

**AWARD NUMBER:** W81XWH-18-1-0235

**TITLE:** Psychological Health and Resilience through Values Affirmation: Effectiveness of a Brief Intervention among Military Personnel

**PRINCIPAL INVESTIGATOR:** Ann H. Huffman, Ph.D.

**CONTRACTING ORGANIZATION:** Northern Arizona University

**REPORT DATE:** July 2020

**TYPE OF REPORT:** Annual

**PREPARED FOR:** U.S. Army Medical Research and Materiel Command  
Fort Detrick, Maryland 21702-5012

**DISTRIBUTION STATEMENT:** Approved for Public Release;  
Distribution Unlimited

The views, opinions and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision unless so designated by other documentation.

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. <b>PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.</b>					
1. REPORT DATE July 2020		2. REPORT TYPE Annual		3. DATES COVERED July 1, 2019–June 30, 2020	
4. TITLE AND SUBTITLE  Psychological Health and Resilience through Values Affirmation: Effectiveness of a Brief Intervention among Military Personnel				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER W81XWH-18-1-0235	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)  Ann H. Huffman, Ph.D., & Heidi A. Wayment  E-Mail: ann.huffman@nau.edu				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)  NORTHERN ARIZONA UNIVERSITY OFFICE OF GRANTS AND CONT. 601 S KNOLES DR ROOM 220 FLAGSTAFF AZ 86011-7034				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)  U.S. Army Medical Research and Materiel Command Fort Detrick, Maryland 21702-5012				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT  Approved for Public Release; Distribution Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT  The long-range goal for this project is to improve the quality of life for military personnel. The objective of this proposal which supports the long-range goal of this project is to examine the effectiveness of a simple, non-spiritual, self-management strategy that strengthens personal and occupational resources-resources that can positively impact adverse reactions to military-specific demands and promote personal and work outcomes. Our intervention, designed to strengthen a balanced self-identity through very brief affirmations of growth and balance values, will be adapted to military occupational contexts. Within the context of Adler and Castro's (2013) Occupational Health Model for Military Mental Health, our central hypothesis is that a balanced self-identity will strengthen personal and occupational resources that moderate the relationship between demands and personal and work outcomes. In the first year we have developed the content for the app, and are preparing to conduct beta testing and piloting.					
15. SUBJECT TERMS Military, wellbeing, intervention, balanced self-identity, app					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			USAMRMC
Unclassified	Unclassified	Unclassified	Unclassified	12	19b. TELEPHONE NUMBER (include area code)

## Table of Contents

	<u>Page</u>
1. Introduction.....	4
2. Keywords.....	4
3. Accomplishments.....	4
4. Impact.....	5
5. Changes/Problems.....	6
6. Products.....	7
7. Participants and Other Collaborating Organizations.....	7
8. Special Reporting Requirements.....	10
9. Appendices.....	10

1. **INTRODUCTION:** Narrative that briefly (one paragraph) describes the subject, purpose and scope of the research.

The long-range goal for this project is to improve the quality of life for military personnel. The objective of this proposal which supports the long-range goal of this project is to examine the effectiveness of a simple, non-spiritual, self-management strategy that strengthens personal and occupational resources-resources that can positively impact adverse reactions to military-specific demands and promote personal and work outcomes. Our intervention, designed to strengthen a balanced self-identity through very brief affirmations of growth and balance values, will be adapted to military occupational contexts. Within the context of Adler and Castro's (2013) Occupational Health Model for Military Mental Health, our central hypothesis is that a balanced self-identity will strengthen personal and occupational resources that moderate the relationship between demands and personal and work outcomes.

