.g., an 8-item measure of depression; Amtmann et al., 2014). PROMIS relies on item response theory to develop, evaluate, weight, and then select specific items for use with individual respondents. Ideally, these scales will be available to clinicians as well as researchers, administrators, and policymakers to promote a common understanding and dialogue about outcomes.

The PROMIS item banks will cover three broad domains: physical, mental, and social health. Psychologists will be compelled to attend more to social health, and participation, specifically, as an important health outcome. The high premium that the International Classification of Functioning, Disability and Health (World Health Organization, 2001) places on participation as an essential outcome influences much of this work. Active participation in desired pursuits may be essential to understanding quality of life among persons with chronic and debilitating conditions, as participation may effectively mediate the effects of injury severity and functional impairment to life satisfaction over time (Erosa, Berry, Elliott, Underhill, & Fine, 2014; Kalpinski et al., 2013). Psychological expertise should be involved in every aspect of item development, refinement, and evaluation in these endeavors to represent the best interests of the profession, our science, and the people we serve.

References


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