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Improving Assessment of Race, Ethnicity, and Culture to Further Veteran PTSD Research

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Objective: Racial and ethnic disparities in posttraumatic stress disorder (PTSD) and its treatment have been documented for both civilians and military veterans. To better understand the presence of disparities and factors that might contribute to them, accurate assessment of race and ethnicity is critical; however there still remains unstandardized assessment and challenges to implementation. The authors highlight specific problems in the assessment of race and ethnicity in research, such as missing data, misclassification, classification categories too limited to reflect many people's social identities, and inappropriate aggregation of ethnoracial subgroups. **Conclusions:** A proposal is made for a minimal uniform assessment standard of race and ethnicity. Additional recommendations incorporate principles proposed by the Institute of Medicine that allow for more granular assessment of race and ethnicity to better capture individual identity and cultural factors as they relate to the assessment, experience and management of PTSD.

Keywords: PTSD, veteran, race, ethnicity, assessment

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U.S. society is becoming increasingly diverse in its multiracial and multiethnic population, and research must also grow to address current and future diversity while also addressing the remaining gaps and disparities in health such as in the prevalence of post-traumatic stress disorder (PTSD) across racial and ethnic groups. For example, a review study showed Latinos had higher rates of PTSD compared with their European American counterparts (Pole, Gone, & Kulkarni, 2008). Data from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) showed PTSD risk, after controlling for exposure, to be higher for African Americans (Blacks) and lower for Asians (Alegria et al., 2013; Friedman, 1998; Roberts, Gilman, Breslau, Breslau, & Koenen, 2011). Hispanic/Latino ethnicity has also been found to be associated with PTSD independent of covariates in a post 9/11 study (Galea et al., 2002), and there is some indication of conditional risk for PTSD among Latinos based on a systematic review of primarily nonveteran studies (Alcántara, Casement, & Lewis-Fernández, 2013). Although there is considerable variability in the designs of studies examining ethnoracial factors in PTSD (Adams & Boscarino, 2005; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995), there appears to be some ethnoracial factors in PTSD that cannot be accounted for solely by covariates such as socioeconomic factors (Mainous, Smith, Acierno, & Geesey, 2005). Given these ethnoracial disparities in PTSD prevalence, there is a need to more closely examine factors that may give rise to these disparities. Differences may be due to factors such as types and numbers of trauma, cultural difference in how traumatic events and attendant affect are processed and managed, or other unmeasured factors affecting prevalence (e.g., poverty, medical illness, familial support, access to mental health care). Thus, the need for accurate and meaningful assessment of race/ethnicity and ethnocultural factors in PTSD research is increasingly important.

Race and Ethnocultural Factors Are Relevant to PTSD Research and Care in Veterans

Research on sociodemographic disparities related to psychological trauma is yet relatively underdeveloped and underexplored, particularly in veteran PTSD research. Race can impact one's everyday experiences and mental health through explicit or implicit definitions (e.g., self-identification or racial stereotyping), and how those definitions shape interactions and access to resources (Kaholokula et al., 2012). Ethnic identity, related to one's cultural group, is important because ethnic norms and beliefs may impact the validity of psychological diagnoses, the acceptability of and response to evidence-based treatments, and the development of culturally competent care (American Psychological Association, 2003; González-Prendes, 2013; Hinton & Lewis-Fernández, 2011; van Rooyen & Nqweni, 2012; Warren, 2013).

Despite the number of studies examining ethnoracial factors in PTSD in the civilian sector, there are far fewer studies examining the role of ethnoracial factors in veteran PTSD. Overall, few differences by race/ethnicity have been found in veterans (Frueh et al., 2002; Macdonald, Greene, Torres, Frueh, & Morland, 2013; Trent, Rushlau, Munley, Bloem, & Driesenga, 2000). The National Vietnam Veteran Readjustment Study (NVVRS) found Hispanics and African Americans veterans had higher rates of PTSD than Whites (Kulka et al., 1990). When the NVVRS data was adjusted for premilitary and military experiences, it was found that Hispanic

Vietnam veterans had a higher probability of experiencing PTSD than nonminority veterans. However, elevated rates of chronic PTSD in Black veterans could be explained by greater exposure to war zone stressors, and elevated rates in Hispanic veterans explained by greater exposure, younger age, lesser education, and lower armed forces qualification test scores when compared with White veterans (Dohrenwend, Turner, Turse, Lewis-Fernandez, & Yager, 2008). With respect to PTSD symptoms, higher levels of PTSD symptoms in Hispanic veterans may be attributed to greater endorsement of positive symptoms (e.g., hypervigilance, intrusive thoughts and flashbacks) than compared with White veterans (Marshall, Schell, & Miles, 2009). Differences by race/ethnicity may also be related to sex-related differences, such as prior trauma exposure reported by African American female veterans more likely to be physical assault compared with White female veterans reporting child sexual abuse (Grubaugh, Slagle, Long, Frueh, & Magruder, 2008). Recent meta-analytic findings suggest that it may be important to consider potential disparities in PTSD among non-Caucasian veterans in order to adequately direct services to the veteran population (Fulton et al., 2015).

