STATE OF MINNESOTA

IN SUPREME COURT

A19-0199

Workers' Compensation Court of Appeals — Thissen, J.

Chadd A. Smith,

Respondent,

vs.

Filed: July 17, 2019
Office of Appellate Courts

Carver County and
Minnesota Counties Intergovernmental Trust,

Relators.

Mary E. Boyce, Ashley N. Biermann, Meuser Law Office, P.A., Eden Prairie, Minnesota, for respondent.

Timothy P. Jung, Katie H. Storms, João C.J.G. de Medeiros, Lind, Jensen, Sullivan & Peterson, P.A., Minneapolis, Minnesota, for relators.

Jeffrey J. Lindquist, Gries Lenhardt Allen, Minneapolis, Minnesota, for amicus curiae Minnesota Defense Lawyers Association.

S Y L L A B U S

1. In a claim for workers' compensation benefits where the alleged injury is post-traumatic stress disorder arising out of and in the course of employment, Minnesota Statutes § 176.011, subd. 15(d) (2018), requires the employee to prove that the employee has been diagnosed with post-traumatic stress disorder (PTSD) by a licensed psychologist or psychiatrist and that the diagnosing professional used the latest version of the *Diagnostic*

and Statistical Manual of Mental Disorders (DSM) in making a diagnosis. The statute does not require a compensation judge to conduct an independent assessment to verify that the diagnosis of a psychologist or psychiatrist conforms to the PTSD criteria set forth in the DSM before accepting the expert's diagnosis.

2. The Workers' Compensation Court of Appeals erred by reversing the compensation judge's choice between two competing medical experts because the expert opinion adopted by the compensation judge had an adequate factual foundation for the diagnosis.

Reversed.

O P I N I O N

THISSEN, Justice.

This case requires us to interpret a 2013 amendment to the Minnesota Workers' Compensation Act, Minn. Stat. §§ 176.001–.862 (2018), which expanded the Act to allow injured workers to recover workers' compensation benefits for post-traumatic stress disorder (PTSD) that arises out of and in the course of employment. The amendment permits recovery for a "mental impairment," *see* Minn. Stat. § 176.011, subd. 16, defined as "a diagnosis of post-traumatic stress disorder by a licensed psychiatrist or psychologist," *id.*, subd. 15(d). " '[P]ost-traumatic stress disorder' means the condition as described in the most recently published edition of the Diagnostic and Statistical Manual of Mental Disorders by the American Psychiatric Association," *id.*, which in its current version is commonly known as the DSM-5. *See* Am. Psychiatric Ass'n, *Diagnostic and Statistical Manual of Mental Disorders* (5th ed. 2013).

Respondent Chadd Smith, a former deputy sheriff for relator Carver County, seeks workers' compensation benefits for PTSD, which he claims resulted from numerous traumatic incidents that he experienced while working. The County denied responsibility. Two licensed psychologists assessed Smith—one diagnosed Smith with PTSD; the other did not. The compensation judge found the psychologist who did not diagnose Smith with PTSD to be more persuasive, adopted that psychologist's report, and dismissed Smith's claim petition.

The Workers' Compensation Court of Appeals (WCCA) reversed. *Smith v. Carver County*, No. WC18-6180, 2019 WL 235685, at *1 (Minn. WCCA Jan. 4, 2019). The WCCA determined that the 2013 amendment requires that a compensation judge conduct an independent assessment to verify that the diagnosis of a psychologist or psychiatrist conforms to the PTSD criteria in the DSM-5 before accepting the expert's diagnosis. *See id.* at *5. We reverse the decision of the WCCA and reinstate the compensation judge's decision.

FACTS

Smith worked as a deputy sheriff with the Carver County Sheriff's Office for nearly 10 years, from July 2006 through June 2016. Before working as a deputy sheriff, Smith had never been diagnosed with, treated for, or had any restrictions related to PTSD. Before beginning his work with the County, Smith underwent a pre-employment examination and was deemed physically and mentally fit to work as a deputy sheriff.

As part of his job as a Carver County deputy sheriff, Smith witnessed numerous situations involving death and injury, including graphic crime scenes, vehicle accidents,

homicides, suicides, shootings, assaults, and domestic abuse situations. It is difficult for a person who is not a law enforcement officer or first responder to overstate the traumatic nature of the situations Smith faced. For example, Smith responded to a vehicular accident where a driver was crushed by a 100,000-pound rock crusher and helped to recover the victim's remains for the medical examiner. Smith was called to the scene of a suicide; upon arrival, he realized that the victim—who had died from a self-inflicted gunshot to the head—was his high school classmate. Just months after that case, Smith was tasked with reporting the death of a different high school friend to the friend's next of kin, an experience he understandably described as "extremely distress[ing] and overwhelm[ing]." Smith has responded to a vehicular accident where a part of the victim's body came off in his hands while administering first aid; a vehicular fire where he and other emergency personnel were unable to control the blaze and were unable to save the victim trapped in the vehicle; a house fire where the victim's remains were severely burnt; and an incident of a deceased male whose body had been outside and decaying for several days. During all of this, Smith also experienced stress at home: his wife was diagnosed with cancer and his daughter was diagnosed with a genetic disorder.

