

12-31-2011

PTSD Treatment-Seeking Among Rural Latino Combat Veterans: A Review of the Literature

Michael R. Duke
University of Memphis

Roland S. Moore
Pacific Institute for Research and Evaluation

Genevieve M. Ames
Pacific Institute for Research and Evaluation

Follow this and additional works at: <https://egrove.olemiss.edu/jrss>



Part of the [Rural Sociology Commons](#)

Recommended Citation

Duke, Michael, Roland Moore, and Genevieve Ames. 2011. "PTSD Treatment-Seeking Among Rural Latino Combat Veterans: A Review of the Literature." *Journal of Rural Social Sciences*, 26(3): Article 8. Available At: <https://egrove.olemiss.edu/jrss/vol26/iss3/8>

This Article is brought to you for free and open access by the Center for Population Studies at eGrove. It has been accepted for inclusion in *Journal of Rural Social Sciences* by an authorized editor of eGrove. For more information, please contact egrove@olemiss.edu.

**PTSD TREATMENT-SEEKING AMONG RURAL LATINO COMBAT
VETERANS: A REVIEW OF THE LITERATURE***

MICHAEL R. DUKE

UNIVERSITY OF MEMPHIS

ROLAND S. MOORE

PACIFIC INSTITUTE FOR RESEARCH AND EVALUATION

and

GENEVIEVE M. AMES

PACIFIC INSTITUTE FOR RESEARCH AND EVALUATION

ABSTRACT

Latino combat soldiers report both higher prevalence and greater overall severity of post-traumatic stress disorder (PTSD) symptoms than non-Hispanic Caucasians. However, these veterans face unique social and cultural barriers to accessing treatment for PTSD that distinguish them from their non-Hispanic white counterparts. Latino veterans who reside in rural settings face additional socio-cultural and structural impediments, in that they are likely to reside far from VA (Veterans Administration) medical facilities, have limited access to public transportation, and hold more conservative views toward mental health treatment than those residing in urban locales. However, little is known about the unique individual, sociocultural, and structural barriers to treatment faced by rural Latino veterans. This paper synthesizes the separate mental health and treatment-seeking literatures pertaining to Latinos, rural populations, and veterans, with the goal of identifying fruitful areas of conceptual overlap, and providing direction for future theory building, research, and targeted interventions.

Exposure to emotional trauma, particularly battlefield conflict, has long been associated with psychiatric harm (Coleman 2006; Dedert et al. 2009; Mayeux et al. 2008), particularly post-traumatic stress disorder (PTSD) (Wilk et al. 2010). During the Second World War, for example, mental health professionals coined the term “battle fatigue” to characterize a cluster of symptoms associated with traumatic combat exposure (e.g., emotional numbness, flashbacks of traumatic events, depression, and guilt). In the aftermath of the Vietnam War, when large numbers of combat veterans returned to civilian life suffering from emotional

*Corresponding Author: Dr. Michael R. Duke, University of Memphis, Department of Anthropology, 316 Manning Hall, Memphis, TN 38152-3530. 901-678-2080. M.Duke@memphis.edu . The authors gratefully acknowledge the support for the writing of this article provided by NIAAA Grant #R01-AA015423 (Genevieve Ames, PI; Roland Moore, Co-PI) and Pacific Institute for Research and Evaluation Development Grant 9802.11.04.

trauma, there was an increasing focus on understanding the etiology and treatment of this malady, which came to be referred to as PTSD.

Despite the deleterious consequences of this condition (e.g., suicide ideation and attempts, substance abuse, broken families), there remained substantial disagreement within the mental health field in terms of whether PTSD should be characterized as a single psychiatric condition, or as a group of overlapping but distinct conditions. It was not until 1980 that the American Psychiatric Association's DSM-III (1980) defined PTSD for the first time. PTSD is considered an anxiety disorder resulting from exposure to a traumatic event in which severe physical harm is present or implied. Symptoms include heightened vigilance, flashbacks to the event, flattened affect, and social withdrawal (Schiraldi 2000).

Between 20 and 30 percent of military personnel deployed in the wars in Iraq and Afghanistan have been diagnosed with PTSD (Jacobson et al. 2008; Seal et al. 2008; Seal et al. 2007; Seal et al. 2009; Smith et al. 2008; Sundin et al. 2010). A novel feature of this dual-front conflict relative to previous military engagements has been the relatively brief period between deployments (Congressional Budget Office 2005; McLean, Shanker, and Tse 2008), which likely contributes to the mental health burden facing the veterans of these conflicts. For example, over 40 percent of U.S. military personnel have been deployed multiple times. Indicative of the toll that multiple deployments place on soldiers' mental health, a study by McLean, et al. (2008) found that diagnoses of depression, anxiety, or acute stress were over twice as likely to occur among Army officers deployed three to four times, compared to their singly-deployed counterparts. Another recent study found analogous increases in PTSD diagnostic criteria with increasing numbers of deployments (LeardMann et al. 2009).

Economic and social costs associated with PTSD and associated mental illnesses (e.g., substance use disorders) are estimated at four to six billion dollars over a two year post-deployment period (Tanielian 2009). The economic impact of PTSD includes not only the cost of mental health and substance abuse treatment, but diminished productivity (e.g., absenteeism, unemployment) and law enforcement and judicial costs (e.g., DWI arrests, domestic disturbances), among other factors. Adding to the social cost is the fact that the literature consistently shows an association between PTSD and substance use disorders, as PTSD sufferers frequently self-medicate with alcohol and other drugs (Benda 2005, 2006; Hermos et al. 2007; Hill and Busuttill 2008; Shipherd, Stafford, and Tanner 2005; Steindl et al. 2003; Taft et al. 2007; Zoričić et al. 2003). For example, Erbes et al. reported that 12 percent of patients at a Midwestern VA hospital who had returned from

deployment 6 months prior were diagnosed with PTSD, and 33 percent of all participants were drinking at problematic levels (Erbes et al. 2007). Despite high PTSD and substance abuse comorbidity, simultaneous treatment for these conditions has traditionally been uncommon until fairly recently, in part because of many therapists' belief that sobriety must precede mental health treatment. This approach to treatment may have important consequences for treatment seeking in that substance abuse treatment may provide an important pathway to PTSD diagnosis and treatment. Partially for this reason, the U.S. Department of Veterans Affairs (VA) has recently begun treating comorbid disorders (including PTSD) in an integrated fashion rather than sequentially.

Approximately 1.1 million Latinos aged 18 and older are veterans of the U.S. Armed Forces (USBC 2009). Interestingly, Latino women represent an increasing portion of Hispanic military personnel, with Latinas currently comprising a larger percentage of military women than the percentage of Latino males among military men (Segal, Segal, and Thanner 2007). Residents of rural communities are over-represented in the Armed Forces, with approximately one-half of recruits residing in small towns and rural areas (U.S. Office of the Under Secretary of Defense Personnel and Readiness 2008). Moreover, rural-origin veterans have disproportionately been casualties in Iraq and Afghanistan (USGAO 2005).

