SPECIAL COMMUNICATION

Common Data Elements for Posttraumatic Stress Disorder Research

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ABSTRACT. Kaloupek DG, Chard KM, Freed MC, Peterson AL, Riggs DS, Stein MB, Tuma F. Common data elements for posttraumatic stress disorder research. Arch Phys Med Rehabil 2010;91:1684-91.

An expert work group with 7 members was formed under the cosponsorship of 5 U.S. federal agencies to identify common data elements for research related to posttraumatic stress disorder (PTSD). The work group reviewed both previous and contemporary measurement standardization efforts for PTSD research and engaged in a series of electronic and live discussions to address a set of predefined aims. Eight construct domains relevant to PTSD were identified: (1) traditional demographics, (2) exposure to stressors and trauma, (3) potential stress moderators, (4) trauma assessment, (5) PTSD screening, (6) PTSD symptoms and diagnosis, (7) PTSD-related functioning and disability, and (8) mental health history. Measures assigned to the core data elements category have relatively low time-and-effort costs in order to make them potentially applicable across a wide range of studies for which PTSD is a relevant condition. Measures assigned to the supplemental data elements category have greater costs but generally demonstrate stronger psychometric performance and provide more extensive information. Accordingly, measures designated as supplemental are recommended instead of or in addition to corresponding core measures whenever resources and study design allow. The work group offered 4 caveats that highlight potential limitations and emphasize the voluntary nature of standardization for PTSD-related measurement.

Key Words: Diagnostic techniques and procedures; Outcome assessment; Rehabilitation; Stress disorders, post-traumatic.

THE CHARGE GIVEN to the PTSD Work Group was to define a common set of PTSD-related variables for inclusion in demographics and clinical assessment, and to recommend screening, assessment, and common outcome measures for use across studies for which PTSD-related measurement is

List of Abbreviations

CAPS	Clinician Administered Posttraumatic Stress Disorder Scale
CES	Combat Exposure Scale
CTQ	Childhood Trauma Questionnaire
DoD	Department of Defense
DRRI	Deployment Risk and Resilience Inventory
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition
ICD-9	International Classification of Diseases, Ninth Revision
INTRuST	Injury and Traumatic Stress Clinical Consortium
LEC	Life Events Checklist
PCL	Posttraumatic Stress Disorder Checklist
PCL-C	Posttraumatic Stress Disorder Checklist Civilian
PCL-M	Posttraumatic Stress Disorder Checklist Military
PCL-S	Posttraumatic Stress Disorder Checklist Specific Event
PC-PTSD	Primary Care Posttraumatic Stress Disorder Screen
PDS	Posttraumatic Diagnostic Scale
PSS-I	Posttraumatic Stress Disorder Symptom Scale Interview Version
PTSD	posttraumatic stress disorder
SDS	Sheehan Disability Scale
SES	socioeconomic status
SF-12	Medical Outcomes Study–Short Form (12-item version)
SF-36	Medical Outcomes Study–Short Form (36-item version)
STRONG STAR	South Texas Research Organizational Network Guiding Studies on Trauma and Resilience
TBI	traumatic brain injury
TLEQ	Traumatic Life Events Questionnaire
VA	Department of Veterans Affairs
VR-12	Veterans RAND Health Survey–Short Form (12-item version)
VR-36	Veterans RAND Health Survey–Short Form (36-item version)

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relevant. The PTSD Work Group effort was shaped by the aim of promoting convergence between research on PTSD and research on TBI.[1]

NATURE OF WORK GROUP EXPERTISE

Members of the PTSD Work Group were recruited and appointed by the Common Data Elements Interagency Steering Committee.[1] The PTSD Work Group provided wide-ranging expertise related to the development and validation of measures for trauma exposure and PTSD, the etiology of PTSD (particularly in relation to sexual assault and military combat), PTSD occurring in the context of TBI, evidence-based interventions for combat stress disorders, the use of health services by and the cost-effectiveness of care for military populations, the stress-related needs of military families during combat deployments, and health care system factors relevant to mass trauma and violence.