Of the events reported by Smith, he deemed two to be the most significant. The first occurred in 2007, soon after he started with Carver County. Smith responded to a vehicular accident in which a young woman had been ejected from the vehicle. Smith reported that, when he approached the woman to administer first aid, he heard her make a sound he referred to as the "death gurgle," which indicated that her injuries were beyond his ability to help. Smith was forced to move on to other victims at the scene. The second

event occurred in 2012 when Smith responded to a call involving an infant who had choked to death on a marshmallow. Smith was tasked with taking photos of the child and attending the autopsy. This death was particularly difficult for Smith because his wife was pregnant with their daughter.

During his tenure as a deputy sheriff, Smith experienced physical and mental ailments on a frequent basis. He reported difficulty sleeping, recurrent dreams and night terrors, and intestinal problems. In 2014, one medical professional diagnosed Smith as suffering from PTSD; several others diagnosed Smith with other mental conditions but not PTSD.

Smith resigned as a deputy sheriff in June 2016. Following his resignation, Smith began working as an insurance adjuster.

In July 2016, about a month after his resignation, Smith was evaluated by Dr. Michael Keller, a licensed psychologist. At the time, Smith was still experiencing intestinal and sleep problems. Dr. Keller noted that, during the examination, Smith presented with mild memory impairment and appeared "extremely tense," "quite anxious," and "significantly depressed." Dr. Keller also noted that Smith had difficulty concentrating, was "physically shaking throughout the entire interview process," "was frequently tearful and emotionally distressed," and was "hyper-vigilant." To evaluate Smith's mental condition, Dr. Keller reviewed Smith's medical history and administered several diagnostic tests (the PTSD Checklist (PCL-5), the Clinician Administered PTSD Scale (CAPS-5), the Minnesota Multiphasic Personality Inventory (MMPI-2), and the

Millon Clinical Multiaxial Inventory (MCMI-IV)). Dr. Keller diagnosed Smith with PTSD, major depressive disorder, and anxiety disorder under the DSM-5.

On August 15, 2016, Smith notified the Carver County Sheriff's Department of Dr. Keller's PTSD diagnosis and asked the County to file a First Report of Injury with the Department of Labor and Industry. The County denied responsibility. In December 2016, Smith filed a workers' compensation claim petition with the Commissioner of the Department of Labor and Industry seeking workers' compensation benefits for his PTSD.

On May 11, 2017, at the request of Carver County, Dr. Paul Arbisi—also a licensed psychologist—performed an independent psychological evaluation of Smith. He noted that Smith reported hypervigilance and withdrawal symptoms and that he felt less engaged and less outgoing. He also noted that Smith was experiencing mood swings, irritability, insomnia, a distinct lack of energy, and physical discomfort. To evaluate Smith's mental condition, Dr. Arbisi administered the CAPS-5 and MMPI-2 tests. Following these tests, Dr. Arbisi diagnosed Smith with somatic symptom disorder and adjustment disorder with mixed anxiety and depressed mood. Dr. Arbisi concluded that Smith did not have PTSD under the criteria set forth in the DSM-5.

The workers' compensation judge held a hearing on Smith's claim petition. Smith and an investigative lieutenant for Carver County were the only live witnesses. All medical evidence was offered in written form, which included records from several medical providers, the reports of Drs. Keller and Arbisi, and the transcripts of the depositions of Drs. Keller and Arbisi. Following the hearing, the compensation judge dismissed Smith's petition. The judge adopted Dr. Arbisi's opinion and diagnosis, tersely finding that

Dr. Arbisi's medical opinion was persuasive and that Dr. Keller's medical opinion was unpersuasive. In his memorandum, the compensation judge stated that he "carefully considered the entire record in this matter, including the testimony at trial, documentary evidence submitted, and also the arguments ably presented by counsel for each of the parties." The judge "concluded that the evidence supports his Findings as to the issues before him in the present proceeding; no further comment or explanation is necessary."[1] Because Smith had failed to meet his burden to prove that he was suffering from PTSD arising out of and in the scope of employment, the compensation judge denied Smith's request for benefits and dismissed his petition.