Given these characteristics, rural Latino veterans may have unique risks for PTSD, and the distinct characteristics of this population may impede their ability to access treatment. These veterans represent a diverse population in terms of both ethnicity and community characteristics. For example, large populations of rural Latinos, including veterans, reside in communities in which they represent the dominant cultural group (e.g., California's San Joaquin Valley, northern New Mexico, the Rio Grande Valley of south Texas, and the rural interior of Puerto Rico), while in other rural settings they comprise a relatively small percentage of the local population. Although the literature is scant in regards to this understudied population, their unique vulnerability (e.g., low SES, membership in an ethnic group that is a frequent target of prejudice/racism, limited civilian job opportunities in the local community, distance from VA medical facilities) makes a need for reviewing and assessing the mental health treatment-seeking literature pertaining to this population all the more important.

In this paper, we provide a review of the literature regarding treatment-seeking among rural Latino veterans, with a particular focus on the implications for those who have served in Operation Iraqi Freedom and Operation Enduring Freedom (OIF/OEF). Because existing research on treatment seeking and its associated

barriers among rural Latino soldiers remains meager, we synthesize three related mental health and treatment-seeking literatures; namely, those pertaining to: a) veterans; b) Latinos, and c) rural populations. The overall goal of this review, therefore, is to identify areas of overlap among these literatures, and to provide directions for future research, theory building, and targeted interventions.

The following section provides a brief overview of current theoretical approaches to treatment seeking, particularly the health-seeking pathways model proposed by Rogler and Cortes (1993) and their followers. Next, the paper examines, in turn, each of the three bodies of mental health treatment-seeking literature listed above. We then conclude with an attempt to synthesize these literatures, and to suggest new areas of research and intervention.

THEORETICAL FRAMEWORKS FOR MENTAL HEALTH TREATMENT SEEKING AMONG RETURNING VETERANS

A variety of treatment modalities exist, both singly and in combination, for those seeking treatment for PTSD. These include an array of cognitive behavioral therapies administered in individual and group settings. Additionally, psychotropic medications such as selective serotonin reuptake inhibitors (SSRIs) may be prescribed. Eye movement desensitization and reprocessing (EMDR) represents an unusual form of treatment in that it has been found to be relatively effective, yet not fully understood (Jones and Wessely 2005; Russell and Silver 2007). Critical event debriefings are an additional technique used for treating PTSD (Pischke and Hallman 2008). It is possible that some of these treatment options themselves may serve as barriers to treatment for veterans unwilling to take psychotropic medication or to revisit traumatic events via therapy. Increasingly, VA hospitals are open to alternative forms of treatment, including traditional healing ceremonies for Native American veterans and more recently, complementary and alternative medicine in addition to conventional treatment modalities (Kroesen et al. 2002).

Because of the stigma associated with, and the relative lack of societal awareness of, the causes and behavioral manifestations of mental illnesses, coupled with the diagnostic characteristics of particular maladies (e.g., paranoia, low self-efficacy), mental health treatment-seeking behaviors and motivations tend to differ from treatment seeking for physiological ailments. Research in this area is greatly indebted to the model of mental health treatment seeking developed by Rogler and Cortes (Rogler and Cortes 1993). Notably, although the authors consider the model generalizable to multiple populations, it was originally developed based upon data from Rogler's research with a Latino population, namely Puerto Ricans in the

eastern United States. The model proposes that there are sequential, culturally- and socially-determined patterns—which they label health-seeking pathways—in which individuals with psychological distress typically seek help from mental health care providers. By pathways, they refer to the structured sequence of circumstances and events, punctuated by both formal and informal referrals, whereby distressed individuals and those around them approach or avoid treatment. These pathways are greatly influenced by significant social others (e.g., spouses, employers), who either encourage (via social or emotional support, formal or informal referrals, etc.) or dissuade (via rationalization, codependency, stigmatizing language, etc.) individuals from seeking treatment (Rogler and Cortes 1993). The logistical, bureaucratic, and therapeutic characteristics of a given mental health service, coupled with the behavioral and cognitive symptoms of particular mental illness, likewise affect the individual's treatment-seeking pathway, as these may present significant barriers to accessing or remaining in treatment. Central to Rogler and Cortes' argument is that these pathways are not random, but are instead framed by cultural and social expectations of the benefits and risks for consenting to treatment.

There is a burgeoning literature, inspired by this framework, on mental health help seeking. For example, Angermeyer, et al. examined the lay public's attitudes toward mental health treatment seeking in a cross-sectional national sample in Germany (Angermeyer, Matschinger, and Riedel-Heller 1999). Findings suggested that, although treatment by mental health professionals was considered helpful for treating schizophrenia, the attitudes and belief systems of the German public favored lay support systems or family physicians for treating depression, including within military populations. Research in this area includes studies focusing on treatment seeking for children with mental health problems (Bussing et al. 2003; Duke and Mateo 2008; Kuhl, Jarkon-Horlick, and Morrissey 1997; Srebnik, Cauce, and Baydar 1996), ethnic differences in treatment attitudes and behaviors (Snowden and Yamada 2005), the influence of type of mental health disorder on treatment seeking (Addington et al. 2002; Kessler, Olfson, and Berglund 2003), and help seeking among workers in different occupational settings (Delaney, Grube, and Ames 1998), including, as described below, the military.

The next section provides a review of predictors that inhibit or encourage treatment seeking among post-deployment veterans in general, followed by discussion of inhibitors specific to Latino members of this population and rural veterans.

MENTAL HEALTH TREATMENT SEEKING AMONG VETERANS

For veterans suffering from deployment-related PTSD, facilitators and impediments to treatment can take many forms, and the relationships between them may be quite complex, encompassing individual, sociocultural, and structural impediments. A fairly robust literature, for example, focuses specifically on individual-level barriers to treatment among soldiers and veterans. Chief among individual-level factors is perceived stigma. The stigma of being labeled as having a mental illness or being seen by mental health providers is a well-explored barrier to treatment, among men (Perlick et al. 2007) and particularly among military personnel (Edlund et al. 2008; Greene-Shortridge, Britt, and Castro 2007; Perlick et al. 2007; Pietrzak et al. 2009; Stecker et al. 2007). Similarly, Jakupcak et al. and Stecker et al. identified stigma and being too proud to show weakness as impeding Iraq War veterans' seeking of mental health treatment (Jakupcak et al. 2008; Stecker et al. 2007). Drawing from survey data with 6,201 veterans who served in Iraq or Afghanistan, Hoge and colleagues also found that stigma, specifically in terms of concern about how they would be perceived by peers and by those in leadership positions, was a leading barrier for seeking mental health treatment for PTSD. Notably, those who expressed the greatest concern over stigma were those who met the screening criteria for mental health problems, specifically PTSD, major depression, or generalized anxiety (Hoge et al. 2004).

Other individual barriers include concerns that treatment could be used to deny a security clearance in the future or harm one's career (Hosek, Kavanagh, and Miller 2006), and beliefs regarding the relative effectiveness of treatment. Specifically, some researchers have found that a significant portion of soldiers and veterans believe that handling one's own problems may be more effective than would seeking professional help (Hoge, Auchterlonie, and Milliken 2006; Hoge et al. 2004; Hosek et al. 2006).