These studies mentioned above illustrate the need to address hidden disparities and also to improve engagement and treatment for trauma and PTSD in minority veteran populations. Better understanding of how race and ethnicity interact with other factors to impact access to care, quality of care, and treatment efficacy is needed (American Psychological Association, 2003; Institute of Medicine, 2009; Parker et al., 2004) among military veterans. For example, a recent study of PTSD service use in veterans found that African Americans were less likely to receive a minimal trial of any treatment, including pharmacotherapy, in the six months following a PTSD diagnosis (Spooft et al., 2015). However, administrative and research data on race/ethnicity have been problematic due to variations in assessment leading to potential misclassification of participants, which has implications for treating our veteran population. We highlight several examples of problems in assessment related to race and ethnicity.

Examples of Specific Problems in Research Related to Race and Ethnicity

Missing or misclassified data. Prior to compliance with the Office of Management and Budget (OMB) revised standards for the collection on race/ethnicity data (released in 1997, but not implemented in the Veterans Health Administration [VHA] until 2003; Office of Management & Budget, 1997), hospitals in the VHA often relied on varying methods to determine patient race and ethnicity (i.e., patient self-report, employee observation, etc.; Mor, 2014; Sohn et al., 2006). Completeness and accuracy of ethnicity data in the VHA Medical Data Sets traditionally has been low—for example, 36% of inpatient facilities have blank ethnicity data for all records (Mor, 2014). However, rates of usable (not 'missing' or 'unknown' or 'declined') race data have increased in the last 20 years (57% in 1997 to over 85% in 2014; Mor, 2014), and there have been noteworthy efforts to cross-validate race/ethnicity information from multiple sources such as the Operation Enduring Freedom/Operation Iraqi Freedom/Operation New Dawn (OEF/OIF/OND) Roster with the VA National Patient Care Database (NCPD) to reduce missing data (Koo, Hebenstreit, Madden, & Maguen, 2016; Koo, Hebenstreit, Madden, Seal, & Maguen,

2015). Unfortunately, misclassification remains higher for some groups (i.e., Native American, Asian, and Pacific Islander patients; Kressin, 2015; Kressin, Chang, Hendricks, & Kazis, 2003).

Sticking to the minimum: When less is not more. Besides conforming to existing federal minimum standards for reporting race (Office of Management & Budget, 1997), there currently is no consistent, uniform approach to measuring or reporting race/ethnicity among VHA research protocols. For example, some studies reported standard federal minimum categories (Murdoch, Hodges, Cowper, Fortier, & van Ryn, 2003), and others assessed more specific subgroups, only to later aggregate them across broader racial categories (Macdonald et al., 2013). Aggregation allows for general statements about potential group differences, but at the cost of being able to say anything about specific groups, which may obscure the ability to determine what underlies the group differences (Koo, Madden, & Maguen, 2015). The procedures using preaggregated categories makes comparisons of associations with race/ethnicity correlates across studies difficult, and also does not allow for meta-analytic pooling of results to examine potential subgroup differences that appear in small numbers in individual studies (Hasnain-Wynia & Baker, 2006), such as “minority” groups.

To aggregate or not to aggregate? When specific race and ethnicity information is collected, it is common to aggregate some groups which are typically found in very small numbers in many regions of the United States. For example, Koreans, Native Hawaiians, and Chinese may be frequently classified into a single broader Asian/Pacific Islander (API) category (Koo et al., 2016; Koo, Hebenstreit, et al., 2015; Koo, Madden, et al., 2015). However, this approach may not always be appropriate. An example for disaggregating API can be seen in the Hawai‘i Vietnam Veterans Project (HVVP) which found significantly lower rates of current and lifetime PTSD for Japanese American veterans compared with European American veterans in the NVVRS, whereas Native Hawaiian veterans showed comparable rates and more severe symptoms than European American counterparts (Friedman, Schnurr, Sengupta, Holmes, & Ashcraft, 2004). A more recent study that examined Iraq and Afghanistan veterans residing in Hawai‘i found that those identifying as Asian American were significantly less likely to screen positive for PTSD than those identifying as Native Hawaiian/Pacific Islander and European American (16.4% vs. 44.4% and 39.2%, respectively; Whealin et al., 2013). Whealin and colleagues also found potential between-groups differences in PTSD severity, risk factors, and resilience factors (Whealin et al., 2015) in a study of Native Hawaiian, Filipino American, Japanese American, and European American National Guard members from the Pacific region. When controlling for other factors, guard members who identified as being Japanese American scored significantly lower than other subgroups on a screen for PTSD (Whealin et al., 2015). Also, in a study examining a large battery of functional measures in veterans who were seeking care at VA clinics (Spira, Onoye, Marx, & Rodriguez, 2014), there were surprisingly few overall differences across illness, functioning, or health services utilization in an ethnically diverse sample. However, there were differences for greater severity of alcohol and somatization problems in Pacific Islander veterans compared with other groups. Pacific Islanders as well as Asians also had elevated rates of reported suicidal ideation and hallucinations. These findings suggest that aggregating some racial/ethnic groups into a single cat-

egory may mask important subgroup differences. Furthermore, if race/ethnicity assessment had only included Asian/Pacific Islander as an identification option, it would not have allowed for further analyses of subgroup differences.

Challenges With Current Assessment Approaches of Race and Ethnicity

Current practices in research typically follow the guidance from OMB on assessment of race and ethnicity information (Office of Management & Budget, 1997). Given some of the problems related to race/ethnicity assessment, we discuss some of the surrounding contexts that pose challenges in moving toward the improved assessment of race/ethnicity and culture.

