



---

*University of Utah*  
UNDERGRADUATE RESEARCH JOURNAL

**WAR RITUALS IN SMALL SCALE SOCIETIES: POTENTIAL TREATMENT FOR  
VETERANS WITH PTSD**

**Rachel Coy (Shane J. Macfarlan, Ph.D.)  
Department of Anthropology**

April 6, 2020  
2020 Monson Prize Winner

## INTRODUCTION

War veterans in the United States have elevated levels of depression, suicide ideation, suicide behaviors, and drug/alcohol use compared with the civilian U.S. population (Maguen, et al. 2011). These adverse outcomes experienced by veterans are common symptoms seen in patients with Post Traumatic Stress Disorder (PTSD). As defined by the U.S. Department of Veterans Affairs, PTSD is a mental health problem that can develop in some people after they either experience or witness a life-threatening event such as combat, a natural disaster, a car accident, or sexual assault (U.S. Department of Veterans Affairs, 2018). Current medications and psychotherapy only successfully treat approximately half of afflicted veterans (U.S. Department of Veterans Affairs, 2018). The negative outcomes experienced by war veterans are more prevalent in those who have killed an enemy in combat compared to those who have not killed (Maguen et al. 2011, 2012). Researchers inside and outside of the U.S. Military (Silver & Wilson 1988; Kindrick 2013; Kelle 2014) have made suggestions that post-war purification rituals may play an important role in reducing these negative outcomes. Researchers have studied these purification rituals, but only in a single culture or cultural act. There has yet to be a cross-cultural analysis of the types of rituals that exist for dealing with war-related PTSD in small-scale societies.

Many small-scale societies have traditional knowledge (Berkes, Colding, Folke 2000) including cultural knowledge, rules, and institutions accumulated over time for dealing with problems faced in daily life. We suspect numerous small-scale societies that practice warfare may have traditional knowledge related to the aftermath of war and reintegrating returning veterans into society. Specifically, I hypothesize that traditional institutions and rituals will be designed to help returning warriors deal with PTSD. Many criteria are used to make a proper diagnosis of PTSD however, in this study, I focused on standards outlined in parts D and E in the DSM-5 criteria. Such as negative affect, decreased interest in activities, sexual problems, feeling isolated, aggression, hypervigilance, difficulty concentrating and difficulty sleeping (Friedman, 2013). I test the hypothesis that small-scale societies' post-war rituals mitigate the stress and trauma associated with war and killing. These rituals specifically include: sexual taboos, touching prohibitions, food taboos, seclusion, sleep deprivation, and labor prohibitions that last at least one month. This research may lead to new treatment options for veterans which will mitigate the symptoms of PTSD and result in higher qualities of life after returning from combat, specifically after killing in combat.

Experiencing combat is a traumatic experience. Approximately 8% of U.S. veterans screened positive for PTSD at some point in their lives (U.S. Department of Veterans Affairs, 2018). Post Traumatic Stress Disorder is diagnosed by a licensed healthcare professional, using criteria outlined by the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Following a diagnosis, a health care professional helps the patient and their family decide upon a treatment plan. There are more treatments for PTSD available now than there have been in the past. Medications to treat PTSD successfully helped 42% of patients no longer meet

criteria for PTSD (U.S. Department of Veterans Affairs, 2018). Focused psychotherapy is another treatment option and studies show that 53% of patients treated with trauma-focused psychotherapy no longer met criteria for PTSD (U.S. Department of Veterans Affairs, 2018). The most successful treatments for PTSD are only able to help approximately half of the veterans suffering. Non-western treatments for PTSD could result in higher success rates for eliminating veteran's PTSD.

Numerous researchers have studied post-war rituals in the past and in modern times. However, these researchers often reference a single culture or cultural act; such as Sweat Lodge rituals in Native American societies (Silver & Wilson, 1988) or Ancient Roman texts (Kelle 2014). The Sweat Lodge rituals performed by the Lakota Sioux Indians provided the warrior with a new vision of themselves in society and helped to facilitate a remission of PTSD (Silver & Wilson, 1988). The Ancient Roman texts, studied by Kelle, suggest that a warrior's reintegration is dependent upon the ability of the community to frame warfare in a group context, rather than just an individual affair (2014). Another example comes from the Zulu people of Southern Africa where a warrior returning from combat is considered a ritual stranger. He is considered contaminated because he killed an enemy in war and is prohibited from returning to his own homestead. To remove the contamination, he must lay with a woman from a strange tribe. The warrior is then considered purified and may return home (Raum, 1973). These findings are from three radically different ethnic groups found throughout time, but all suggest purification rituals for warriors returning from combat leads to more positive outcomes for veterans.