There is evidence to suggest that demographic characteristics may also be associated with mental health treatment seeking or avoidance. For example, Fikretoglu and colleagues found that marital status and income, in addition to trauma-related and PTSD-related factors, predicted treatment seeking in Canadian military members with PTSD (Fikretoglu et al. 2006). Although data on mental health treatment seeking among male and female soldiers and veterans are sparse, women in the general population are more likely than men to seek out such services (Perlick et al. 2007), and it is likely that a similar pattern exists among veterans. In terms of racial/ethnic demographic characteristics, the literature remains opaque. For example, in a study of newly-diagnosed PTSD patients in the VA, Spont and

colleagues found that veteran race, but not Hispanic ethnicity, was associated with decreases in some pharmacotherapy measures and increases in some counseling measures (Spoont et al. 2009). Likewise, self-efficacy in accessing the health system may be a factor in whether a veteran seeks needed mental health treatment services. Spoont and her colleagues, for example, found that veterans who filed PTSD disability claims sought and received greater mental health care treatment than veterans who did not file such claims (Spoont et al. 2007).

Like U.S. culture more generally, military acculturation emphasizes both collectivism (cohesiveness, etc.) and individualism (emphasis on career advancement, the “Army of One” ad campaign). When U.S. servicemen and women go through the process of acculturation to the military culture, they see themselves as part of – and interconnected with – the military, rather than as isolated independent individuals (Dornbusch 1955; Jaffe 1984; Segal and Segal 1983). Whatever the benefits of this acculturation process in terms of building group solidarity, it likely results in negative consequences in that it may dissuade help-seeking and self-efficacy. Both the military and the VA are cognizant of the military culture that contributes to individual restraint from seeking treatment, as evidenced by their current large-scale advertising efforts praising the bravery of soldiers and veterans who seek help in order to encourage treatment seeking.

Family concern or other family members seeking treatment for secondary traumatization may help direct veterans to access treatment for PTSD (Dirkzwager et al. 2005). For part time soldiers, such as those serving in the National Guard or the Reserves, who return to civilian occupations following deployment, another avenue through which they may seek treatment would be employer referral to employee assistance programs (Freeman et al. 2004).

The lack of confidentiality in DoD-supplied treatment was one of the concerns most frequently mentioned as a barrier to seeking treatment by a nationwide random sample of OIF/OEF recently surveyed veterans (Schell and Marshall 2006). To the extent that treatment records could be cited as a reason to withhold promotions or assignments, the present system of minimal confidentiality within DoD-provided health care is a major structural barrier to seeking treatment within that system. Noting opportunities for screening-based referral no matter the initial contact at the VA, Cully and colleagues identified potential openings to increase pathways to treatment within the VA bureaucracy (Cully et al. 2008). The VA is also investigating such opportunities (Tracy et al. 2007)

PTSD TREATMENT SEEKING AMONG LATINOS

Latino veterans, like other ethnic minority soldiers, historically have faced more hazardous duty than whites (Dohrenwend et al. 2008). In addition, experiences of prejudice or racism that Latino veterans may have experienced during deployment is likely to exacerbate PTSD (Ruef, Litz, and Schlenger 2000; Sutker et al. 1995). Correspondingly, Latino combat soldiers report both higher prevalence (Kulka et al. 1990; Lewis-Fernández et al. 2008; Mason 1997; Pole et al. 2005; Rosenheck and Fontana 1996), and greater overall severity, of PTSD symptoms than non-Hispanic Caucasians (Dohrenwend et al. 2008; Elwy, Ranganathan, and Eisen 2008; Marshall, Schell, and Miles 2009). Recent evidence also suggests that PTSD symptoms among diagnosed Latinos differ not only in severity but in kind, with Latinos more likely to report exaggerated or intensified cognitive and sensory perceptions, such as flashbacks and hyper-vigilance, than non-Hispanic Caucasians (Marshall et al. 2009).

However, PTSD among Latinos has a higher likelihood of being misdiagnosed by medical practitioners, since symptoms often take the form of somatic complaints (e.g., back or stomach problems) (Cañive et al. 2001; Pole et al. 2005; Ruef et al. 2000). In addition, the high cultural values placed on stoicism, on downplaying distress, and on the family as the vehicle for addressing personal problems (i.e., *familismo*) may result in Latino veterans being reluctant to seek outside help (Cañive et al. 2001; Dohrenwend et al. 2008; Pole et al. 2005). These cultural characteristics may contribute to Latinos — including veterans (Rosenheck and Fontana 1994)—using fewer mental health services than non-Latino Caucasians (Hough et al. 1987; Pole, Gone, and Kulkarni 2008; Snowden and Cheung 1990; Vega et al. 1999; Wang et al. 2005). Moreover, a perceived lack of cultural competency in the VA mental health system may be an obstacle to accessing mental health or substance abuse treatment. For example, in a study of perceived barriers to mental health treatment by Latino and Native American (NA/L) veterans, four of the six most commonly listed barrier items reported by VA staff pertained to cultural competency-related issues (i.e., NA/L veterans have difficulty discussing personal matters; VA system does not understand needs of NA/L veterans; NA/L veterans do not trust VA system; VA system does not outreach to NA/L communities) (Westermeyer et al. 2002).

Rural Latino veterans may be more acculturated than their nonmilitary neighbors, by virtue of their ability to speak English, and their status as U.S. citizens or legal residents. However, as residents of rural communities with deep cultural roots, these veterans—and the social institutions within which they are

embedded (e.g., the family, the community, the workplace)—are likely to hold more culturally-conservative views toward mental health or substance abuse treatment than veterans residing in urban centers. Moreover, high rates of unemployment and poverty that exist in rural communities dependent on agriculture may limit the ability of rural Latino veterans to access, and subsequently remain in, treatment for PTSD, due to transportation costs and limited access to health insurance, among other impediments.

PTSD TREATMENT SEEKING AMONG RURAL VETERANS

The prevalence of PTSD is higher among rural combat veterans than among those residing in urban or suburban locales, according to a (2004) study by Elhai et al. Yet veterans' psychiatric service provision and utilization may be lower in rural areas. For example, in a 2003-2004 sample of over 400,000 veterans with new diagnoses of PTSD, depression, or anxiety, rural veterans were far less likely to avail themselves of psychotherapy than were their urban counterparts (Cully et al. 2010). A recent review of research on rural veterans' health needs (Weeks et al. 2008) shed light on some of the fundamental issues facing veterans in rural areas, as well as significant gaps in that literature, in which definitions of rurality vary dramatically, a point underscored by other scholars as well (Berke et al. 2009; West et al. 2010). Other limitations of the literature include small or convenience sample sizes and relatively few studies incorporating veterans from the most recent conflicts in Afghanistan and Iraq. A number of the 50 articles Weeks et al. (2008) reviewed that specifically focused upon rural veterans found that their health-related quality of life was lower than that of urban counterparts (Wallace et al. 2010a; Wallace et al. 2006; Weeks et al. 2004), and highlighted their lack of access to health care, including distance and inferior transportation infrastructure (Wallace et al. 2010b; Warner and Leukefeld 2001; Weeks et al. 2008; West and Weeks 2009).

Another rural-urban difference in use of VA clinics is that urban veterans use non-VA clinics at a higher rate than rural veterans, perhaps because of greater availability of health care resources (Hynes et al. 2007). Intensive mental health case management in rural settings is particularly challenging due to travel times and distances (Mohamed, Neale, and Rosenheck 2009). Dual use of VA and other clinics by Medicare-eligible (65 and older) veterans is common, with distance to VA facilities again playing a role in the choice of health care service (Hynes et al. 2007). As a way to bridge spatial barriers, VA facilities are exploring the use of remote technologies including telephone and Internet infrastructure, but adoption is

uneven (Schooley et al. 2010). It is worth noting that the demographics of rural veterans are changing. Thus, refining understandings and definitions of rural veteran populations is essential to improving the provision of the appropriate mental and physical healthcare services for them (Wallace et al. 2010b).