The WCCA reversed the compensation judge's decision in part, vacated in part, and remanded for further consideration. *Smith*, 2019 WL 235685, at *1. The WCCA held that the language of Minn. Stat. § 176.011, subd. 15(d), is "unique" because it incorporated the definition of PTSD set forth in the latest version of the DSM. 2019 WL 235685 at *5. Because of that "unique" language, the court concluded that "a determination of whether a claim for PTSD is compensable must go beyond the weighing and choosing between competing expert medical opinions." *Id.* The WCCA held that compensation judges "must apply the statute to determine whether the employee met his or her burden of proof to

[1] Although the compensation judge broadly adopted Dr. Arbisi's opinions, he gave no specific reasons in his findings or memorandum for the conclusion that Dr. Arbisi's opinions were persuasive. While we can (and certainly did) review the two doctors' reports and depositions and other record evidence, a fact-finding court's detailed explanation of its reasoning is always helpful to reviewing courts and, more importantly, to the parties. On appeal, Smith does not assert that the compensation judge's findings were insufficiently detailed.

establish a compensable claim of PTSD. In doing so, judges may rely on expert medical opinion, *so long as the opinion is consistent with the requirements contained in the statute*," i.e., the DSM-5 PTSD criteria. *Id.* (emphasis added).

Relying on its interpretation of the statute, the WCCA held that the compensation judge's decision to adopt Dr. Arbisi's opinion was improper because Dr. Arbisi's diagnosis did not explicitly conform to the PTSD criteria in the DSM-5. *See id.* at *5–6. The court reversed the compensation judge's finding that Dr. Arbisi's opinion was persuasive, vacated the finding that Dr. Keller's opinion was unpersuasive, and remanded for a determination of whether Dr. Keller's opinion complied with the DSM-5 criteria. *Id.* at *6. Carver County filed a timely petition for review.

ANALYSIS

We review de novo the interpretation of statutory provisions in the Workers' Compensation Act. *Gilbertson v. Williams Dingmann, LLC*, 894 N.W.2d 148, 151 (Minn. 2017). The statutory interpretation question before us turns on the Legislature's intent when it enacted Minn. Stat. § 176.011, subds. 15(a), (d), 16. *See* Minn. Stat. § 645.16 (2018). The plain language of the statute is our best guide to the Legislature's intent. *See State v. Riggs*, 865 N.W.2d 679, 682 (Minn. 2015). When the statutory language is clear, the Legislature's intent is clear and we follow it.

I.

The Minnesota Workers' Compensation Act states that "[e]very employer is liable . . . to pay compensation in every case of personal injury or death of an employee

arising out of and in the course of employment without regard to the question of negligence. The burden of proof of these facts is upon the employee." Minn. Stat. § 176.021, subd. 1.

Before 2013, employees could receive workers' compensation benefits for work-related *mental* stimulus or injuries only when (1) a mental stimulus produced physical injury; or (2) a physical stimulus produced mental injury. *See Schuette v. City of Hutchinson*, 843 N.W.2d 233, 237 & n.2 (Minn. 2014). Claims where "a mental stimulus result[ed] in [only] mental injury" were not covered. *Id.* at 237. Moreover, "the presence of physical symptoms d[id] not convert a claim based on mental injury caused by mental stimulus into a compensable claim." *Id.* In short, before 2013, a worker could not recover for PTSD under the Workers' Compensation Act.

In 2013, the Legislature amended the Minnesota Workers' Compensation Act by redefining "occupational disease" and "personal injury" to include "mental impairment." Act of May 16, 2013, ch. 70, art. 2, §§ 1–2, 2013 Minn. Laws 362, 367–68 (codified at Minn. Stat. § 176.011, subds. 15(a), (d), 16). The relevant portions of the amended Act state:

> Subd. 15. **Occupational disease.** (a) "Occupational disease" means a mental impairment as defined in paragraph (d) or physical disease arising out of and in the course of employment . . . .
>
> (d) For the purposes of this chapter, "mental impairment" means a diagnosis of post-traumatic stress disorder by a licensed psychiatrist or psychologist. For the purposes of this chapter, "post-traumatic stress disorder" means the condition as described in the most recently published edition of the Diagnostic and Statistical Manual of Mental Disorders by the American Psychiatric Association. . . .
>
> Subd. 16. **Personal injury.** "Personal injury" means any mental impairment as defined in subdivision 15, paragraph (d) . . . .

Minn. Stat. § 176.011, subds. 15(a), (d), 16.