2. **KEYWORDS:**

Military, wellbeing, quiet ego, intervention, growth, self-identity, balance, app,

3. **ACCOMPLISHMENTS:**

**What were the major goals of the project?**

<b>Phase II</b>		
<b>Aim 1: Examine the effectiveness of a brief, non-spiritual, self-management intervention on strengthening value balance.</b>		
	<b>Timeline</b>	<b>% complete</b>
<b>Major Task 4: Pilot Intervention Study</b>	10-15	100%
<i>YEAR 1 Milestone: BRAVE Intervention Materials Developed</i>	MONTH 14	
<b>Major Task 5: Preparation for Intervention Study</b>	10-15	100%*
<i>YEAR 2 Milestone: Setting and Materials for Intervention Study Ready</i>	MONTH 15	
<b>Major Task 6: Beta testing of Q-Core 1.0</b>	10-13	100%
<i>YEAR 2 Milestone: Q-core 1.0 tested and ready for submission</i>	MONTH 13	
<b>Major Task 7: Q-Core 1.0 prepare application</b>	10-15	100%
<i>YEAR 2 Milestone: Q-core 1.0 submitted to Apple</i>	MONTH 15	
<b>Phase III:</b>		
<b>Aim 2: Assess which factors moderate the relationship between the self-management intervention and organizational/personal resources.</b>		
<b>Aim 3. Investigate the impact of improved value balance on resources, and work and personal outcomes.</b>		
	<b>Timeline</b>	
<b>Major Task 8: Conduct BRAVE Intervention Studies (active duty, N = 200);</b>	16-21	10%*

<i>YEAR 2 Milestone: Studies 1 &amp; 2 completed; Data ready for analysis</i>	MONTH 21	
<b>Major Task 9: Data Analysis</b>		
<i>YEAR 2: Milestone: Data analyzed</i>	MONTH 27	
<b>Major Task 10: Create Q-Core 1.1</b>	15-21	NA*
<i>YEAR 2 Milestone: Beta version Q-Core 1.1 developed</i>	MONTH 21	
<b>Major Task 11: Beta testing of Q-Core 1.1</b>	19-21	NA*
<b>Major Task 12: Q-Core 1.1 prepare application for submission</b>	21-24	NA*
<i>YEAR 2 Milestone: Q-core 1.1 tested and ready for submission</i>	MONTH 23	NA*
<i>YEAR 2 Milestone: Q-core 1.1 submitted to Apple</i>	MONTH 24	NA*

\*See notes below related to disruption of study due to COVID-19

### **What was accomplished under these goals?**

During the second year of the project we were able to develop and finalize all of our material. We developed two apps; one for the experimental condition, and one for the control condition. We received full IRB approval for our study. We completed the pilot study which allowed us to finalize our procedures for the study. We were able to secure a study site (Fort Hood) and were provided a building to use for the study. While at Fort Hood we further developed our recruitment methodology. We began the study in the first week of March, completed the pre-intervention procedures (i.e., survey, cognitive attention computer assessment, and urine sample) in addition to introducing participants to the intervention for approximately 24 participants.

Unfortunately, during the time of the pre-test for the initial group, COVID19 threats emerged and we were unable to continue the study. We revised the post methodology so we would be able to finish the data collection with the first round of participants. We had to change the post-assessment to fully online which required us to not collect the urine sample or have them complete the cognitive attention computer assessment.

### **What opportunities for training and professional development has the project provided?**

Nothing to Report.

### **How were the results disseminated to communities of interest?**

Nothing to Report.

### **What do you plan to do during the next reporting period to accomplish the goals?**

After discussions with our science officer (Inna Williams) and our Psychological Health & Resilience Portfolio Manager (Kate Nassauer) we have revised the methodology and made it fully online for the rest of study 1. Our goal is to go back to face-to-face after the COVID19 threat subsides and it is safe to travel and to conduct research. We will re-assess this possibility after study 1 is completed (approximately Jan).

## **4. IMPACT:**

### **What was the impact on the development of the principal discipline(s) of the project?**

Nothing to Report.

**What was the impact on other disciplines?**

Nothing to Report.

**What was the impact on technology transfer?**

Nothing to Report.

**What was the impact on society beyond science and technology?**

Nothing to Report.

**5. CHANGES/PROBLEMS:**

**Changes in approach and reasons for change**

As mentioned earlier, we began the study in the first week of March, completed the pre-intervention procedures (i.e., survey, cognitive attention computer assessment, and urine sample) in addition to introducing participants to the intervention for approximately 24 participants.