Acknowledging constructs are complex and yet moving forward. Race, ethnicity, and culture are concepts which are complex, interrelated, and socially constructed. Although race traditionally has been related to categorizations based on phenotypic features (e.g., skin color), ethnicity typically has been related to categorization of people on shared cultural characteristics (e.g., geography, history; Racher & Annis, 2007). Culture is also shared among a particular group of people in its lifestyle, beliefs and values, rules and traditions, and so forth, and related to ethnic expression of the group (Racher & Annis, 2007). There is a clear need for more in-depth discussion on the nature of these constructs; however, the varying definitions of these constructs often pose a challenge. One approach to evaluating race and ethnicity recommends that both constructs should be distinctly differentiated and assessed accordingly (Moubarac, 2013); on the other hand, depending on the context of the study these distinctions may not be relevant to the research in question (Schwartz et al., 2014; Umaña-Taylor et al., 2014). Although we acknowledge the complexity and interrelatedness of these constructs, and the varying needs and interests of researchers, we nevertheless advocate for moving toward a more standardized assessment approach which is needed to improve the research and care for individuals with PTSD.

Reporting to the funders: Can we move beyond the bottom line? Because it is important for researchers to be able to conform to the reporting requirements of funders such as the National Institutes of Health (NIH) or VHA, we recognize that researchers may be most familiar with the accepted standard for assessing and reporting race/ethnicity. Typically, ethnicity (Hispanic/Latino or not) is asked in a separate item from basic race categories (e.g., White, Black, Asian, Native Hawaiian/Pacific Islander, American Indian/Alaska Native) to be able to distinguish between the two constructs. Although this facilitates federal reporting requirements, there are some drawbacks to this approach, as utilizing the basic categories may still elicit nonresponse by individuals who do not differentiate their identification by race versus ethnicity. For example, similar to the Census studies (U.S. Census, 2012), individuals who are Hispanic/Latino (which is singled out as the only ethnicity to assess) may not further identify with any other category or race. This limits the specificity and the generalization of findings for particular groups, and potentially obscures findings related to health and health care disparities.

Small sample sizes for certain underrepresented ethnorracial groups. Much research comparing race or ethnicity primarily includes individuals from European American, African American,

or Hispanic/Latino groups (Frueh, Elhai, Monnier, Hamner, & Knapp, 2004). However, there may be different patterns of prevalence within typically smaller sized samples of understudied ethnorracial groups. Often, research on underrepresented groups with small samples lack power, even though effect sizes or odds ratios may be similar to those of other large minority groups (Tsai, Desai, Cheng, & Chang, 2013). These differences are even less likely to be detected when smaller sample sizes of subgroups are collapsed into a generic “Other” group or other aggregate groups such as Asian/Pacific Islander (Tsai et al., 2013). More emphasis needs to be given to study designs that can facilitate preparation for future meta-analytic studies by including specific underrepresented ethnorracial groups, even if these distinctions do not result in significant differences for an individual study. Although capturing data from smaller underrepresented minority groups may be of little importance to an individual investigator, proactive efforts could be made to collect data on such groups to answer questions in the future. Over time the accumulation of these individual studies will allow for data pooling across studies.

Archival studies depend on accurate assessment and coding. The use of secondary or administrative data poses a challenge when one considers the variation in individual assessment approaches (e.g., due to policy, chronology of data sets) for race/ethnicity that may be reflected in the larger data system over time. Besides the aforementioned problems with missing or misclassified data, whatever race/ethnicity data does exist must be examined for uniformity and usability with potential constraints placed on the level of ethnorracial information available for analyses (e.g., only large racial categories) that can be bridged across multiple studies.

Assessment of race/ethnicity is not documented or not standardized. The lack of documentation of the assessment method used in a study (e.g., self-report, observer rating, selection of multiple categories; Ford & Kelly, 2005) is another problem in determining the accuracy and quality of race/ethnicity assessment. A review of studies in high-impact journals for public health and epidemiology found that there was a lack of transparency in the methods used to assess race and/or ethnicity (Moubarac, 2013). Lack of documentation on how race/ethnicity was assessed in the methods sections of primary and secondary analyses was typical, including in studies of veterans (C’de Baca, Castillo, & Qualls, 2012).

Furthermore, previous investigators (Ford & Kelly, 2005) have noted that a lack of a core set of basic demographic items (while also using research-specific expanded measurement items) shared across research studies prevents accurate comparison of data across studies as well as future pooling efforts. Standardizing such practices is necessary to disentangle the effects of race and ethnicity from the effects of other demographic factors.

Lack of measured cultural factors. Although the measurement and reporting of race/ethnicity is generally accepted in administrative and research protocols, the direct assessment of ethnocultural identification, cultural factors or acculturation (which are often key mediators of apparent “racial” differences; Kagawa Singer, 2012) is rarely undertaken in studies of veteran populations (Schwartz, Unger, Zamboanga, & Szapocznik, 2010), possibly due to time constraints, lack of familiarity with the constructs, or lack of interest. However, the accurate identification of ethnicity and race is an essential first step toward understanding what cultural

factors might be salient. For researchers whose aim is to study the influence of ethnocultural factors on psychological outcomes, it may be necessary to go further to assess strength or level of ethnocultural identification based on beliefs and/or practices, as well as assess factors that can influence acculturation to mainstream (predominantly European American) values, beliefs, and behaviors. Additionally, factors such as immigration status, length of residence in the United States, socioeconomic status, and language may distinguish minority-status veterans from minority-status individuals in civilian populations (Morren, Gelissen, & Vermunt, 2012). For example, a substantially larger percentage of Asian American/Pacific Island veterans are U.S. Citizens (94.9%) compared with Asian American/Pacific Islanders in the general U.S. population (77.3%), which may explain why there may be differential findings of Asian American/Pacific Island groups in veterans compared with civilian populations.