DISCUSSION

Some of the treatment impediments outlined above are salient to all groups of veterans, regardless of ethnicity and geographic setting. Nonetheless, this synthesis of the literatures on PTSD treatment seeking among veterans, Latinos, and rural veterans (summarized in Table 1) has important implications for rural Latino veterans suffering from this mental health impairment.

First, rural veterans and Latinos are substantially represented among those who have served in Iraq and Afghanistan. These conflicts are relatively unique in U.S. military history in their dependence on relatively small numbers of part-time soldiers—including Reservists and National Guard troops—subjected to multiple deployments, which substantially increases the likelihood of PTSD exposure. Second, despite efforts by the U.S. Department of Veterans Affairs to streamline the process, veterans can face substantial bureaucratic barriers in accessing services, especially among those suffering from PTSD or other mental health problems. Third, given the documented tendency of Latinos to somaticize mental health problems including PTSD, Latino veterans suffering from this condition may go undiagnosed. The VA and the Department of Defense may wish to consider spearheading an educational campaign targeting medical providers who treat Latino veterans, in order to raise awareness of the ways in which physical ailments might mask the presence of PTSD among these patients. In addition, although they are often a source of social and emotional support, Latino veterans' families may present barriers to treatment, given cultural norms that favor addressing members' behavioral problems internally rather than seeking help from institutions outside of the family. A social marketing campaign targeting Latino families of combat veterans that promotes help-seeking as a form of social support may alleviate some of the impediments faced by these soldiers in accessing mental health services. For those who do seek help, however, there are few culturally-sensitive treatment modalities available within the VA or among other mental health providers,

PTSD TREATMENT-SEEKING

167

TABLE 1. POTENTIAL BARRIERS TO TREATMENT: VETERAN, LATINO, RURAL, AND OTHER ISSUES

Characteristics	Potential Barriers
Veteran	<ol style="list-style-type: none"> 1) stigma; 2) stoicism; 3) demographic characteristics; 4) self-efficacy; 5) number of deployments; 6) military culture; 7) confidentiality with VA treatment options
Latino	<ol style="list-style-type: none"> 1) high combat exposure; 2) prejudice/racism; 3) misdiagnosis (somatic complaints) 4) stoicism; 5) reluctance to seek help outside the family (<i>familismo</i>); 6) perceived lack of cultural competency at the VA
Rural	<ol style="list-style-type: none"> 1) culturally conservative views toward mental health treatment; 2) unemployment; 3) diminished access to health care; 4) poor transportation infrastructure
Other	<ol style="list-style-type: none"> 1) self efficacy; 2) low socioeconomic status; 3) marital status; 4) comorbidity (substance abuse); 5) treatment effectiveness

particularly in rural settings distant from full service medical centers. These forms of treatment—particularly those that are attentive to potential variability among Latino subgroups—are sorely needed. Finally, for veterans residing in rural areas, limited access to conveniently-located mental health treatment facilities, an underdeveloped public transportation infrastructure, and socially conservative views regarding mental health treatment—particularly when that treatment is not deemed culturally competent by potential patients—represent additional obstacles to receiving adequate care. A sustained program of outreach to veterans in these

communities, coupled with transportation stipends for patients and incentives to encourage therapists to serve in rural VA health centers, may go a long way toward facilitating treatment access among rural Latino veterans.

Despite these multiple impediments, there are notable gaps in the existing literature. For example, there is scant information regarding how PTSD treatment seeking is conceptualized and experienced by veterans, and regarding how socio-cultural and structural conditions may impede or facilitate successful treatment seeking. The research on treatment seeking among Latino veterans is particularly limited, focusing primarily on clinical populations (i.e., those who have already been diagnosed) rather than on undiagnosed veterans (Elhai et al. 2007; Fontana and Rosenheck 2008; Jakupcak et al. 2008), or on the perceptions of treatment providers regarding Latino treatment obstacles (Westermeyer et al. 2002). Also, research in this area seldom distinguishes among different Latino subpopulations (e.g., Cuban Americans, Mexican Americans, Puerto Ricans), although the considerable cultural and social diversity within this ethnic category may impact both PTSD symptomatology and treatment-seeking pathways.

Moreover, while there is extensive research on the psychology of treatment seeking (Hoge et al. 2006; Hoge et al. 2004; Hoge et al. 2007), including for veterans overall (Edlund et al. 2008; Greene-Shortridge et al. 2007; Hosek et al. 2006; Jakupcak et al. 2008; Perlick et al. 2007; Pietrzak et al. 2009; Stecker et al. 2007), most of this literature focuses on individual treatment-seeking pathways and motivations, rather than on how treatment seeking is conceptualized and experienced by those suffering from those conditions. The literature, therefore, remains underdeveloped in terms of conceptualizing how structural (e.g., distance from VA, treatment policies) conditions and socio-cultural norms (e.g., familial and community, norms regarding family, work, and responsibility) and expectancies (e.g., regarding the therapeutic value of treatment, emotional discomfort of participating in psychotherapy) impede or facilitate successful treatment seeking. Each of these factors is particularly salient to rural Latino veterans. Although these soldiers remain an understudied population, their unique challenges in terms of low SES, experiences with prejudice/racism, distance from VA facilities, and limited job opportunities make a multidimensional consideration of treatment seeking all the more important.

Given these social and structural impediments, a social determinants of health approach (Blas and Kurup 2010; Marmot and Wilkinson 2006) may advance the theoretical literature in this area. This approach would emphasize those socio-demographic elements of the military population, including low SES, high

percentage of racial/ethnic minorities (Sass et al. 2009; Shetgiri et al. 2009), and rural residence (Weeks et al. 2008; West and Weeks 2009), that increase the likelihood of exposure to combat-specific traumatic events on the one hand, and impede veterans' propensity to seek mental health treatment on the other. A focus on gender differences in treatment seeking between rural Latino and Latina veterans likewise should be considered, as Latina veterans returning from deployment may face gender-specific barriers to treatment (Vogt et al. 2006; Zinzow et al. 2007). Lastly, research documenting successful outreach and treatment programs for rural Latino veterans would provide invaluable information on how best to serve this population.

As many of the limitations of the current literature pertain to questions of social, cultural, and structural contexts, an in-depth qualitative accounting of these issues is warranted. Because of an absence of ethnographic studies of treatment seeking among rural Latino veterans, the often complex social ecological factors (Hovell, Wahlgren, and Gehrman 2002) that facilitate or impede their health-seeking pathways (Rogler and Cortes 1993) remain poorly understood. A socioecological approach to treatment seeking, for example, would emphasize those elements of the social (e.g., workplaces, families, communities) and structural (e.g., policies, treatment access) milieu that influence rural Latino veterans' capacity to seek and obtain treatment. Given the importance of culture in regards to understanding Latino veteran treatment-seeking behaviors, it may be fruitful to expand the concept of social ecology by emphasizing a socio-cultural environmental approach, in which cultural norms and values regarding comportment and help seeking are embedded in social institutions such as the family, the workplace, and the community.