Unfortunately, during the time of the pre-test for the initial group, COVID19 threats emerged and we were unable to continue the study. We revised the post methodology so we would be able to finish the data collection with the first round of participants. We had to change the post-assessment to fully online which required us to not collect the urine sample or have them complete the cognitive attention computer assessment. After discussions with our science officer (Inna Williams) and our Psychological Health & Resilience Portfolio Manager (Kate Nassauer) we have revised the methodology and made it fully online for the rest of study 1. Our goal is to go back to face-to-face after the COVID19 threat subsides and it is safe to travel and to conduct research. We will re-assess this possibility after study 1 is completed (approximately Jan).

**Actual or anticipated problems or delays and actions or plans to resolve them**

Due to COVID19 we had to put the study on pause. As mentioned above, we have revised the methodology and made it fully online for the rest of study 1. Our goal is to go back to face-to-face after the COVID19 threat subsides and it is safe to travel and to conduct research. We will re-assess this possibility after study 1 is completed (approximately Jan).

**Changes that had a significant impact on expenditures**

Nothing to Report at this time. Due to changes we will have some changes in the expenditures. We will not know exactly what is needed until after Study 1 is completed.

**Significant changes in use or care of human subjects, vertebrate animals, biohazards, and/or select agents**

- **Significant changes in use or care of human subjects**

Nothing to Report.

- **Significant changes in use or care of vertebrate animals.**

Not applicable

- **Significant changes in use of biohazards and/or select agents**

Nob applicable

## 6. **PRODUCTS:**

### **Publications, conference papers, and presentations**

Nothing to Report.

### **Journal publications.**

Nothing to Report.

### **Books or other non-periodical, one-time publications.**

Nothing to Report.

### **Other publications, conference papers, and presentations.**

#### **Website(s) or other Internet site(s)**

Nothing to Report.

#### **Technologies or techniques**

Nothing to Report.

#### **Inventions, patent applications, and/or licenses**

Nothing to Report.

#### **Other Products**

Nothing to Report.

## 7. **PARTICIPANTS & OTHER COLLABORATING ORGANIZATIONS**

**What individuals have worked on the project?**

*Name:* Ann Huffman, Ph.D.  
*Project Role:* Co-PI  
*Researcher Identifier (e.g. ORCID ID):* <https://orcid.org/0000-0002-7434-571X>  
*Nearest person month worked:* 5 months  
*Contribution to Project:* Dr. Huffman has performed work in the area of app content development, contacts for recruitment, HRPO paperwork, development of interview protocols, supervision of research coordinator and Research Assistant,

*Name:* Heidi Wayment, Ph.D.  
*Project Role:* Co-PI  
*Researcher Identifier (e.g. ORCID ID):* <https://orcid.org/0000-0001-5287-5966>  
*Nearest person month worked:* 5 months  
*Contribution to Project:* Dr. Wayment has performed work in the area of app content development, app organization and management, NAU IRB paperwork, development of initial protocols, liaison with App developer

*Name:* Christopher Farkas  
*Project Role:* Research Coordinator  
*Researcher Identifier (e.g. ORCID ID):* NA  
*Nearest person month worked:* 10 months  
*Contribution to Project:* Christopher has performed work in the area of support in app content, development of recordings for app, IRB-related training, purchasing (e.g., gift cards), support in support for daily operations.

*Name:* Jennifer Van Horne  
*Project Role:* Research Assistant  
*Researcher Identifier (e.g. ORCID ID):* NA  
*Nearest person month worked:* 1.5 months  
*Contribution to Project:* Jennifer has worked on survey development, literature reviews, support to research coordinator.

*Name:* Carl Castro  
*Project Role:* Military Consultant  
*Researcher Identifier (e.g. ORCID ID):* NA  
*Nearest person month worked:* 1 month  
*Contribution to Project:* Carl assisted in integrating military concepts to intervention material; supported PIs as needed

*Name:* JP Bonn  
*Project Role:* App Developer Consultant  
*Researcher Identifier (e.g. ORCID ID):* NA  
*Nearest person month worked:* 3 month  
*Contribution to Project:* JP has been working on app development.