What Is Needed

As we move toward a society with an increasingly diverse and multiracial and multiethnic population, we must accommodate current and prepare for future diversity. However, researchers often overlook accurate and specific ethnorracial delineation when they are not a specific focus of a study (e.g., race/ethnicity is measured simply to describe a sample, or rule out statistical covariate). However, even in these cases, researchers may miss important covariates if overly broad categories or imprecise data collection methods are used. Also, the quality of future studies wishing to aggregate research through meta-analyses or in a data repository will depend upon the quality of the data collected from each of the constituent studies. Therefore, research on trauma and other psychological factors will benefit from (a) clearer identification of race and ethnicity, (b) greater consistency across studies, and (c) improved accurate description of data collection methods (Kressin, 2015).

Considerations and Recommendations

We advocate to improve assessment for race, ethnicity and culture in veteran PTSD research, and bring up two main recommendations for consideration in near future studies.

A more granular assessment for race/ethnicity. Going beyond the traditionally required reporting approach, we posit that assessing race/ethnicity with more granularity will provide information to meet reporting requirements, but it will also enhance accurate clarification of race/ethnicity. With the impetus from federal agencies, the Institute of Medicine (IOM) Subcommittee on Standardized Collection of Race/Ethnicity Data for Health care Quality Improvement underwent a comprehensive process to examine models for collecting and coding race, ethnicity, and language data and formed recommendations for improvement (Institute of Medicine, 2009). We strongly agree with one of the IOM’s foremost recommendations to collect granular data on ethnicity using categories applicable to the population being served or studied (Institute of Medicine, 2009). We also recommend that data on multiple races should be collected as multiple responses to a single question rather than requiring multiracial participants to endorse a single “multiracial” category (Institute of Medicine, 2009; Parker et al., 2004). The benefit of this approach is that with

greater level of detail, future studies may be able to elucidate differences specific to ethnoracial factors.

We advocate for further discussion and adoption of a standardized assessment which includes both broad and more detailed ethnoracial groupings in which one is categorized from perspectives of self-identification, and also other-identification. The more granular ethnoracial groupings, such as in the IOM template for granular ethnicity and rollup scheme (Appendix E; *Institute of Medicine, 2009*) allows for aggregation to categories which map on to the existing reporting guidelines of federal agencies. We propose an instrument where two questions should be included (a) a “select all that apply” range of categories; and (b) a query for a primary self-identification(s). Also, a third item should assess how others generally identify the individual. An example assessment tool and description of a development process can be found in the online Supplemental Material and may be considered as an illustration of the approach to granularity in a sample data collection instrument which can be tailored to the needs of the research study.

A “check all that apply” assessment procedure allows people to more realistically convey their racial background and the ethnoracial group(s) that they identify with. If this approach is used, multiple endorsements can be addressed in several ways, such as creating additional grouping of high-frequency multiple endorsements and asking which group is most salient to the respondent (i.e., identifies most with). For the purposes of study analyses, an investigator may be interested in specific combinations of racial/ethnic identification (*Liebler & Halpern-Manners, 2008*), or relationship of outcomes to their primary identification, or both. Alternatively, there is the option to aggregate the granular data into broader categories such as “Asian-White” which may be more informative than “more than one race” category that has traditionally been used in order bridge data across studies to perform meta-analyses.

Further, asking how an individual is perceived by others can provide information about how implicit or explicit racial categorization can shape how other people interact with them, and potentially shed light on the resulting implications for their self-perception, mental health, and access to resources (*Cook, Arrow, & Malle, 2011; Kaholokula et al., 2012*).

Other considerations for further exploration in ethnocultural assessment. Although not the focus of this article, we introduce additional considerations for measuring ethnic identification and for other culture related factors in order to highlight their relevance to improving assessment of race, ethnicity and culture.

Some types of research studies—such as those that assess the validity of psychological diagnoses, the acceptability of and/or response to evidence-based treatments, and the provision of culturally competent care—also necessitate a specific measure of ethnocultural identification (*American Psychological Association, 2003; González-Prendes, 2013; Hinton & Lewis-Fernández, 2011; van Rooyen & Nqweni, 2012; Warren, 2013*). Although there are fewer studies that routinely incorporate ethnic identity measures as part of assessment procedures, we encourage investigators to explore and consider opportunities to enhance their data collection and move beyond minimum standard categories of race and ethnicity.

Several measures are available that assess the strength or level of ethnocultural identification via, for example, participants’ re-

ported cultural beliefs and/or practices. The Ethnic Identity Scale (EIS; *Umaña-Taylor, Yazedjian, & Bámaca-Gómez, 2004*), the Ethnic Identity Scale Brief (EIS-Bf; *Douglass & Umana-Taylor, 2015*) and the Multigroup Ethnic Identity Measure-Revised (MEIM-R; *Phinney & Ong, 2007*) are examples of brief scales to obtain such information. If there is an endorsement of multiple “primary” ethnic identities, the assessment may be repeated for each of the additional primary identifications, as well as with a dominant ethnocultural identification, if appropriate to the context of the study.

Depending on the questions being studied, other related cultural parameters may include: the number of generations the family has lived in the United States; the members in the household (e.g., multigenerational living situation); the number of years since migrating to the United States; the primary language(s) spoken (e.g., in the household, community, how often used, with whom); zip codes or other geographic information (e.g., region, rurality); and race or ethnic identity as perceived by others (e.g., family, friends, health care providers).

