

## **Student Responses to RENEWAL Questions**

*The following apply only for renewal applications. Please consider these responses in making your assessment of the application.*

### **1. Please describe how successful you were in achieving the intended outcomes of and adhering to the plan/timeline of your original proposal.**

I was successful in following the outlined timeline in my original proposal, however additional questions emerged. The most frequent post-war ritual was food taboos, despite the expectation that sexual prohibitions and seclusion behavior would be most prevalent. Additionally, there was a negative relationship between the frequency of war and the number of post-war purification rituals, the opposite of what was expected. Further work to assemble a larger sample size will improve the accuracy of my preliminary findings.

### **2. Please describe how successful you think your relationship with your mentor was during your first semester of UROP.**

Professor [REDACTED] was an excellent mentor during my first UROP semester. We met regularly to discuss progress on the project and he always responded quickly to any emails I sent. He was readily available to provide guidance with database management, statistical analysis, poster construction and with the research process in general.

### **3. Please explain what you think the impact of an additional semester in UROP would be to your educational and career goals.**

After completing my Bachelor of Science degree in Anthropology, with an emphasis in Health, I plan to attend medical school. Further work as a research assistant will provide increased opportunities for me to improve my critical thinking and problem-solving skills which will be crucial to my success in medical school. By participating in research, I am also learning academic writing, presentation and communication skills. Continued work on this project will also deepen my understanding of mental health and help me empathize with patients once I am a health care provider. Participating in cross-cultural research in health-related topics has provided me with knowledge about numerous cultural groups throughout the world. My long-term career goals include working in international medicine and the knowledge gained from this research project will be incredibly beneficial to my future work.

## **UROP Proposal**

### **Title of Proposal**

Cross Cultural Analysis of Post Combat Rituals in Small Scale Societies

### **Problem/Topic of Research or Creative Work**

War veterans in the United States have elevated levels of depression, suicidal ideation, suicidal 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 US 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 in small-scale societies. We suspect these post-war rituals will either function as a) a rite of passage, characterized as a ritual including prohibitions lasting less than a month, where warriors receive a reward for their acts during war, or b) a therapeutic ritual, characterized as a ritual including prohibitions lasting more than a month, that function to help warriors deal with war-related moral trauma and PTSD. I will focus my analysis on the therapeutic functions of post-war rituals.

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. I plan to test the hypothesis that small-scale societies' post-war rituals mitigate the stress and trauma associated with war and killing. These rituals will 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.

## **Relevant Background/Literature Review**

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 social worker, psychologist or physician, using criteria outlined by the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Following a diagnosis, a health care professional aids 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 the 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 veteran PTSD in our industrialized society are only able to help approximately half of the veterans suffering. Non-industrialized societies can provide an alternate perspective on this issue. By studying non-industrialized societies, we can gain a deeper understanding of the reintegration back into society our veterans go through.

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.

## **Specific Activities to be Undertaken and Timeframe for Each Activity**

Many criteria are used to make a proper diagnosis of PTSD, however, in this study, I will focus on standards outlined by Criterion D and E in the DSM-5 criteria. Such as negative affect, decreased interest in activities, feeling isolated, aggression, hypervigilance, difficulty concentrating and difficulty sleeping (Friedman, 2013). These symptoms 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 will make it possible for me to search quickly for topics. I will be searching 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 'Aftermath of Combat' (code 727) and 'General Sex Restrictions' (code 834) can be combined which yields 32 paragraphs from 19 ethnographies spanning 16 cultures. I will study these ethnographies, and others from similar search codes, and distill pertinent information into a database. I will meet with Professor [REDACTED] every two weeks to discuss construction of the database and data coding and analysis. I will meet with Professor [REDACTED] once a week during the figure and table production and the poster production phases.

### **Timeline:**

Data coding: 70 hours

Database Management: 10 hours

Data Analysis: 10 hours

Mentorship: 10 hours

Figure and table production: 10 hours

Poster Production: 10 hours

Total: 120 hours

## **Relationship of the Proposed Work to the Expertise of the Faculty Mentor**

My faculty mentor, Dr. [REDACTED], is an Assistant Professor in the Department of Anthropology at the University of Utah. He is an expert on the evolutionary ecology of cooperation and conflict in small-scale societies (Macfarlan, Quinlan, & Remiker, 2013, Macfarlan & Remiker, 2017) with research focusing specifically on warfare in Lowland Amazonia (Macfarlan et al 2014; Macfarlan et al 2018). Furthermore, he has experience performing cross-cultural research (Macfarlan & Henrickson 2010; Hewlett & Macfarlan 2010), advising graduate students on projects related to eHRAF (Emily Post, MA, UofU 2018), and database management and analysis.

As an Anthropology major, I have taken multiple courses from Professor [REDACTED] and I find his teaching style engaging. In addition, I have spent 3 semesters working as a Research Assistant for Professor [REDACTED] and have an established relationship with him and familiarity with this project. Professor [REDACTED]'s expertise will be an excellent resource to continue to utilize during this research project and his willingness to invest in collaborations with undergraduate students makes him an ideal faculty mentor.

## **Relationship of the Proposed Work to Student's Future Goals**

Both my personal and educational goals will be bettered by participating in this research project. I am pursuing a Bachelor of Science degree in Anthropology with an emphasis in Health. After graduating, I plan to attend medical school. Regardless of which medical specialty I practice in, I will interact with patients from varied backgrounds. Conducting cross-cultural research will provide foundational knowledge to draw upon when I communicate with patients from different cultural backgrounds. This project will also help me understand how mental health can alter people's lives, which will help me empathize with patients once I am a health care provider. Participation in hypothesis-driven research will also further my capabilities as a scientist. This project will sharpen my problem-solving and analytical skills. I will gain experience writing professionally and presenting research findings, which will be tremendously valuable skills to have in my medical career.

## **References**

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