## METHODS

The symptoms used to diagnose PTSD can be searched topically in the electronic Human Relations Area Files (hereafter, eHRAF). The eHRAF is the world's largest electronic database of ethnographic case studies spanning the last 200 years and contains in-depth knowledge on over 400 world cultures. Each ethnography has been digitized and is fully searchable by word or phrase. The database has been pre-coded topically. These codes made it possible for me to search quickly for topics. I searched for specific rituals warriors undergo after returning from combat. Each search criteria will narrow down which ethnographic documents are produced. For example, pre-coded topics 'Avoidance and Taboo' (code 784) and 'Aftermath of Combat' (code 727) can be combined which results in 90 paragraphs from 46 ethnographies spanning 35 cultures. Using these search codes and similar ones, I compiled a database of 61 ethnographic accounts. This dataset provided information about the post-war rituals found in 40 different cultures.

A notable example comes from the Kaska, a hunter-gatherer group located in the Arctic. Honigman (1954) described the post-war rituals of the Kaska, he reported that once the warriors returned to camp, each man went directly to his own dwelling. Every week for the first month or so, the men who had taken scalps from their enemy danced while wearing the scalp as this would help them "to forget the fighting." The warriors would receive gifts of food for a year or two

because it was dangerous for a man who had killed human beings to hunt game. The Kaska were concerned that if “game blood” mixed with the human blood that he had shed it would make the man “heavy.” Honigman was skeptical about this aspect of the post-war ritual because he thought a hunter-gatherer group in the Arctic likely couldn’t afford to have men not hunting and bringing in food for up to two years. He continued describing the post-war rituals and explained: “warfare, or more specifically, contact with killing, rendered a man unfit for sexual intercourse. Hence a two-month avoidance of cohabitation followed his return. Violation of this taboo might mean the death of his children” (Honigman, 1954). This example was coded as sexual abstinence, touching prohibition, labor prohibition, prohibitions last at least 1 month, warrior exists in a liminal space, warrior goes through purification rite, individual given cultural rewards, and warrior is contaminated.

The O’odham people of the Southwest region of North America refer to warriors who have killed during combat as ‘enemy slayers’. This excerpt from Underhills’ ethnography provides an account of the post-war ritual among the O’odham people: “There began for the enemy slayer a period more rigorous than any on the warpath. He was expected to sleep very little and not to talk except to his guardian. The latter visited him at morning and at evening, bringing a little pinole, which he mixed and handed to him. If the slayer wished to show real fortitude, he would let the mixture settle, drink the thin solution on top and throw the rest away. He drank water only when the guardian presented it to him”(1946). This paragraph was added to the database and coded as food taboos, warrior is in seclusion, sleep deprivation, and warrior exists in a liminal space. The completed dataset included information on the various post-war rituals from small-scale societies around the world. While there were many differences across cultural groups, several patterns emerged from the dataset. These patterns will be discussed further in the results section.

After data was collected on the frequency of post-war rituals in 40 different cultures it was used to determine the nature of the relationship between the frequency of war and the number of rituals. Ember and Ember (1992) collected data on the frequency of external and internal warfare. This analysis focused on internal warfare data. Internal warfare was defined as war within a language group or society (Ember & Ember, 1992). Engaging in combat, especially killing during combat, with groups who are similar to your own group with respect to ethnicity and language is more traumatic than engaging in combat with groups who are not as similar. We expect a greater frequency of warfare predicts a greater presence of purification rituals. If you experience war-related trauma frequently, we predict that there will be more rituals in place to help returning warriors deal with PTSD. Ember and Ember rated the frequency of warfare on a scale from 0 to 5. A rating of zero indicates that the two coders used by Ember and Ember could not reach a resolved rating on the frequency of warfare, meaning the data was not clear. A rating of one was assigned to cultures where warfare is absent or rare. When a culture received a rating of 5, they were involved in warfare almost constantly and at any time of the year. A Poisson

regression analysis was conducted to determine the relationship between the number of purification rituals and the frequency of internal warfare.

## RESULTS

Post-Combat Purification Rituals are found across the world; however, they appeared less frequently than expected (13% of eHRAF societies). The frequencies of various war ritual categories are shown in Table 1. The most frequent post-war ritual was food taboos, despite the expectation that sexual prohibitions and seclusion behavior would be most prevalent. The belief that the warrior was contaminated was prominent and seen in 80% of cultures. Descriptive statistics of the cross-cultural distribution of post-combat purification rituals are shown in Table 2.