Finally, when an investigators’ work focuses on studying specific cultural groups (e.g., within a geographically defined community) to which the investigators do not belong, we recommend that they consult with members of that community to inform the project methodology. For example, in addition to formal or informal focus groups or interviews with the target research group, it is advisable to have a subject matter expert (i.e., cultural broker) for that cultural subgroup, and/or incorporate representatives from the community into a project advisory board during the development and implementation of assessment methodology. Such input will inform whether beliefs about mental health, socioeconomic factors, history or sociopolitical issues such as racism, discrimination, and cultural trauma (*Gone, 2004*) impact how an assessment measure is interpreted and/or completed which may not only improve the cultural accuracy of the research, but also improve data collection from the community (*Mir et al., 2013*). However, in these types of studies, it is expected that researchers should seek to be knowledgeable about relevant cultural contexts and potential ethical considerations prior to and while interacting with the community and building relationships for partnership. As mentioned, we frame these as considerations to be explored more fully and appropriately by researchers as they progress beyond a minimum standard of race and ethnicity assessment.

Conclusion and Thoughts for Further Discussion

Even though attempting to quantify distinct race/ethnicity categories is important and can yield information about broad patterns, it is important to note that there will be variability in the experiences among individuals within a group. We acknowledge the limitations in generalizing race and ethnicity factors, because people exist as intersections of multiple identities and influences. Intersections describe the complex realities of our concurrent multiple identities and the ways unique combinations of identities can affect how individuals live as members of the different groups (*Parker et al., 2004*). Even so, there is value in considering a more precise, uniform approach to assessing race/ethnicity for veteran PTSD and trauma research. To move the field beyond minimal federal categories, studies should try to include a sufficient number of racial/ethnic minorities for subgroup analyses for the study

question and to facilitate cross-study comparisons and potentially add to larger data repository samples. Furthermore, documenting how race/ethnicity is measured and used in a research study is also needed. Although the recommendations here are suggested for new studies, this is particularly relevant for research which may utilize the future existing secondary sources such as regional or national administrative data. As more researchers being to engage in systematic approaches for reporting and documenting race/ethnicity and culture related factors, a method for tracking the adoption of these practices in the literature, such as the GAP-REACH checklist for assessing ethnicity/race/culture in published studies, may be useful (Lewis-Fernandez et al., 2013).

Given that veterans also receive care in the community, it is increasingly important for researchers and practitioners to be aware that needs for veteran mental health are likely to be addressed by community practitioners as well as the veteran health care system. The contexts of race/ethnicity for veteran care and support will be applicable to both community providers and VHA. There still currently exists a lag in prioritizing the importance of race/ethnicity as a subtopic in new models of mental health for military populations (e.g., Psychological Health Research Continuum; Castro, 2014), however, researchers can help to elevate their importance.

Although not a permanent solution, small adjustments to the assessment of ethnic/racial factors may be easily integrated into existing data collection procedures for individual investigations. Large data systems are likely to grapple with constraints of policy, capacity, coordination/exchange, as well as in training of staff for implementation (IOM Report Chapter 6 Implementation; Institute of Medicine, 2009). Nonetheless, as new information system protocols are developed, the timing may be ripe to incorporate more optimal measures for assessing race or ethnocultural factors. Researchers who are interested in more focused inquiry on race or ethnocultural factors are encouraged to seek appropriate consultation and expertise. Each investigation is unique, and so there is no one-size-fits-all approach to assessing race, ethnicity, and culture. The recommendations offered here put forth a call for greater mobilization among researchers to accelerate the progress in race and ethnocultural factors in PTSD with the long-term outcome aimed at enhancing the quality of research, ensuring social justice, and ultimately improving the health of veterans.