AUTHOR BIOGRAPHIES

Michael R. Duke, Ph.D., is an Assistant Professor of Anthropology at the University of Memphis in Memphis, TN. He has expertise in the areas of Latino populations, labor, mental health, and substance use research. (email: M.Duke@memphis.edu)

Genevieve M. Ames, Ph.D. is Senior Research Scientist at the Pacific Institute for Research and Evaluation's Prevention Research Center in Berkeley, CA and Professor in the School of Public Health at the University of California, Berkeley. A medical anthropologist, she has published widely on alcohol use in family settings and in multi-ethnic occupational cultures, including factory, construction, food service, municipal, and military workers.

Roland S. Moore, Ph.D., is a senior research scientist interested in prevention of alcohol, tobacco, and other drug problems in Native American communities and a variety of workplace cultures. Dr. Moore works as an applied anthropologist with the Pacific Institute for Research and Evaluation's Prevention Research Center in Berkeley, CA.

REFERENCES

- Addington, J., S. Van Mastrigt, J. Hutchinson, and D. Addington. 2002. "Pathways to Care: Help Seeking Behaviour in First Episode Psychosis." *Acta Psychiatrica Scandinavica* 106:358–64.
- American Psychiatric Association. 1980. *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*. Washington, DC: American Psychiatric Association.
- Angermeyer, M. C., H. Matschinger, and S. G. Riedel-Heller. 1999. "Whom to Ask for Help in Case of a Mental Disorder? Preferences of the Lay Public." *Social Psychiatry and Psychiatric Epidemiology* 34:202–10.
- Benda, Brent B. 2005. "A Study of Substance Abuse, Traumata, and Social Support Systems among Homeless Veterans." *Journal of Human Behavior in the Social Environment* 12:59–82.
- _____. 2006. "Survival Analyses of Social Support and Trauma among Homeless Male and Female Veterans Who Abuse Substances." *American Journal of Orthopsychiatry* 76:70–9.
- Berke, Ethan M., Alan N. West, Amy E. Wallace, and William B. Weeks. 2009. "Practical and Policy Implications of Using Different Rural-Urban Classification Systems: A Case Study of Inpatient Service Utilization among Veterans Administration Users." *Journal of Rural Health* 25:259–66.
- Blas, Erik and Anand S. Kurup. 2010. "Equity, Social Determinants and Public Health Programmes." Geneva, Switzerland: World Health Organization.
- Bussing, Regina, Bonnie Zima, Faye Gary, and Cynthia Garvan. 2003. "Barriers to Detection, Help-seeking, and Service Use for Children with ADHD Symptoms." *The Journal of Behavioral Health Services and Research* 30:176–89.
- Cañive, Jose M., Diane T. Castillo, Vicente B. Tuason, Wen-Shing Tseng, and Jon Streltzer. 2001. "The Hispanic Veteran." Pp. 157–72 in *Culture and Psychotherapy: A Guide to Clinical Practice*, edited by W-S Tseng and J. Streltzer. Arlington, VA: American Psychiatric Publishing, Inc.
- Coleman, Penny. 2006. *Flashback: Posttraumatic Stress Disorder, Suicide, and the Lessons of War*. Boston, MA: Beacon Press.

- Congressional Budget Office. 2005. "An Analysis of the U.S. Military's Ability to Sustain an Occupation in Iraq: An Update." Washington, DC: United States Congress, Congressional Budget Office.
- Cully, Jeffrey A., John P. Jameson, Laura L. Phillips, Mark E. Kunik, and John C. Fortney. 2010. "Use of Psychotherapy by Rural and Urban Veterans." *Journal of Rural Health* 26:225–33.
- Cully, Jeffrey A., Laura Tolpin, Louise Henderson, Daniel Jimenez, Mark E. Kunik, and Laura A. Petersen. 2008. "Psychotherapy in the Veterans Health Administration: Missed Opportunities?" *Psychological Services* 5:320–31.
- Dedert, Eric A., Kimberly T. Green, Patrick S. Calhoun, Ruth Yoash-Gantz, Katherine H. Taber, Marinell Miller Mumford, Larry A. Tupler, Rajendra A. Morey, Christine E. Marx, Richard D. Weiner, and Jean C. Beckham. 2009. "Association of Trauma Exposure with Psychiatric Morbidity in Military Veterans Who Have Served since September 11, 2001." *Journal of Psychiatric Research* 43:830–6.
- Delaney, William, Joel W. Grube, and Genevieve M. Ames. 1998. "Predicting Likelihood of Seeking Help through the Employee Assistance Program among Salaried and Union Hourly Employees." *Addiction* 93:399–410.
- Dirkzwager, Anja J. E., Inge Bramsen, Herman Adèr, and Henk M. van der Ploeg. 2005. "Secondary Traumatization in Partners and Parents of Dutch Peacekeeping Solders." *Journal of Family Psychology* 19:217–26.
- Dohrenwend, Bruce P., J. Blake Turner, Nicholas A. Turse, Roberto Lewis-Fernandez, and Thomas J. Yager. 2008. "War-related Posttraumatic Stress Disorder in Black, Hispanic, and Majority White Vietnam Veterans: The Roles of Exposure and Vulnerability." *Journal of Traumatic Stress* 21:133–41.
- Dornbusch, Sanford M. 1955. "The Military Academy as an Assimilating Institution." *Social Forces* 33:316–21.
- Duke, Michael R. and Wandick Mateo. 2008. "Disparities in Access to Behavioral Health Services for Puerto Rican-descended Adolescents." *Human Organization* 67:68–76.
- Edlund, Mark J., John C. Fortney, Christina M. Reaves, Jeffrey M. Pyne, and Dinesh Mittal. 2008. "Beliefs about Depression and Depression Treatment among Depressed Veterans." *Medical Care* 46:581–9.
- Elhai, Jon D., S. N. Baugher, R. P. Quevillon, J. Sauvageot, and B. C. Frueh. 2004. "Psychiatric Symptoms and Health Service Utilization in Rural and Urban Combat Veterans with Posttraumatic Stress Disorder." *Journal of Nervous and Mental Disorders* 192:701–4.

- Elhai, Jon D., Todd B. Kashdan, Jessica J. Snyder, Terry C. North, Christopher J. Heaney, and B. Christopher Frueh. 2007. "Symptom Severity and Lifetime and Prospective Health Service Use among Military Veterans Evaluated for PTSD." *Depression & Anxiety (1091-4269)* 24:178–84.
- Elwy, A. Rani, Gayatri Ranganathan, and Susan V. Eisen. 2008. "Race-Ethnicity and Diagnosis as Predictors of Outpatient Service Use among Treatment Initiators." *Psychiatric Services (Washington, D.C.)* 59:1285–91.
- Erbes, Christopher, Joseph Westermeyer, Brian Engdahl, and Erica Johnsen. 2007. "Post-traumatic Stress Disorder and Service Utilization in a Sample of Service Members from Iraq and Afghanistan." *Military Medicine* 172:359–63.
- Fikretoglu, Deniz, Alain Brunet, Norbert Schmitz, Stephane Guay, and David Pedlar. 2006. "Posttraumatic Stress Disorder and Treatment Seeking in a Nationally Representative Canadian Military Sample." *Journal of Traumatic Stress* 19:847–58.
- Fontana, Alan and Robert Rosenheck. 2008. "Treatment-seeking Veterans of Iraq and Afghanistan: Comparison with Veterans of Previous Wars." *The Journal of Nervous and Mental Disease* 196:513–21.
- Freeman, David, Catherine Cromwell, Deborah Aarenau, Michael Hazelton, and Monique Lapointe. 2004. "Factors Leading to Successful Workplace Integration of Employees Who Have Experienced Mental Illness." *Employee Assistance Quarterly* 19:51–8.
- Greene-Shortridge, Tiffany M., Thomas W. Britt, and Carl Andrew Castro. 2007. "The Stigma of Mental Health Problems in the Military." *Military Medicine* 172:157–61.
- Hermos, John A., Melissa M. Young, Elizabeth V. Lawler, David Rosenbloom, and Louis D. Fiore. 2007. "Long-term, High-dose Benzodiazepine Prescriptions in Veteran Patients with PTSD: Influence of Preexisting Alcoholism and Drug-abuse Diagnoses." *Journal of Traumatic Stress* 20:909–14.
- Hill, David M. and Walter Busuttill. 2008. "Dual Diagnosis in Service Veterans with Post-traumatic Stress Disorder and Co-existing Substance Misuse." *Advances in Dual Diagnosis* 1:33–6.
- Hoge, Charles W., Jennifer L. Auchterlonie, and Charles S. Milliken. 2006. "Mental Health Problems, Use of Mental Health Services, and Attrition from Military Service after Returning from Deployment to Iraq or Afghanistan." *JAMA: Journal of the American Medical Association* 295:1023–32.
- Hoge, Charles W., Carl A. Castro, Stephen C. Messer, Dennis McGurk, Dave I. Cotting, and Robert L. Koffman. 2004. "Combat Duty in Iraq and Afghanistan,