The language is plain and straightforward. For an employee to recover workers' compensation benefits for PTSD arising out of and in the course of employment, the employee must prove that a psychiatrist or psychologist has diagnosed him or her with PTSD and that the professional based the employee's diagnosis on the latest version of the DSM.[2] Neither Smith nor the County suggests that the statutory language prevents an employer from submitting a diagnosis from a psychiatrist or psychologist based on the latest version of the DSM that contradicts the diagnosis of the employee's medical professional. In that circumstance (as in every other workers' compensation case where the parties submit competing medical diagnoses), the job of the compensation judge is to determine whether the expert diagnoses have adequate foundation and, if both have adequate foundation, decide which of the professional diagnoses is more credible and persuasive. *See Gianotti v. Indep. Sch. Dist. 152*, 889 N.W.2d 796, 803 (Minn. 2017) ("In

[2] The WCCA and Smith placed much weight on the second sentence of subdivision 15(d), which requires the diagnosis to be "the condition . . . described in the most recently published edition of the Diagnostic and Statistical Manual of Mental Disorders by the American Psychiatric Association." Minn. Stat. § 176.011, subd. 15(d). This is unsurprising language. There are competing and evolving versions of the diagnostic criteria for PTSD. For example, the International Classification of Diseases sets forth a different set of diagnostic criteria for health conditions than the DSM-5. *See generally* World Health Organization, *Classifications*, World Health Org. (last visited July 9, 2019), https://www.who.int/classifications/icd/en/. Perhaps more importantly, the definition of PTSD may change as new versions of the DSM itself are promulgated. The diagnostic criteria for PTSD in the DSM-5 differ from the criteria set out in the DSM-4. *Compare* Am. Psychiatric Ass'n, DSM-5, *supra*, at 271–74, *with* Am. Psychiatric Ass'n, *Diagnostic and Statistical Manual of Mental Disorders* 463–68 (4th ed. text revision 2000). The Legislature wisely chose statutory language that accounted for the possible evolution of the diagnostic criteria for PTSD without requiring the passage of amendatory language each time a new version of the DSM is published.

weighing medical evidence, a compensation judge has the discretion as the trier of fact to choose between competing and conflicting medical experts' reports and opinions."). And as a general rule, the WCCA must affirm a compensation judge's choice between two expert opinions "unless the facts assumed by the expert in rendering his or her opinion are not supported by the evidence." *Pelowski v. K-Mart Corp.*, 627 N.W.2d 89, 93 (Minn. 2001) (citing *Nord v. City of Cook*, 360 N.W.2d 337, 342–43 (Minn. 1985)).

In reaching a different conclusion, the WCCA found (and Smith urges us to agree) that the straightforward statutory language providing that PTSD is covered by the Workers' Compensation Act somehow worked a revolution in the role of the compensation judge for this specific class of injuries. The WCCA's opinion would require the compensation judge to go far beyond determining whether the medical professional had an adequate foundation for diagnosing a worker with (or without) PTSD under the DSM-5. Instead, under the WCCA's approach, the compensation judge must lay each expert's report on the desk next to the DSM-5 and assess whether the medical professional's opinion conformed with the precise wording of the DSM-5 as the compensation judge interprets those words. As Smith acknowledged at oral argument, the WCCA opinion tells compensation judges to independently read and apply the DSM-5 in accordance with the canons of construction as if it were an administrative rule or regulation. Nothing in the language of Minn. Stat. § 176.011, subds. 15(a), (d), 16, even remotely suggests that such an exercise is required.

Indeed, the Legislature's use of the phrase "diagnosis . . . by a licensed psychiatrist or psychologist" in subdivision 15(d) demonstrates that the professional judgment and discretion of a trained professional in evaluating whether an employee suffers from PTSD

is the essential focus. *See* Minn. Stat. § 176.011, subd. 15(d); *see also Diagnosis*, *Black's Law Dictionary* (10th ed. 2014) (defining "diagnosis" as "[t]he determination of a medical condition . . . by physical examination or by study of its symptoms"). Because of the complexity of diagnosing a medical condition, such assessments are "usually a matter of professional judgment" about which reasonable medical experts may disagree. *Todd v. Eitel Hosp.*, 237 N.W.2d 357, 362 (Minn. 1975). Accordingly, when medical diagnosis is required, deference to a professional's judgment is sensible. "[P]rofessional judgments [by medical professionals] are entitled to a presumption of validity" because there is " 'no reason to think judges or juries are better qualified than appropriate professionals in making . . . decisions [in the treatment context.]' " *Jarvis v. Levine*, 418 N.W.2d 139, 147 (Minn. 1988) (quoting *Youngberg v. Romeo*, 457 U.S. 307, 323 (1982)). But that is precisely what the WCCA opinion does: It substitutes a compensation judge's legalistic analysis of the DSM-5 for the professional judgment of psychiatrists and psychologists.

The WCCA's decision also ignores guidance *in the DSM-5* about how it is to be used. The DSM-5 notes that its "primary purpose . . . is to *assist trained physicians in the diagnosis* of their patients' mental disorders . . . ." Am. Psychiatric Ass'n, DSM-5, *supra*, at 19 (emphasis added). To that end, it warns that "[t]he symptoms contained in the respective diagnostic criteria sets *do not constitute comprehensive definitions of underlying disorders*, which encompass cognitive, emotional, behavioral, and physiological processes that are far more complex than can be described in these brief summaries." *Id.* (emphasis added). And almost as if the editors of the DSM were anticipating this case, the DSM warns: "[T]he definition of mental disorder[s] included in [the DSM] [were] developed to

meet the needs of clinicians, public health professionals, and research investigators *rather than all of the technical needs of the courts and legal professionals*." *Id.* at 25 (emphasis added). Consequently, the "[u]se of [the DSM] to assess for the presence of a mental disorder by nonclinical, nonmedical, or otherwise insufficiently trained individuals is not advised." *Id.* Put another way, the DSM is a guideline for medical and health professionals, not a checklist for judges.