Table 1. Post-Combat Purification Rituals and Cultural Beliefs

<b>Post-Combat Purification Rituals</b>	<b>Category</b>	<b>Number of Cultures</b>
	Food Taboos	17
	Seclusion	16
	Sexual Abstinence	15
	Labor Prohibitions	7
	Touching Prohibitions	6
	Sleep Deprivation	3
	<b>Cultural Beliefs</b>	Ghost of the Dead
	Warrior Contamination	32
	Spouse Contaminated	3

Table 2. Descriptive statistics of the cross-cultural distribution of post-combat purification rituals

	N	Mean (SD)	Min/Max
Number of Purification Strategies	40	1.6 (1.6)	0/6
Number of Ethnographies per Culture	40	1.5 (1.2)	1/7
Frequency of Internal Warfare	20	2.6 (2)	0/5

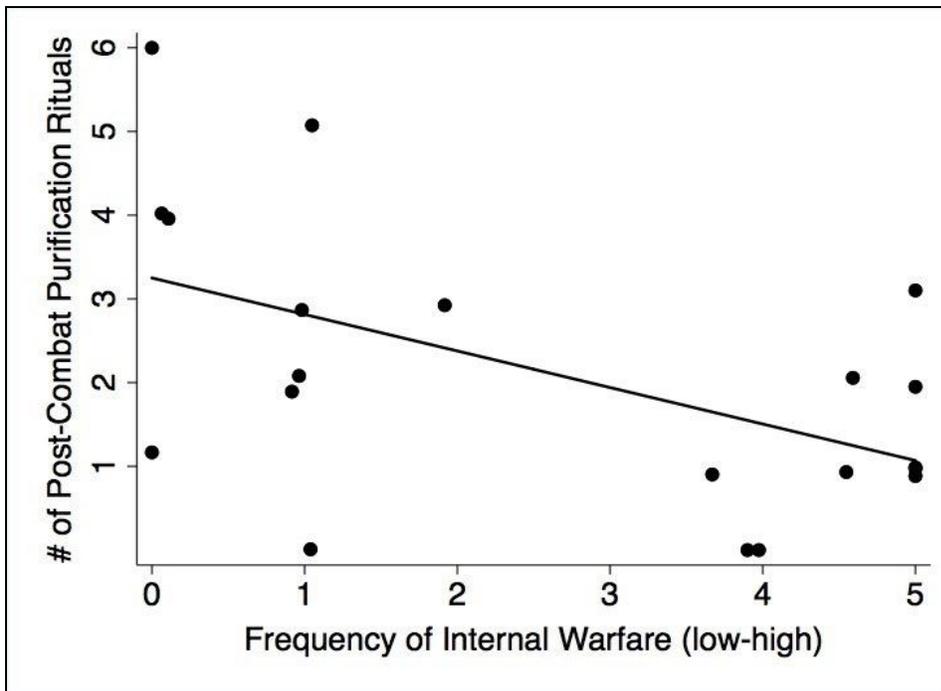
A poisson regression (clustered robust SE around geographic region) was used to assess how the frequency of internal war impacts the number of post-combat purification rituals. After controlling for the number of ethnographies written per culture, we find that the frequency of

internal war has a negative impact on the number of post-combat purification rituals (Pseudo R<sup>2</sup>=0.13; Wald X<sup>2</sup>=12.1; n=20) (Table 3) (Figure 1).

Table 3. Poisson Regression coefficients associated with the # of post-combat purification rituals

	IRR (RSE)	z	p
Frequency of Internal War	0.8 (0.06)	-2.7	.006
# of Ethnographies	1.3 (0.2)	1.96	.05

Figure 1. Scatterplot relationship between the frequency of internal war and the number of post-combat purification rituals.



## DISCUSSION

Veterans in the United States experience many negative outcomes as a result of their military service. Specifically, they experience high levels of PTSD and suicide. Since 2007, the average number of veteran deaths per day by suicide has been 16 or more (U.S. Department of Veterans Affairs, 2020). This statistic illustrates the severity of this health crisis for veterans. Scholars note that many small-scale societies engage in post-combat rituals to help reintegrate war veterans back to civilian life and these rituals are designed to deal with PTSD (Kindrick, 2013); however, none have ever systematically tested this. We tested the hypothesis that post-combat rituals are designed to mitigate war-induced PTSD by conducting the first cross-cultural analysis of these rituals. Our results showed seclusion & sexual abstinence were

frequently found in post-combat rituals and were represented as consistent with PTSD. The high frequency of food taboos was unexpected given the diagnostic criteria for PTSD. Food taboos were the most prevalent ritual, yet not represented in the DSM-5 PTSD criteria. Comorbid depression among veterans with PTSD is common (Stander, et al. 2014). The DSM-5 criteria for depression include increases or decreases in appetite (Uher, et al. 2015). The appetite changes associated with depression may account for the high prevalence of food taboos in post-war rituals. Future work with a larger sample size of post-war rituals will provide a clearer picture of this phenomenon.