BACKGROUND

Importance and Relevance of PTSD

PTSD is a prominent mental health condition with an estimated prevalence of approximately 8% in the general adult population of the United States[2] and rates that are substantially higher in select subpopulations that include both past and current combat-exposed military personnel.[3,4] PTSD is noteworthy for high levels of psychiatric comorbidity, particularly the presence of depression and/or substance use disorders.[5] These co-occurring conditions typically develop after PTSD,[6,7] and their presence contributes to both distress and impaired ability to function in key life roles (eg, work and family).[8] Directly and indirectly, PTSD is projected to have substantial negative economic consequences.[9]

Experiences involving injury and threat to life are considered causal in triggering posttraumatic distress and are a required element of the formal diagnostic criteria for PTSD. There is potential for co-occurrence with TBI because the same types of experiences can be instrumental in both conditions.[10] In addition, the scientific and clinical picture regarding TBI/PTSD comorbidity is complicated by a degree of symptom overlap (eg, complaints about concentration and memory) and the likelihood that either condition can potentially complicate treatment of the other.[11,12] Given these considerations, PTSD-related assessment is potentially relevant for many studies that focus primarily on TBI issues.

Work Group Process

Background information was distributed to PTSD Work Group members in January 2009. This included a book chapter[13] summarizing recommendations for PTSD-related measurement that had been formulated by a conference in 1995 sponsored jointly by the VA and the National Institute of Mental Health. These recommendations provided a foundation for the current effort.

Key recommendations from the 1995 conference included the following: (1) promoting use of psychometric properties (ie, validity, reliability, clinical utility) to evaluate and compare the quality of measures; (2) asserting the preference for structured diagnostic instruments that allow both dichotomous and continuous rating of PTSD symptoms; (3) noting the importance of evaluating impairment and disability associated with PTSD symptoms as indicators of condition severity; (4) stating the necessity of evaluating both A1 (exposure) and A2 (reactions) criteria when assessing traumatic stressors; and (5) specifying that trauma history-taking include questioning about a range of potential traumatic event types (eg, disasters, accidents) across the lifespan, with detailed examination of key characteristics for each endorsed event (eg, perceived life threat, associated injury, duration).

PTSD Work Group members Murray Stein and Alan Peterson each identified data standardization efforts for PTSD-related and TBI-related research with which they already were involved. Stein made available a draft document outlining the uniform data set that is under development by the INTRuST (see background[11]). Peterson made available the list of measures recommended by the multidisciplinary STRONG STAR research consortium (http://www.strongstar.org). The PTSD Work Group took account of the expert contributions made to these standardization efforts and recognized the potential for cross-study comparison that might result from measurement recommendations that align with those produced by these 2 influential research consortia.

The general process involved individual PTSD Work Group members reviewing measures in their assigned construct domains and then presenting relevant information and issues for discussion. This work was accomplished via e-mail and a series of conference calls. These exchanges were collaborative and constructive, with consensus reached quickly in most instances. Consensus was aided by substantial convergence between INTRuST and STRONG STAR recommendations, as well as the relative maturity of assessment methods in the traumatic stress field.

Factors Influencing Selection of Constructs

The PTSD Work Group engaged in a nomination process identifying 8 construct domains that are featured in PTSD-related assessment and research: (1) traditional demographics, (2) exposure to stressors and trauma, (3) potential stress moderators, (4) trauma assessment, (5) PTSD screening, (6) PTSD symptoms and diagnosis, (7) PTSD-related functioning and disability, and (8) mental health history. These key domains guided the scope of the effort and provided a framework for grouping the measures.

Distinguishing Between Core and Supplemental Data Elements

Variables or measures were assigned to the core data elements category if they generally require few resources (eg, involve self-report rather than clinical interview) and pose limited respondent burden (eg, have a low number of items). The relatively low time-and-effort costs of these measures make it feasible to consider applying them across a wide range of studies for which PTSD is a relevant psychologic health condition.

Measures listed in the supplemental data elements category generally show stronger psychometric performance than their counterparts in the core data elements category, and they invariably provide information that broadens or refines the scope of inquiry. For these reasons, supplemental data elements are recommended instead of or in addition to their core data elements counterparts whenever resources and study design allow.

Factors Influencing Selection of Measures

Work Group decisions were guided by considerations that included favorable psychometric evidence (eg, validation and reliability), utility (eg, applicability), extent of adoption in the relevant scientific literature, resource requirements (eg, time required for administration, need for an interviewer), and burden on respondents. The impact of each consideration differed across variables and measures. For example, 2 measures might be comparable in terms of adoption but distinguished from one another on administration time, whereas 2 other measures might be compa-