We also disagree with Smith's contention that Dr. Arbisi's use of a battery of primary assessment instruments like the CAPS-5 and MMPI-2 tests to *apply* the DSM-5 criteria resulted in an impermissible departure from the criteria.[3] In fact, both Dr. Keller and Dr. Arbisi used the CAPS-5 and MMPI-2 tools in their diagnoses of Smith. The use of tests specifically designed to assist professionals in *applying* the DSM criteria is perfectly appropriate and expected.[4]

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[3] Several primary assessment instruments have been developed to apply the DSM criteria to specific patients. These include the CAPS-5, PCL-5, and MMPI-2 tests noted above. Other examples include the Structured Clinical Interview (SCID), PTSD Symptom Scale–Interview (PSS-I), Structured Interview for PTSD (SIP), Posttraumatic Stress Diagnostic Scale (PDS), Davidson Trauma Scale (DTS), Impact of Event Scale (IES), Mississippi Scale for Combat-Related PTSD (Mississippi Scale), and Personality Assessment Inventory (PAI). *See* Edna B. Foa & Elna Yadin, *Assessment and Diagnosis of Posttraumatic Stress Disorder*, Psychiatric Times, July 1, 2011, at 1–4, https://www.psychiatrictimes.com/ptsd/assessment-and-diagnosis-posttraumatic-stress-disorder [opinion attachment]. Notably, subdivision 15(d) does not instruct a compensation judge on which test should be used by a medical expert, much less how to apply it. In fact, the DSM-5 itself is silent as to how a psychologist or psychiatrist should evaluate a patient's symptoms. That decision rests with trained psychiatrists and psychologists, not compensation judges.

[4] Of course, nothing in our decision prevents a compensation judge from performing the traditional task of reviewing or analyzing an expert's report in order to evaluate the

We therefore conclude that Minn. Stat. § 176.011, subd. 15(d), does nothing more than require that a diagnosis of PTSD in a workers' compensation case be done by a licensed psychiatrist or psychologist based on the latest version of the DSM.

II.

We now turn to the compensation judge's decision that Dr. Arbisi's diagnosis was more persuasive than Dr. Keller's diagnosis. When reviewing the factual findings of a compensation judge, the WCCA may not "disregard the compensation judge's findings, but must affirm the findings unless they are 'clearly erroneous and unsupported by substantial evidence in view of the entire record as submitted.' " *Pelowski*, 627 N.W.2d at 92 (quoting Minn. Stat. § 176.421, subd. 1). "Substantial evidence is evidence that a reasonable mind might accept as adequate." *Id.* Further, where a dispute centers on the compensation judge's choice between two conflicting expert opinions, the judge's choice between experts must be "upheld unless the facts assumed by the expert in rendering his or her opinion are not supported by the evidence." *Id.* at 93 (citing *Nord*, 360 N.W.2d at 342–43); *see also Gianotti*, 889 N.W.2d at 803. A compensation judge may rely on an expert opinion if it has "an adequate factual foundation." *Hudson v. Trillium Staffing*, 896 N.W.2d 536, 540 (Minn. 2017) (citation omitted). Adequate foundation is lacking where the opinion (1) "does not include the facts and/or data upon which the expert relied in forming the opinion"; (2) "does not explain the basis for the opinion"; or (3) "when the facts assumed by the expert in rendering an opinion are not supported by the evidence."

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expert's credibility, factual foundation, or other aspects relevant to a compensation judge's assessment of an expert's report and conclusions.

Id. (citations omitted). The expert opinion "need only be based on 'enough facts to form a reasonable opinion that is not based on speculation or conjecture.' " *Mattick v. Hy-Vee Foods Stores*, 898 N.W.2d 616, 621 (Minn. 2017) (quoting *Gianotti*, 889 N.W.2d at 802).

We have carefully reviewed the record, including the depositions and medical opinions of Drs. Keller and Arbisi. Dr. Arbisi's opinion was based on enough facts, forms a reasonable opinion, and thus is not based on speculation or conjecture. *See id.* Dr. Arbisi reviewed Smith's medical history, conducted an in-person evaluation and interview, and then produced a detailed report summarizing his findings, evaluation, and diagnosis. Dr. Arbisi was also deposed and rigorously cross-examined by counsel. And critically, Dr. Arbisi based his diagnosis on the DSM-5 criteria for PTSD. Accordingly, we conclude that Dr. Arbisi's opinion included the facts and data upon which he relied in forming his opinion, explained the basis for his opinion, and did not assume facts that are not supported by the evidence. *See Hudson*, 898 N.W.2d at 540. Because Dr. Arbisi's opinion had adequate factual foundation, the WCCA erred by overriding the compensation judge's choice.