- Mental Health Problems, and Barriers to Care." *New England Journal of Medicine* 351:13–22.
- Hoge, Charles W., Artin Terhakopian, Carl A. Castro, Stephen C. Messer, and Charles C. Engel. 2007. "Association of Posttraumatic Stress Disorder with Somatic Symptoms, Health Care Visits, and Absenteeism among Iraq War Veterans." *The American Journal of Psychiatry* 164:150–3.
- Hosek, James, Jennifer Kavanagh, and Laura Miller. 2006. "How Deployments Affect Service Members." Santa Monica, CA: RAND Corporation.
- Hough, Richard L., John A. Landsverk, Marvin Karno, M. Audrey Burnam, Dianne M. Timbers, Javier I. Escobar, and Darrel A. Regier. 1987. "Utilization of Health and Mental Health Services by Los Angeles Mexican Americans and Non-Hispanic Whites." *Archives of General Psychiatry* 44:702–9.
- Hovell, Melbourne F., Dennis R. Wahlgren, and Christine A. Gehrman. 2002. "The Behavioral Ecological Model: Integrating Public Health and Behavioral Science." Pp. 347–85 in *Emerging Theories in Health Promotion Practice and Research*, edited by R. J. DiClemente, R. A. Crosby, and M. C. Kegler. San Francisco, CA: Jossey-Bass.
- Hynes, Denise M., Kristin Koelling, Kevin Stroupe, Noreen Arnold, Katherine Mallin, Ming-Woong Sohn, Frances M. Weaver, Larry Manheim, and Linda Kok. 2007. "Veterans' Access to and Use of Medicare and Veterans Affairs Health Care." *Medical Care* 45:214–23.
- Jacobson, Isabel G., Margaret A. K. Ryan, Tomoko Hooper, Tyler C. Smith, Paul J. Amoroso, Edward J. Boyko, Gary D. Gackstetter, Timothy S. Wells, and Nicole S. Bell. 2008. "Alcohol Use and Alcohol-related Problems Before and After Military Combat Deployment." *Journal of the American Medical Association* 300:663–75.
- Jaffe, Alexandra. 1984. "The Negotiation of Meaning in the Military." *Central Issues in Anthropology* 5:31–46.
- Jakupcak, Matthew, Jane Luterek, Stephen Hunt, Daniel Conybeare, and Miles McFall. 2008. "Posttraumatic Stress and Its Relationship to Physical Health Functioning in a Sample of Iraq and Afghanistan War Veterans Seeking Postdeployment VA Health Care." *Journal of Nervous and Mental Disease* 196:425–8.
- Jones, Edgar and Simon Wessely. 2005. *Shell Shock to PTSD: Military Psychiatry from 1900 to the Gulf War*. New York, NY: Psychology Press.

- Kessler, Ronald C., Mark Olsson, and Patricia A. Berglund. 2003. "Patterns and Predictors of Treatment Contact after First Onset of Psychiatric Disorders." *Focus* 1:299–306.
- Kroesen, Kendall, Carol M. Baldwin, Audrey J. Brooks, and Iris R. Bell. 2002. "U.S. Military Veterans' Perceptions of the Conventional Medical Care System and Their Use of Complementary and Alternative Medicine." *Family Practice* 19:57–64.
- Kuhl, Josephine, Liat Jarkon-Horlick, and Richard F. Morrissey. 1997. "Measuring Barriers to Help-seeking Behavior in Adolescents." *Journal of Youth and Adolescence* 26:637–50.
- Kulka, Richard A., William E. Schlesenger, John A. Fairbank, Richard L. Hough, B. Kathleen Jordan, Charles R. Marmar, Daniel S. Weiss, and David A. Grady. 1990. *Trauma and the Vietnam War Generation: Report of Findings from the National Vietnam Veterans Readjustment Study*. New York, NY: Brunner/Mazel.
- LeardMann, Cynthia A., Tyler C. Smith, Besa Smith, Timothy S. Wells, and Margaret A. K. Ryan. 2009. "Baseline Self Reported Functional Health and Vulnerability to Post-traumatic Stress Disorder after Combat Deployment: Prospective U.S. Military Cohort Study." *British Medical Journal (Clinical Research Ed.)* 338:b1273.
- Lewis-Fernández, Roberto, J. Blake Turner, Randall Marshall, Nicholas Turse, Yuval Neria, and Bruce P. Dohrenwend. 2008. "Elevated Rates of Current PTSD among Hispanic Veterans in the NVVRS: True Prevalence or Methodological Artifact?" *Journal of Traumatic Stress* 21:123–32.
- Marmot, Michael and Richard G. Wilkinson. 2006. *Social Determinants of Health*. 2nd ed. Oxford, UK: Oxford University Press.
- Marshall, Grant N., Terry L. Schell, and Jeremy N. V. Miles. 2009. "Ethnic Differences in Posttraumatic Distress: Hispanics' Symptoms Differ in Kind and Degree." *Journal of Consulting and Clinical Psychology* 77:1169–78.
- Mason, Karen Elaine. 1997. "A Model of Psychological Distress among Hispanic Male Vietnam Veterans Diagnosed with PTSD." Dissertation Abstracts International: Section B: The Sciences and Engineering, ProQuest Information & Learning, US.
- Mayeux, Richard, Kathryn K. Basham, Evelyn J. Bromet, Gregory L. Burke, Dennis S. Charney, Michael Davis, Douglas A. Drossman, Dwight L. Evans, Vincent J. Felitti, Janice L. Krupnick, William B. Malarkey, Bruce S. McEwen, Thomas G. Pickering, Jerrold F. Rosenbaum, and B. Timothy Walsh. 2008. *Gulf War*