References

- Adams, R. E., & Boscarino, J. A. (2005). Differences in mental health outcomes among Whites, African Americans, and Hispanics following a community disaster. *Psychiatry: Interpersonal and Biological Processes*, 68, 250–265. <http://dx.doi.org/10.1521/psyc.2005.68.3.250>
- Alcántara, C., Casement, M. D., & Lewis-Fernández, R. (2013). Conditional risk for PTSD among Latinos: A systematic review of racial/ethnic differences and sociocultural explanations. *Clinical Psychology Review*, 33, 107–119. <http://dx.doi.org/10.1016/j.cpr.2012.10.005>
- Alegría, M., Fortuna, L. R., Lin, J. Y., Norris, F. H., Gao, S., Takeuchi, D. T., . . . Valentine, A. (2013). Prevalence, risk, and correlates of posttraumatic stress disorder across ethnic and racial minority groups in the United States. *Medical Care*, 51, 1114–1123. <http://dx.doi.org/10.1097/MLR.000000000000007>
- American Psychological Association. (2003). Guidelines on multicultural education, training, research, practice and organizational change for psychologists. *American Psychologist*, 58, 377–402. <http://dx.doi.org/10.1037/0003-066X.58.5.377>
- Castro, C. A. (2014). The U.S. framework for understanding, preventing, and caring for the mental health needs of service members who served in combat in Afghanistan and Iraq: A brief review of the issues and the research. *European Journal of Psychotraumatology*, 5, 24713. <http://dx.doi.org/10.3402/ejpt.v5.24713>
- C'de Baca, J., Castillo, D., & Qualls, C. (2012). Ethnic differences in symptoms among female veterans diagnosed with PTSD. *Journal of Traumatic Stress*, 25, 353–357. <http://dx.doi.org/10.1002/jts.21709>
- Cook, J. E., Arrow, H., & Malle, B. F. (2011). The effect of feeling stereotyped on social power and inhibition. *Personality and Social Psychology Bulletin*, 37, 165–180. <http://dx.doi.org/10.1177/0146167210390389>
- Dohrenwend, B. P., Turner, J. B., Turse, N. A., Lewis-Fernandez, R., & Yager, T. J. (2008). War-related posttraumatic stress disorder in Black, Hispanic, and majority White Vietnam veterans: The roles of exposure and vulnerability. *Journal of Traumatic Stress*, 21, 133–141. <http://dx.doi.org/10.1002/jts.20327>
- Douglass, S., & Umama-Taylor, A. J. (2015). A brief form of the Ethnic Identity Scale: Development and empirical validation. *Identity: An International Journal of Theory and Research*, 15, 48–65. <http://dx.doi.org/10.1080/15283488.2014.989442>
- Ford, M. E., & Kelly, P. A. (2005). Conceptualizing and categorizing race and ethnicity in health services research. *Health Services Research*, 40, 1658–1675. <http://dx.doi.org/10.1111/j.1475-6773.2005.00449.x>
- Friedman, M. (1998). The Matsunaga Vietnam Veterans Project. *PTSD Research Quarterly*, 9, 7. Retrieved from <http://www.ptsd.va.gov/professional/newsletters/research-quarterly/V9N4.pdf>
- Friedman, M. J., Schnurr, P. P., Sengupta, A., Holmes, T., & Ashcraft, M. (2004). The Hawai'i Vietnam Veterans Project: Is minority status a risk factor for posttraumatic stress disorder? *Journal of Nervous and Mental Disease*, 192, 42–50. <http://dx.doi.org/10.1097/01.nmd.0000105999.57129.ee>
- Frueh, B. C., Elhai, J. D., Monnier, J., Hamner, M. B., & Knapp, M. (2004). Symptom patterns and service use among African American and Caucasian veterans with combat-related PTSD. *Psychological Services*, 1, 22–30. <http://dx.doi.org/10.1037/1541-1559.1.1.22>
- Frueh, B. C., Hamner, M. B., Bernat, J. A., Turner, S. M., Keane, T. M., & Arana, G. W. (2002). Racial differences in psychotic symptoms among combat veterans with PTSD. *Depression and Anxiety*, 16, 157–161. <http://dx.doi.org/10.1002/da.10068>
- Fulton, J. J., Calhoun, P. S., Wagner, H. R., Schry, A. R., Hair, L. P., Feeling, N., . . . Beckham, J. C. (2015). The prevalence of posttraumatic stress disorder in Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) Veterans: A meta-analysis. *Journal of Anxiety Disorders*, 31, 98–107. <http://dx.doi.org/10.1016/j.janxdis.2015.02.003>
- Galea, S., Ahern, J., Resnick, H., Kilpatrick, D., Bucuvalas, M., Gold, J., & Vlahov, D. (2002). Psychological sequelae of the September 11 terrorist attacks in New York City. *The New England Journal of Medicine*, 346, 982–987. <http://dx.doi.org/10.1056/NEJMs013404>
- Gone, J. P. (2004). Mental health services for Native Americans in the 21st century United States. *Professional Psychology: Research and Practice*, 35, 10–18. <http://dx.doi.org/10.1037/0735-7028.35.1.10>
- González-Prendes, A. A. (2013). Culture-sensitive regulation of anger. In E. Fernandez (Ed.), *Treatments for anger in specific populations: Theory, application, and outcome* (pp. 236–254). New York, NY: Oxford University Press. <http://dx.doi.org/10.1093/med:psych/9780199914661.003.0013>
- Grubbaugh, A. L., Slagle, D. M., Long, M., Frueh, B. C., & Magruder, K. M. (2008). Racial disparities in trauma exposure, psychiatric symptoms, and service use among female patients in Veterans Affairs primary care clinics. *Women's Health Issues*, 18, 433–441. <http://dx.doi.org/10.1016/j.whi.2008.08.001>
- Hasnain-Wynia, R., & Baker, D. W. (2006). Obtaining data on patient race, ethnicity, and primary language in health care organizations: Current