CONCLUSION

For the foregoing reasons, we reverse the decision of the Workers' Compensation Court of Appeals and reinstate the decision of the compensation judge.

Reversed.

Assessment and Diagnosis of Posttraumatic Stress Disorder

By Edna B. Foa, PhD and Elna Yadin, PhD

July 1, 2011

Volume: 28 **Issue:** 7

PTSD, Sexual Offenses, Dissociative Identity Disorder, Trauma And Violence

Posttraumatic stress disorder (PTSD) is a chronic and debilitating mental condition that develops in response to catastrophic life events, such as military combat, sexual assault, and natural disasters. The symptoms of PTSD are divided into 3 symptom clusters: reexperiencing, avoidance, and hyperarousal. In addition, trauma survivors often experience guilt, dissociation, alterations in personality, difficulty with affect regulation, and marked impairment in ability for intimacy and attachment.[1,2] Disorders comorbid with PTSD include depression, substance abuse, other anxiety disorders, and a range of physical complaints.[3,4]

Over the past several decades, considerable progress has been made in the development and empirical evaluation of assessment instruments for measuring trauma exposure and PTSD as well as related syndromes, such as acute stress disorder. The measures that have been developed, including questionnaires, structured interviews, and psychophysiological procedures, have been extensively validated and many have been widely adopted internationally. PTSD assessments were developed to be psychometrically sound; to collect information from multiple sources across response channels; and to use across different trauma populations, settings, genders, ethnic groups, and cultures.[5-8]

This article, based on a comprehensive review by Weathers and associates,[9] provides a selective and brief summary of trauma and PTSD assessments in adults.

Diagnosing PTSD

The current diagnostic criteria for PTSD include[10]:

- Exposure to a traumatic stressor (criterion A)

- The development of a characteristic syndrome involving reexperiencing, avoidance and numbing, and hyperarousal symptoms (criteria B through D)

- Duration of at least 1 month (criterion E)

- Clinically significant distress or impairment in social or occupational functioning (criterion F).

A comprehensive assessment of PTSD evaluates all of the diagnostic criteria, assesses associated features and comorbid disorders, and establishes a differential diagnosis. Although some of these tasks can be accomplished with self-report measures, most are best accomplished with a structured interview. Clinical interviews provide opportunities to ask follow-up questions, to clarify items and responses, and to use clinical judgment in making the final ratings.

It is necessary to establish that an individual has been exposed to an extreme stressor that satisfies the DSM-IV definition of trauma as described in criterion A. The patient must have directly experienced the event, witnessed it, or learned about it indirectly; the event must have been life-threatening, involved serious injury, or threatened physical integrity; and it must have triggered an intense emotional response of fear, horror, or helplessness.

In addition to identifying an index event for symptom inquiry, it is important to assess for exposure to other traumatic events across the life span. Exposure to multiple lifetime traumas is typical, and previous traumas may influence reactions to the index event.[3,11] The target trauma is identified as the one that is currently causing the most frequent and severe symptoms. The 17 PTSD symptoms are then rated in relation to that event (**Table 1**). In addition to evaluating the diagnosis and severity of PTSD, a comprehensive assessment often includes an evaluation for the presence of comorbid disorders and associated features.

Several measures are available to help diagnose PTSD and assess its severity. These include structured interviews, self-report measures, and multiscale personality inventories (**Table 2**).

CHECKPOINTS

? Posttraumatic stress disorder (PTSD) assessment instruments are psychometrically sound, can be used to collect information from multiple sources, and can be used to measure different trauma populations.

? Although structured interviews, self-report measures, and multiscale personality inventories are available for assessing PTSD, a structured interview is recommended to evaluate all of the diagnostic criteria, assess associated features and comorbid disorders, and establish a differential diagnosis.

? In addition to identifying an index event for symptom inquiry, it is important to assess patients for exposure to other traumatic events across their life span.

Structured interviews

The comprehensive Structured Clinical Interview for DSM-IV (SCID) is designed to help diagnose all the major DSM-IV disorders.[12] As with all SCID modules, the PTSD module maps directly onto DSM-IV diagnostic criteria. The SCID PTSD module appears to have good reliability and convergent validity in a variety of samples and settings.[13-15]

The Clinician-Administered PTSD Scale (CAPS), which was developed in 1989 at the National Center for PTSD, is a comprehensive structured interview for PTSD.[16,17] The CAPS consists of 30 items: 17 items assess DSM-IV symptoms of PTSD; 5 assess onset, duration, subjective distress, and functional impairment; 3 assess overall response validity, symptom severity, and symptom improvement; and 5 assess associated symptoms, including trauma-related guilt and dissociation. In addition, the CAPS assesses criterion A by means of the Life Events Checklist, which screens for possible trauma exposure. It also includes a trauma inquiry section that evaluates criterion A and identifies an index event for symptom inquiry. At the symptom level, the CAPS yields continuous and dichotomous scores for each item, and at the syndrome level it yields a continuous measure of overall PTSD symptom severity in addition to a dichotomous PTSD diagnosis.