- and Health, Volume 6: Physiologic, Psychologic, and Psychosocial Effects of Deployment-related Stress*. Washington, DC: The National Academies Press.
- McLean, Alan, Thom Shanker, and Archie Tse. 2008. "Tracking Deployments." *New York Times*, April 5. Retrieved December 30, 2011 (http://www.nytimes.com/interactive/2008/04/05/us/nationalspecial/20080405_MILITARYCOUNT_GRAPHIC.html?scp=1&sq=Tracking%20Deployments&st=cse).
- Mohamed, Somaia, Michael Neale, and Robert A. Rosenheck. 2009. "VA Intensive Mental Health Case Management in Urban and Rural Areas: Veteran Characteristics and Service Delivery." *Psychiatric Services (Washington, D.C.)* 60:914–21.
- Perlick, Deborah A., Lauren N. Manning, Jon E. Grant, and Marc N. Potenza. 2007. "Overcoming Stigma and Barriers to Mental Health Treatment." Pp. 389–417 in *Textbook of Men's Mental Health*, edited by J. E. Grant and M. N. Potenza. Arlington, VA: American Psychiatric Publishing, Inc.
- Pietrzak, Robert H., Douglas C. Johnson, Marc B. Goldstein, James C. Malley, and Steven M. Southwick. 2009. "Perceived Stigma and Barriers to Mental Health Care Utilization among OEF-OIF Veterans." *Psychiatric Services* 60:1118–22.
- Pischke, Patrick J. and Christian J. Hallman 2008. "Effectiveness of Critical Event Debriefings During Operation Iraqi Freedom II." *The United States Army Medical Department Journal*: 18–23.
- Pole, Nnamdi, Suzanne R. Best, Thomas J. Metzler, and Charles R. Marmar. 2005. "Why Are Hispanics at Greater Risk for PTSD?" *Cultural Diversity and Ethnic Minority Psychology* 11:144–61.
- Pole, Nnamdi, Joseph P. Gone, and Madhur Kulkarni. 2008. "Posttraumatic Stress Disorder among Ethnoracial Minorities in the United States." *Clinical Psychology: Science and Practice* 15:35–61.
- Rogler, Lloyd H. and Dharma E. Cortes. 1993. "Help-seeking Pathways: A Unifying Concept in Mental Health Care." *American Journal of Psychiatry* 150:554–61.
- Rosenheck, Robert and Alan Fontana. 1994. "Utilization of Mental Health Services by Minority Veterans of the Vietnam Era." *The Journal of Nervous And Mental Disease* 182:685–91.
- _____. 1996. "Ethnocultural Variations in Service Use among Veterans Suffering from PTSD." Pp. 483–504 in *Ethnocultural Aspects of Posttraumatic Stress Disorder: Issues, Research, and Clinical Applications*, edited by A. J. Marsella, M. J.

- Friedman, E. T. Gerrity, and R. M. Scurfield. Washington, DC: American Psychological Association.
- Ruef, Anne Marie, Brett T. Litz, and William E. Schlenger. 2000. "Hispanic Ethnicity and Risk for Combat-related Posttraumatic Stress Disorder." *Cultural Diversity and Ethnic Minority Psychology* 6:235–51.
- Russell, Mark and Steven M. Silver. 2007. "Training Needs for the Treatment of Combat-related Posttraumatic Stress Disorder: A Survey of Department of Defense Clinicians." *Traumatology* 13:4–10.
- Sass, Bernd, Joanne Moffat, Bhui Kamaldeep, and Kwame McKenzie. 2009. "Enhancing Pathways to Care for Black and Minority Ethnic Populations: A Systematic Review." *International Review of Psychiatry* 21:430–8.
- Schell, Terry L. and Grant N. Marshall. 2006. "Survey of Individuals Previously Deployed for OEF/OIF." Pp. 87–115 in *Invisible Wounds of War: Psychological and Cognitive Injuries, Their Consequences, and Services to Assist Recovery*, edited by T. Tanielian and L. H. Jaycox. Santa Monica, CA: RAND Corporation.
- Schiraldi, Glenn R. 2000. *The Post-traumatic Stress Disorder Sourcebook*. Lincolnwood, IL: Lowell House.
- Schooley, Benjamin L., Thomas A. Horan, Pamela W. Lee, and Priscilla A. West. 2010. "Rural Veteran Access to Healthcare Services: Investigating the Role of Information and Communication Technologies in Overcoming Spatial Barriers." *Perspectives in Health Information Management* 7 (Spring 2010). Retrieved September 30, 2011 (http://library.ahima.org/xpedio/groups/public/documents/ahima/bok1_046927.pdf).
- Seal, Karen H., Daniel Bertenthal, Shira Maguen, Kristian Gima, Ann Chu, and Charles R. Marmar. 2008. "Getting Beyond 'Don't Ask; Don't Tell': An Evaluation of U.S. Veterans Administration Postdeployment Mental Health Screening of Veterans Returning from Iraq and Afghanistan." *American Journal of Public Health* 98:714–20.
- Seal, Karen H., Daniel Bertenthal, Christian R. Miner, Saunak Sen, and Charles Marmar. 2007. "Bringing the War Back Home: Mental Health Disorders among 103,788 U.S. Veterans Returning from Iraq and Afghanistan Seen at Department of Veterans Affairs Facilities." *Archives of Internal Medicine* 167:476–82.
- Seal, Karen H., Thomas J. Metzler, Kristian S. Gima, Daniel Bertenthal, Shira Maguen, and Charles R. Marmar. 2009. "Trends and Risk Factors for Mental Health Diagnoses among Iraq and Afghanistan Veterans Using Department of

- Veterans Affairs Health Care, 2002–2008.” *American Journal of Public Health* 99:1651–8.
- Segal, David R. and Mady W. Segal. 1983. “Change in Military Organization.” *Annual Review of Sociology* 9:151–70.
- Segal, David R., Mady W. Segal, and Meredith H. Thanner. 2007. “Hispanics and African Americans in the U.S. Military: Trends in Representation.” *Race, Gender, & Class* 14:48–64.
- Shetgiri, Rashmi, Gery W. Ryan, Lawren M. Askew, Paul J. Chung, and Mark A. Schuster. 2009. “Risk and Resilience in Latinos: A Community-based Participatory Research Study.” *American Journal of Preventive Medicine* 37:S217–S224.
- Shipherd, Jillian C., Jane Stafford, and Lynlee R. Tanner. 2005. “Predicting Alcohol and Drug Abuse in Persian Gulf War Veterans: What Role do PTSD Symptoms Play?” *Addictive Behaviors* 30:595–9.
- Smith, Tyler C., Margaret A. K. Ryan, Deborah L. Wingard, Donald J. Slymen, James F. Sallis, and Donna Kritz-Silverstein. 2008. “New Onset and Persistent Symptoms of Post-traumatic Stress Disorder Self Reported after Deployment and Combat Exposures: Prospective Population Based U.S. Military Cohort Study.” *British Medical Journal (Clinical Research Ed.)* 336:366–71.
- Snowden, Lonnie R. and Freda K. Cheung. 1990. “Use of Inpatient Mental Health Services by Members of Ethnic Minority Groups.” *The American Psychologist* 45:347–55.
- Snowden, Lonnie R. and Ann-Marie Yamada. 2005. “Cultural Differences in Access to Care.” Pp. 143–66 in *Annual Review of Clinical Psychology*. Vol. 1. Palo Alta, CA: Annual Reviews.
- Spoont, Michele R., James Hodges, Maureen Murdoch, and Sean Nugent. 2009. “Race and Ethnicity as Factors in Mental Health Service Use among Veterans with PTSD.” *Journal of Traumatic Stress* 22:648–53.
- Spoont, Michele R., Nina A. Sayer, David B. Nelson, and Sean Nugent. 2007. “Does Filing a Post-traumatic Stress Disorder Disability Claim Promote Mental Health Care Participation among Veterans?” *Military Medicine* 172:572–5.
- Srebnik, Debra, Ana Mari Cauce, and Nazli Baydar. 1996. “Help-seeking Pathways for Children and Adolescents.” *Journal of Emotional and Behavioral Disorders* 4:210–20.
- Stecker, Tracy, John C. Fortney, Francis Hamilton, and Icek Ajzen. 2007. “An Assessment of Beliefs About Mental Health Care among Veterans Who Served in Iraq.” *Psychiatric Services (Washington, D.C.)* 58:1358–61.