**Has there been a change in the active other support of the PD/PI(s) or senior/key personnel since the last reporting period?**

Nothing to Report.

**What other organizations were involved as partners?**

Nothing to Report.

#### **8. SPECIAL REPORTING REQUIREMENTS**

- **COLLABORATIVE AWARDS:**

Not applicable

- **QUAD CHARTS:**

Quad chart attached.

#### **9. APPENDICES**

Appendix A – Quad Chart

## Appendix A – Quad Chart

# Psychological Health and Resilience through Values Affirmation: Effectiveness of a Brief Intervention among Military Personnel

BA150565

W81XWH-18-1-0235

PI: Huffman/Wayment

Org: Northern Arizona University Award Amount: 1,410,601



12

## Study/Product Aim(s)

Aim 1. Examine the effectiveness of a brief, non-spiritual, self-management intervention on strengthening value balance.

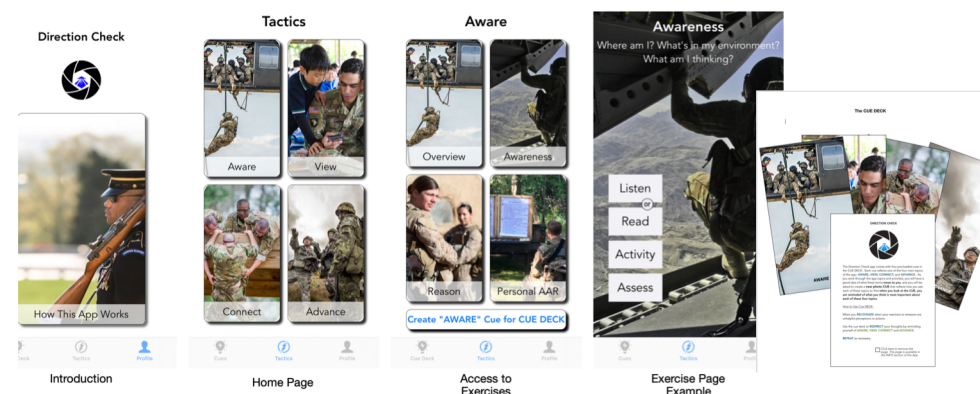
Aim 2. Assess which factors moderate the relationship between the self-management intervention and organizational/personal resources.

Aim 3. Investigate the impact of improved value balance on resources, and work and personal outcomes.

## Approach

In a three-phased study, we will experimentally examine how well our adaptation of an intervention strengthens personal and occupational resources in a military occupational setting. Phase I and II consist of refinement of intervention, focus group and beta testing of phone app (Q-Core 1.0). In phase III two studies (pre-test post-test control group design) will be implemented.

Our app-based intervention to strengthen a balanced self-identity overcomes past issues with stigma associated with traditional medical models by focusing on self-reliance and personal growth. Screen shots from our developed Direction Check App below:



Accomplishment: To date, no science-related accomplishments to report.

## Timeline and Cost

Activities	CY	18-19	19-20	20
Develop/Pilot Self-Management Intervention				
Examination of Effectiveness of Self-Management Intervention				
Assess impact of Intervention and key moderating variables				
<b>Estimated Budget (\$K)</b>		<b>\$562,851</b>	<b>\$688,906</b>	<b>\$158,842</b>

Updated: (Jun, 2020)

## Goals/Milestones

**CY18 Goal** – Develop/Pilot Self-Management Intervention

- X Full working lab
- X 95% of all IRB/HRPO application approved
- X Focus groups & BRAVE Protocols completed

☐ **CY19 Goals** – Examination of Effectiveness of Self-Management Intervention

- X Recruitment plan developed
- X App is finalized

☐ **CY20 Goal** – Assess impact of Intervention and key moderating variables

## Comments/Challenges/Issues/Concerns

Challenge: Had to temporarily stop data collection due to COVID19

## Budget Expenditure to Date

Projected Expenditure: ~\$1,251,757

Actual Expenditure : \$858,961