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The CAPS has been studied extensively and has excellent psychometric properties. It is the most widely used structured interview for PTSD and has proved useful for a variety of clinical and research assessment needs. The CAPS published version includes the interview booklet, an interviewer's guide, and a technical manual. The main disadvantage of the CAPS is that it contains many more questions and therefore takes longer than other interviews to administer; it also requires additional training to become proficient in its administration and scoring. Finally, it yields 2 scores that need to be combined to yield an overall index of the intensity of the PTSD symptoms.

The PTSD Symptom Scale–Interview (PSS-I) is a structured interview developed by Foa and colleagues[18] to assess DSM-III-R criteria for PTSD. It consists of 17 questions that correspond to the symptom criteria for PTSD. The current version, modified for DSM-IV, includes combined frequency and intensity ratings. The PSS-I yields a severity/frequency score for each of the 3 PTSD symptom clusters as well as a total PTSD severity score. It also yields a PTSD diagnosis, which is obtained by following a rationally derived scoring system whereby an item is counted as a symptom toward a diagnosis if it is rated as 1 or more.

The PSS-I has excellent psychometric properties.[18] It has strong internal consistency, good test-retest reliability, and excellent validity. Furthermore, it correlates strongly with several self-report measures of PTSD, depression, and anxiety.

In a recent report, the PSS-I generally compared favorably with the CAPS.[19] The PSS-I took significantly less time to administer than did the CAPS. PSS-I is relatively brief and easy to administer; it yields a PTSD diagnosis as well as continuous severity scores for the 3 symptom clusters and the full syndrome. It includes only a single question for each symptom and offers instructions on how to follow up on ambiguous responses.

The Structured Interview for PTSD, developed to assess DSM-III and DSM-III-R criteria for PTSD, was modified in 1997 to correspond to DSM-IV criteria and relabeled as the SIP.[20,21] The SIP consists of 19 items, including 17 items that correspond to DSM-IV diagnostic criteria for PTSD and 2 items that measure trauma-related guilt. Items are rated on a 5-point scale and those that are rated as moderate or higher are considered symptom endorsements. The SIP yields a continuous measure of PTSD symptom severity as well as a dichotomous DSM-IV PTSD diagnosis.

The SIP has excellent interrater reliability and diagnostic agreement.[20] Good diagnostic utility against the SCID PTSD module was reported as well. For the revised version, in addition to excellent test-retest reliability and interrater reliability, moderate to strong correlations with self-report measures of PTSD have been reported, as had moderate correlations with measures of depression and anxiety.[21] Furthermore, the SIP has shown good sensitivity to clinical change as a treatment outcome measure.

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Self-report measures

The Posttraumatic Stress Diagnostic Scale (PDS) is a 49-item self-report measure designed to assess all the DSM-IV diagnostic criteria for PTSD.[22,23] The PDS, which is based on the self-report counterpart of the PSS-I (PSS-SR) is the only stand-alone instrument that assesses all DSM-IV criteria.[18] It was designed as a screening instrument to identify PTSD in the general population or in a population of trauma survivors. The PDS is psychometrically sound.[23]

There is strong internal consistency and good test-retest reliability across the 17 symptom items of the PDS.[22] The PDS correlates well with self-report measures of PTSD, depression, and anxiety. The PDS total severity score and the total number of symptoms endorsed significantly discriminate persons with and without a PTSD diagnosis based on the SCID PTSD module. The PDS has adequate diagnostic utility against the SCID.

The PDS was developed with careful attention to content validity. It yields both a continuous measure of symptom severity and a PTSD diagnosis, and it has excellent psychometric properties. The PDS has been translated into numerous languages and its psychometric properties, which were examined in several cultures, replicate those found in the original study.

The PTSD Checklist (PCL) is a 17-item self-report measure of PTSD developed at the National Center for PTSD in 1990.[24] The 17 PCL items correspond to the 17 DSM-IV symptoms of PTSD. Respondents rate how much they have been bothered by each symptom during the past month using a 5-point scale. The PCL yields a continuous measure of PTSD symptom severity for each of the 3 symptom clusters and for the whole syndrome.

The PCL has been widely adopted (especially by Veterans Administration systems) and extensively evaluated, and it has excellent psychometric properties across a variety of trauma populations.[24-26] The PCL also correlates strongly with other measures of PTSD and combat exposure, and it has demonstrated good diagnostic utility against the SCID PTSD module.