- Steindl, Stanley R., Ross McD. Young, Mark Creamer, and David Crompton. 2003. "Hazardous Alcohol Use and Treatment Outcome in Male Combat Veterans with Posttraumatic Stress Disorder." *Journal of Traumatic Stress* 16:27–34.
- Sundin, J., N. T. Fear, A. Iversen, R. Rona, and S. Wessely. 2010. "PTSD after Deployment to Iraq: Conflicting Rates, Conflicting Claims." *Psychological Medicine* 40:367–82.
- Sutker, Patricia B., John Mark Davis, Madeline Uddo, and Shelly R. Duitta. 1995. "Assessment of Psychological Distress in Persian Gulf Troops: Ethnicity and Gender Comparisons." *Journal of Personality Assessment* 64:415–27.
- Taft, Casey T., Danny G. Kaloupek, Jeremiah A. Schumm, Amy D. Marshall, Jillian Panuzio, Daniel W. King, and Terence M. Keane. 2007. "Posttraumatic Stress Disorder Symptoms, Physiological Reactivity, Alcohol Problems, and Aggression among Military Veterans." *Journal of Abnormal Psychology* 116:498–507.
- Tanielian, Terri. 2009. "Assessing Combat Exposure and Post-traumatic Stress Disorder in Troops and Estimating the Costs to Society Implications from the RAND Invisible Wounds of War Study." Santa Monica, CA: RAND Corporation.
- Tracy, Stephen W., Jodie A. Trafton, Kenneth R. Weingardt, Eangelica G. Aton, and Keith Humphreys. 2007. "How Are Substance Use Disorders Addressed in VA Psychiatric and Primary Care Settings? Results of a National Survey." *Psychiatric Services* 58:266–9.
- U.S. Bureau of the Census (USBC). 2009. "American Community Survey, 2009." Retrieved February 17, 2011 (<http://www.census.gov/acs/www/>).
- U.S. Government Accountability Office (USGAO). 2005. "Military Personnel: Reporting Additional Servicemember Demographics Could Enhance Congressional Oversight." Washington, DC: U.S. Government Accountability Office.
- U.S. Office of the Under Secretary of Defense Personnel and Readiness. 2008. "Population Representation in the Military Services, Fiscal Year 2007." Washington, DC: U.S. Department of Defense
- Vega, William A., Bohdan Kolody, Sergio Aguilar-Gaxiola, and Ralph Catalano. 1999. "Gaps in Service Utilization by Mexican Americans with Mental Health Problems." *American Journal of Psychiatry* 156:928–34.
- Vogt, Dawne, Amy Bergeron, Dawn Salgado, Jennifer Daley, Paige Ouimette, and Jessica Wolfe. 2006. "Barriers to Veterans Health Administration Care in a

- Nationally Representative Sample of Women Veterans.” *Journal of General Internal Medicine* 21:S19–S25.
- Wallace, Amy E., Richard Lee, Todd A. MacKenzie, Alan N. West, Steven Wright, Brenda M. Booth, Kara Hawthorne, and William B. Weeks. 2010a. “A Longitudinal Analysis of Rural and Urban Veterans’ Health-related Quality of Life.” *The Journal of Rural Health* 26:156–63.
- Wallace, Amy E., Todd A. MacKenzie, Steven M. Wright, and William B. Weeks. 2010b. “A Cross-sectional, Multi-year Examination of Rural and Urban Veterans Administration Users: 2002–2006.” *Military Medicine* 175:252–8.
- Wallace, Amy E., William B. Weeks, Stanley Wang, Austin F. Lee, and Lewis E. Kazis. 2006. “Rural and Urban Disparities in Health-related Quality of Life among Veterans with Psychiatric Disorders.” *Psychiatric Services* 57:851–6.
- Wang, Philip S., Michael Lane, Mark Olfson, Harold A. Pincus, Kenneth B. Wells, and Ronald C. Kessler. 2005. “Twelve-month Use of Mental Health Services in the United States: Results from the National Comorbidity Survey Replication.” *Archives of General Psychiatry* 62:629–40.
- Warner, Barbara D. and Carl G. Leukefeld. 2001. “Rural-Urban Differences in Substance Use and Treatment Utilization among Prisoners.” *The American Journal of Drug and Alcohol Abuse* 27:265–80.
- Weeks, William B., Amy E. Wallace, Alan N. West, Hilda R. Heady, and Kara Hawthorne. 2008. “Research on Rural Veterans: An Analysis of the Literature.” *Journal of Rural Health* 24:337–44.
- Weeks, William B., Lewis E. Kazis, Yujing Shen, Zhongxiao Cong, Xinhua S. Ren, Donald Miller, Austin Lee, and Jonathan B. Perlin. 2004. “Differences in Health-related Quality of Life in Rural and Urban Veterans.” *American Journal of Public Health* 94:1762–7.
- West, Alan N., Richard E. Lee, Michael D. Shambaugh-Miller, Byron D. Bair, Keith J. Mueller, Ryan S. Lilly, Peter J. Kaboli, and Kara Hawthorne. 2010. “Defining ‘Rural’ for Veterans’ Health Care Planning.” *The Journal of Rural Health* 26:301–9.
- West, Alan N. and William B. Weeks. 2009. “Health Care Expenditures for Urban and Rural Veterans in Veterans Health Administration Care.” *Health Services Research* 44:1718–34.
- Westermeyer, Joseph, Jose Canive, Judith Garrard, Eligio Padilla, Ross D. Crosby, and Paul Thuras. 2002. “Perceived Barriers to Mental Health Care for American Indian and Hispanic Veterans: Reports by 100 VA Staff.” *Transcultural Psychiatry* 39:516–30.

- Wilk, Joshua E., Paul D. Bliese, Paul Y. Kim, Jeffrey L. Thomas, Dennis McGurk, and Charles W. Hoge. 2010. "Relationship of Combat Experiences to Alcohol Misuse among U.S. Soldiers Returning from the Iraq War." *Drug and Alcohol Dependence* 108:115–21.
- Zinzow, Heidi M., Anouk L. Grubaugh, Jeannine Monnier, Samantha Suffoletta-Maierle, and B. Christopher Frueh. 2007. "Trauma among Female Veterans: A Critical Review." *Trauma, Violence, & Abuse* 8:384.
- Zoričić, Zoran, Dalibor Karlović, Danjel Buljan, and Srđan Marušić. 2003. "Comorbid Alcohol Addiction Increases Aggression Level in Soldiers with Combat-related Post-traumatic Stress Disorder." *Nordic Journal of Psychiatry* 57:199–202.