- challenges and proposed solutions. *Health Services Research*, 41, 1501–1518.
- Hinton, D. E., & Lewis-Fernández, R. (2011). The cross-cultural validity of posttraumatic stress disorder: Implications for DSM-5. *Depression and Anxiety*, 28, 783–801. <http://dx.doi.org/10.1002/da.20753>
- Institute of Medicine. (2009). *Race, ethnicity, and language data: Standardization for health care quality improvement*. Washington, DC: The National Academies Press.
- Kagawa Singer, M. (2012). Applying the concept of culture to reduce health disparities through health behavior research. *Preventive Medicine*, 55, 356–361. <http://dx.doi.org/10.1016/j.ypmed.2012.02.011>
- Kaholokula, J. K., Grandinetti, A., Keller, S., Nacapoy, A. H., Kingi, T. K., & Mau, M. K. (2012). Association between perceived racism and physiological stress indices in Native Hawaiians. *Journal of Behavioral Medicine*, 35, 27–37. <http://dx.doi.org/10.1007/s10865-011-9330-z>
- Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry*, 52, 1048–1060. <http://www.ncbi.nlm.nih.gov/pubmed/7492257>. <http://dx.doi.org/10.1001/archpsyc.1995.03950240066012>
- Koo, K. H., Hebenstreit, C. L., Madden, E., & Maguen, S. (2016). PTSD detection and symptom presentation: Racial/ethnic differences by gender among veterans with PTSD returning from Iraq and Afghanistan. *Journal of Affective Disorders*, 189, 10–16. <http://dx.doi.org/10.1016/j.jad.2015.08.038>
- Koo, K. H., Hebenstreit, C. L., Madden, E., Seal, K. H., & Maguen, S. (2015). Race/ethnicity and gender differences in mental health diagnoses among Iraq and Afghanistan veterans. *Psychiatry Research*, 229, 724–731. <http://dx.doi.org/10.1016/j.psychres.2015.08.013>
- Koo, K. H., Madden, E., & Maguen, S. (2015). Race-ethnicity and gender differences in VA health care service utilization among U.S. veterans of recent conflicts. *Psychiatric Services*, 66, 507–513. <http://dx.doi.org/10.1176/appi.ps.201300498>
- Kressin, N. R. (2015). Race/ethnicity identification: Vital for disparities research, quality improvement, and much more than “meets the eye”. *Medical Care*, 53, 663–665. <http://dx.doi.org/10.1097/MLR.0000000000000409>
- Kressin, N. R., Chang, B. H., Hendricks, A., & Kazis, L. E. (2003). Agreement between administrative data and patients’ self-reports of race/ethnicity. *American Journal of Public Health*, 93, 1734–1739. <http://dx.doi.org/10.2105/AJPH.93.10.1734>
- Kulka, R. A., Schlenger, W. A., Fairbanks, J. A., Hough, R. L., Jordan, B. K., Marmar, C. R., & Cranston, A. S. (1990). *Trauma and the Vietnam War generation: Report of findings from the National Vietnam Veterans Readjustment Study*. New York, NY: Routledge.
- Lewis-Fernández, R., Raggio, G. A., Gorriz, M., Duan, N., Marcus, S., Cabassa, L. J., . . . Hinton, D. E. (2013). GAP-REACH: A checklist to assess comprehensive reporting of race, ethnicity, and culture in psychiatric publications. *Journal of Nervous and Mental Disease*, 201, 860–871. <http://dx.doi.org/10.1097/NMD.0b013e3182a5c184>
- Liebler, C. A., & Halpern-Manners, A. (2008). A practical approach to using multiple-race response data: A bridging method for public-use microdata. *Demography*, 45, 143–155. <http://dx.doi.org/10.1353/dem.2008.0004>
- Macdonald, A., Greene, C. J., Torres, J. G., Frueh, B. C., & Morland, L. A. (2013). Concordance between clinician-assessed and self-reported symptoms of posttraumatic stress disorder across three ethnic/racial groups. *Psychological Trauma: Theory, Research, Practice, and Policy*, 5, 201–208. <http://dx.doi.org/10.1037/a0031879>
- Mainous, A. G., III, Smith, D. W., Acierno, R., & Geesey, M. E. (2005). Differences in posttraumatic stress disorder symptoms between elderly non-Hispanic Whites and African Americans. *Journal of the National Medical Association*, 97, 546–549.
- Marshall, G. N., Schell, T. L., & Miles, J. N. (2009). Ethnic differences in posttraumatic distress: Hispanics’ symptoms differ in kind and degree. *Journal of Consulting and Clinical Psychology*, 77, 1169–1178. <http://dx.doi.org/10.1037/a0017721>
- Mir, G., Salway, S., Kai, J., Karlsen, S., Bhopal, R., Ellison, G. T., & Sheikh, A. (2013). Principles for research on ethnicity and health: The Leeds Consensus Statement (Vol. 23). *European Journal of Public Health*, 23, 504–510.
- Mor, M. (2014, May). *Assessing race and ethnicity*. Paper presented at the Veterans Affairs VIREC Database and Methods Cyberseminar Series, Pittsburgh, PA. Retrieved from http://www.hsrd.research.va.gov/for_researchers/cyber_seminars/archives/763-notes.pdf
- Morren, M., Gelissen, J. P., & Vermunt, J. K. (2012). Response strategies and response styles in cross-cultural surveys. *Cross-Cultural Research: The Journal of Comparative Social Science*, 46, 255–279. <http://dx.doi.org/10.1177/1069397112440939>
- Moubarac, J. C. (2013). Persisting problems related to race and ethnicity in public health and epidemiology research. *Revista de Saude Publica*, 47, 104–116. <http://dx.doi.org/10.1590/S0034-89102013000100014>
- Murdoch, M., Hodges, J., Cowper, D., Fortier, L., & van Ryn, M. (2003). Racial disparities in VA service connection for posttraumatic stress disorder disability. *Medical Care*, 41, 536–549. <http://dx.doi.org/10.1097/01.MLR.0000053232.67079.A5>
- Office of Management and Budget. (1997). *Revisions to the standards for the classification of federal data on race and ethnicity*. Retrieved from http://www.whitehouse.gov/omb/fedreg_1997standards
- Parker, J. D., Schenker, N., Ingram, D. D., Weed, J. A., Heck, K. E., & Madans, J. H. (2004). Bridging between two standards for collecting information on race and ethnicity: An application to Census 2000 and vital rates. *Public Health Reports*, 119, 192–205.
- Phinney, J. S., & Ong, A. D. (2007). Conceptualization and measurement of ethnic identity: Current status and future directions. *Journal of Counseling Psychology*, 54, 271–281. <http://dx.doi.org/10.1037/0022-0167.54.3.271>
- Pole, N., Gone, J. P., & Kulkarni, M. (2008). Posttraumatic stress disorder among ethnic/racial minorities in the United States. *Clinical Psychology: Science and Practice*, 15, 35–61. <http://dx.doi.org/10.1111/j.1468-2850.2008.00109.x>
- Racher, F. E., & Annis, R. C. (2007). Respecting culture and honoring diversity in community practice. *Research and Theory for Nursing Practice*, 21, 255–270. <http://dx.doi.org/10.1891/088971807782427985>
- Roberts, A. L., Gilman, S. E., Breslau, J., Breslau, N., & Koenen, K. C. (2011). Race/ethnic differences in exposure to traumatic events, development of post-traumatic stress disorder, and treatment-seeking for post-traumatic stress disorder in the United States. *Psychological Medicine*, 41, 71–83. <http://dx.doi.org/10.1017/S0033291710000401>
- Schwartz, S. J., Syed, M., Yip, T., Knight, G. P., Umaña-Taylor, A. J., Rivas-Drake, D., & Lee, R. M. (2014). Methodological issues in ethnic and racial identity research with ethnic minority populations: Theoretical precision, measurement issues, and research designs. *Child Development*, 85, 58–76. <http://dx.doi.org/10.1111/cdev.12201>
- Schwartz, S. J., Unger, J. B., Zamboanga, B. L., & Szapocznik, J. (2010). Rethinking the concept of acculturation: Implications for theory and research. *American Psychologist*, 65, 237–251. <http://dx.doi.org/10.1037/a0019330>
- Sohn, M. W., Zhang, H., Arnold, N., Stroupe, K., Taylor, B. C., Wilt, T. J., & Hynes, D. M. (2006). Transition to the new race/ethnicity data collection standards in the Department of Veterans Affairs. *Population Health Metrics*, 4, 7. <http://dx.doi.org/10.1186/1478-7954-4-7>
- Spira, J., Onoye, J., Marx, B. P., & Rodriguez, P. (2014, November). *Ethnoracial factors in PTSD in a sample of clinic veterans*. Paper presented at the International Society of Traumatic Stress Studies, Philadelphia, PA.