The Davidson Trauma Scale (DTS) is another 17-item self-report measure that assesses DSM-IV diagnostic criteria for PTSD.[27] The format is similar to that of the CAPS in that the frequency and severity of each symptom is rated on separate 4-point scales. The time frame for ratings is the past week. This allows for frequent administrations, which is valuable in treatment outcome studies but limits the use of the DTS as a diagnostic measure.

The DTS appears to have good psychometric properties.[27] It has high internal consistency and strong test-retest reliability. It also demonstrates good convergent and discriminant validity and correlates strongly with several other PTSD measures. In addition, the DTS distinguishes between PTSD severity, and it is sensitive to changes in PTSD severity as a function of treatment. Finally, the DTS demonstrates good diagnostic utility against the SCID PTSD module.

The DTS appears to be a useful measure of PTSD. It is well suited for tracking changes in symptom severity in treatment outcome studies and has been widely adopted for this purpose.[28] One limitation is that little additional psychometric work has been conducted, so it is not clear how well the original findings can be generalized to other samples and settings.

Developed before the formal recognition of PTSD as a mental disorder in DSM-III, the Impact of Event Scale (IES) is the oldest standardized measure of posttraumatic symptoms.[29] Weiss and Marmar[30] developed a 22-item revised version (IES-R) by adding 6 hyperarousal items and 1 dissociative item and by changing the response dimension from symptom frequency to degree of subjective distress, expanding the number of response options from 4 to 5 and relabeling the anchors. The IES-R demonstrates the same high level of reliability and validity as the original IES.[31] Both versions can be used effectively to assess trauma-related symptoms.

The Mississippi Scale for Combat-Related PTSD (Mississippi Scale) is a 35-item self-report measure of PTSD symptoms and associated features.[32] Items are rated on a 5-point scale with anchors that vary according to item content. The Mississippi Scale is the most widely used measure of combat-related PTSD. It has excellent psychometric properties and was selected as the primary PTSD measure in the National Vietnam Veterans Readjustment Study (NVVRS).[6,32-35]

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Assessment and Diagnosis of Posttraumatic Stress Disorder: Page 4 of 4

By Edna B. Foa, PhD and Elna Yadin, PhD

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PTSD, Sexual Offenses, Dissociative Identity Disorder, Trauma And Violence

Multiscale personality inventories

The Minnesota Multiphasic Personality Inventory (MMPI) is one of the oldest and most widely used psychological assessment instruments.[36] The MMPI was revised in 1989, and the MMPI-2, which incorporates a number of new features, has continued the tradition of the MMPI as a preeminent multiscale personality inventory.[37] The MMPI-2 permits a broad, psychometrically sound assessment of personality, psychopathology, and various forms of response bias.

The MMPI-2 assesses the wide range of problems typically seen in the clinical presentation of PTSD and provides sophisticated methods for detecting malingering and other types of response bias. Penk and associates[38] provide a thorough overview of the various clinical applications of the MMPI-2 and describe in some detail how information from the MMPI-2 can be integrated effectively with information from other sources.

Developed in 1991, the Personality Assessment Inventory (PAI) has grown rapidly in popularity in clinical, research, and forensic settings.[39] Because the PAI is a relatively new instrument, only a limited number of studies have investigated its use in the assessment of PTSD. However, the studies that have emerged indicate that the PAI has considerable promise and could be very useful as a research and clinical tool with trauma survivors.

Based on the relatively small amount of literature thus far, the PAI appears to have considerable merit for the assessment of PTSD. As with the MMPI-2, the PAI rigorously evaluates various forms of response bias, assesses a wide range of comorbid syndromes, and contains a specialized PTSD scale. Because it was developed in a construct validation approach, the PAI provides a straightforward assessment of

contemporary constructs related to diagnosis and clinical management. In addition, preliminary evidence suggests that it has discriminant validity for distinguishing PTSD from other commonly comorbid disorders, such as depression.

SUMMARY

Considerable progress has been made in the development and evaluation of standardized measures for assessing trauma exposure and PTSD. A wide variety of instruments and protocols that can provide psychometrically sound and practicable measurement of PTSD for almost any application across settings is available. The use of such instruments is de rigueur for empirical studies and is increasingly expected in clinical settings as well. The growing focus on the use of evidence-based assessment procedures will foster the continued dissemination of such measures until they become part of routine clinical practice.

It is clear that scientific knowledge regarding the phenomenology, etiology, and treatment of PTSD will continue to broaden and deepen, and that sound measurement will play a vital role. The construct of PTSD has fostered a sustained and systematic investigation of the human response to trauma, and evidence-based assessment will continue to provide the foundation for the study and care of those persons who suffer the psychological toll of catastrophe.

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