There was a negative relationship between the frequency of internal warfare and the number of post-combat purification rituals. This relationship was not what we initially expected, but may be due to desensitization to traumatic events. This negative relationship suggests individuals who have experienced war less frequently may be the most likely to need purification rituals to deal with moral trauma. The implications of this finding could alter the treatment of veterans with PTSD based on the length of their service and the amount of combat exposure they experienced while in the US Military. However, the frequency of warfare data was only available for 50% of cultures with post-war purification rituals. The limitations of the data only showed part of the picture, a more complete dataset on the frequency of warfare will be necessary to confirm our initial findings. Additionally, war veterans who receive cultural rewards may decrease the necessity for purification rituals. While my role in this project focused on the post-war purification rituals warriors go through, the full scope of this research includes an analysis of the cultural rewards and health outcomes of veterans in small-scale societies. This research could have long term psychiatric and policy implications for veterans with PTSD and their integration back to civilian life.

## REFERENCES

1. Maguen S., et al. (2011). Killing in combat, mental health symptoms, and suicidal ideation in Iraq war veterans. *Journal of Anxiety Disorders*. (5), 563-567.  
<https://doi:10.1016/j.janxdix.2011.01.003>
2. Friedman M. J. (2013). Finalizing PTSD in DSM-5: Getting Here from There and Where to Go Next. *Journal of Traumatic Stress*, 26(5), pp. 548-556.  
<https://doi.org/10.1002/jts.21840>
3. Maguen S., et al. (2012). Killing in combat may be independently associated with suicidal ideation. *Depress Anxiety*, 29. (11), 918-923. doi:10.1002/da.21954.
4. Silver, S. M. & Wilson J. P. (1988). Native American Healing and Purification Rituals for War Stress In J. P. Wilson, Z. Harel, & B. Kahana (Eds.), *Human Adaptation to Extreme Stress from the Holocaust to Vietnam* (pp. 337-355). New York and London: Plenum Press.
5. Kindrick, T. D. Maj. USAF. (2013). Society and the Soldier's Soul: Is the Warrior's Purification Ritual Needed or Possible in Modern America? Air Command and Staff College, Air University. Maxwell Air Force Base, Alabama
6. Kelle, B. E. (2014). Post War Rituals of Return and Reintegration in B. E. Kelle, F. R. Ames, & J. L. Wright (Eds.), *Warfare, Ritual, and, Symbol in Biblical and Modern Contexts* (pp. 205-241). Atlanta, Georgia: Society of Biblical Literature.
7. Raum, O. F. (1973). Social Functions of Avoidances and Taboos Among the Zulu. *Monographien Zur Völkerkunde*. Berlin, New York: de Gruyter. Retrieved from <http://ehrafworldcultures.yale.edu/document?id=fx20-015>
8. Berkes, F., Colding, H., & Folke, C. (2000). Rediscovery of Traditional Ecological Knowledge as Adaptive Management. *Ecological Applications*, 10(5), pp. 1251-1262.
9. Hewlett B. S. & Macfarlan S. J. (2010). Fathers' Role in Hunter-Gatherer and Other Small-Scale Cultures In M. E. Lamb (Ed.), *The Role of the Father in Child Development* (pp. 413-434). Hoboken, New Jersey: John Wiley & Sons, Inc.
10. U.S. Department of Veterans Affairs (2018, October 11). PTSD: National Center for PTSD. Retrieved from <https://www.ptsd.va.gov/>
11. Ember, C. R., & Ember, M. (1992). Warfare, aggression, and resource problems: Cross-cultural codes. *Behavior Science Research*, 26(1-4), 169.  
<https://doi.org/10.1177/106939719202600108>
12. Stander, V. A., Thomsen, C. J., & Highfill-McRoy, R. M. (2014). Etiology of depression comorbidity in combat-related PTSD: A review of the literature. *Clinical Psychology Review*, 34(2), 87-98. <https://doi.org/10.1016/j.cpr.2013.12.002>
13. Uher, R., Payne, J. L., Pavlova, B., & Perlis, R. H. (2014). Major Depressive Disorder in Dsm-5: Implications for Clinical Practice and Research of Changes from Dsm-Iv. *Depression & Anxiety (1091-4269)*, 31(6), 459-471. <https://doi.org/10.1002/da.22217>

14. Honigmann, J. J. (1954). *Kaska Indians: An Ethnographic Reconstruction*. Yale University Publications In Anthropology. New Haven, Conn.: Yale University Press. Retrieved from <http://ehrafworldcultures.yale.edu/document?id=nd12-006>
15. Underhill, R. (1946). *Papago Indian Religion*. Contributions To Anthropology. New York: Columbia University Press. Retrieved from <http://ehrafworldcultures.yale.edu/document?id=nu79-001>
16. U.S. Department of Veterans Affairs (2020, March 16). *Mental Health: Suicide Prevention, Veteran Suicide Data*. Retrieved from [https://www.mentalhealth.va.gov/suicide\\_prevention/data.asp](https://www.mentalhealth.va.gov/suicide_prevention/data.asp)