- Spoont, M. R., Nelson, D. B., Murdoch, M., Sayer, N. A., Nugent, S., Rector, T., & Westermeyer, J. (2015). Are there racial/ethnic disparities in VA PTSD treatment retention? *Depression and Anxiety, 32*, 415–425. <http://dx.doi.org/10.1002/da.22295>
- Trent, C. R., Jr., Rushlau, M. G., Munley, P. H., Bloem, W., & Driesenga, S. (2000). An ethnocultural study of posttraumatic stress disorder in African-American and white American Vietnam War veterans. *Psychological Reports, 87*, 585–592. <http://dx.doi.org/10.2466/PRO.87.6.585-592>
- Tsai, J., Desai, M., Cheng, A., & Chang, J. (2014). The effects of race and other socioeconomic factors on health service use among military veterans. *Psychiatric Quarterly, 85*, 35–47.
- Umaña-Taylor, A. J., Quintana, S. M., Lee, R. M., Cross, W. E., Jr., Rivas-Drake, D., Schwartz, S. J., . . . the Ethnic and Racial Identity in the 21st Century Study Group. (2014). Ethnic and racial identity during adolescence and into young adulthood: An integrated conceptualization. *Child Development, 85*, 21–39. <http://dx.doi.org/10.1111/cdev.12196>
- Umaña-Taylor, A. J., Yazedjian, A., & Bámaca-Gómez, M. (2004). Developing the Ethnic Identity Scale Using Eriksonian and social identity perspectives. *Identity: An International Journal of Theory and Research, 4*, 9–38. http://dx.doi.org/10.1207/S1532706XID0401_2
- U.S. Census. (2012, May 29, 2014). *2010 Census Race and Hispanic Origin Alternative Questionnaire Experiment* [Technical briefing]. Retrieved from <http://www.census.gov/2010census/news/press-kits/aqe/aqe.html>
- van Rooyen, K., & Nqwini, Z. C. (2012). Culture and posttraumatic stress disorder (PTSD): A proposed conceptual framework. *South African Journal of Psychology/Suid-Afrikaanse Tydskrif vir Sielkunde, 42*, 51–60. <http://dx.doi.org/10.1177/008124631204200106>
- Warren, B. J. (2013). How culture is assessed in the DSM–5. *Journal of Psychosocial Nursing and Mental Health Services, 51*, 40–45. <http://dx.doi.org/10.3928/02793695-20130226-04>
- Whealin, J. M., Nelson, D., Stotzer, R., Guerrero, A., Carpenter, M., & Pietrzak, R. H. (2015). Risk and resilience factors associated with posttraumatic stress in ethno-racially diverse National Guard members in Hawai'i. *Psychiatry Research, 227*, 270–277. <http://dx.doi.org/10.1016/j.psychres.2015.02.023>
- Whealin, J. M., Stotzer, R., Nelson, D., Li, F., Liu-Tom, H. T., & Pietrzak, R. H. (2013). Evaluating PTSD prevalence and resilience factors in a predominantly Asian American and Pacific Islander sample of Iraq and Afghanistan Veterans. *Journal of Affective Disorders, 150*, 1062–1068. <http://dx.doi.org/10.1016/j.jad.2013.05.044>

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