

**TriService Nursing Research Program Final Report Cover Page**

|  |  |
|--|--|
| Sponsoring Institution   | TriService Nursing Research Program  |
| Address of Sponsoring Institution                                | 4301 Jones Bridge Road<br>Bethesda MD 20814  |
| USU Grant Number   | N14-P17  |
| USU Project Number   | HU0001-14-1-TS12   |
| Title of Research Study or Evidence-Based Practice (EBP) Project | Stress, Resilience, Stigma and Barriers to Mental Health Care in AF Nursing Staff  |
| Period of Award  | 1 September 2014 -- 30 November 2016   |
| Applicant Organization   | University of New Mexico   |
| Address of Applicant Organization                                | University of New Mexico Health Sciences Center<br>HSC Financial Services, MSC 09 5220<br>1 University of New Mexico<br>(Physical Address: 1650 Univ. Blvd, Suite 2200)<br>Albuquerque, NM 87131 |

**Signatures**

PI Signature

Date

2-28-2017

Mentor Signature

Date

2-28-17

Mentor Signature

Date

28 Feb 17

## Table of Contents

|  |    |
|--|----|
| Abstract   | 3  |
| TSNRP Research Priorities  | 5  |
| Progress Towards Achievement of Specific Aims  | 6  |
| Findings Related to Research Questions 1 and 2   | 6  |
| Findings Related to Research Question 3  | 8  |
| Findings Related to Research Question 4  | 10 |
| Additional Findings  | 11 |
| Relationship of Current Findings to Previous Findings  | 13 |
| Effect of Problems or Obstacles on the Results   | 15 |
| Limitations  | 15 |
| Conclusion   | 16 |
| Significance of Study or Project Results to Military Nursing   | 18 |
| Changes in Clinical Practice, Leadership, Management, Education, Policy, and/or<br>Military Doctrine | 20 |
| References Cited   | 21 |
| Summary of Dissemination   | 24 |
| Reportable Outcomes  | 27 |
| Recruitment and Retention Table: Wright-Patterson Air Force Base                                     | 28 |
| Recruitment and Retention Table: Joint Base Andrews  | 29 |
| Recruitment and Retention Table: Travis Air Force Base   | 30 |
| Demographic Characteristics of the Sample  | 31 |
| Final Budget Report  | 32 |

## Abstract

**Purpose:** To assess if stigma and barriers to accessing mental health (MH) services in Air Force (AF) nurses are influenced by resilience, stress, demographics, deployment, use of MH services, or treatment-seeking.

**Methods:** AF registered nurses (RNs) and medical technicians completed a survey, including demographic items, stigma scale, barriers scale, Conner-Davidson Resilience scale, and Perceived Stress Questionnaire.

**Sample:**  $n=250$  (RNs = 141, Medical Technicians = 104, Unknown = 5)

**Analysis:** Descriptive statistics characterized demographics, MH access, deployment(s), and questionnaire scores. Multivariate analysis of variance examined stigma, barriers, stress, and resilience based on demographics and deployment. Logistic regression determined whether treatment-seeking was influenced by military grade, gender, stigma, barriers, stress, and resilience.

**Findings:** On average, respondents neither agreed nor disagreed accessing MH services would be stigmatizing ( $M=3.1$ ,  $SD=.88$ ). However, the modal response category was *Agree* (i.e., stigmatizing) for four of the six items, specifically, accessing MH services would result in: being seen as weak, harm my career, cause unit members to have less confidence in me, and cause unit leadership to treat me differently. Participants disagreed barriers would exist ( $M=2.1$ ,  $SD=.74$ ), although the modal response category was *Agree* for difficulty getting time off work for treatment.

Resilience was high ( $M=75.4$ ,  $SD=12.7$ ); stress was moderate ( $M=.43$ ,  $SD=.18$ ). Multivariate analyses showed an effect of military grade on stigma, resilience, and stress ( $p<.05$  for each). RNs reported higher stigma and resilience and lower stress than enlisted personnel.

The majority who accessed MH services did so during their service; care was unrelated to deployments. Approximately 44% reported a stress or emotional problem, and 28% accessed MH services within the past six months. Stress was higher in individuals who accessed care within the past six months,  $t(232) = 4.87, p < .001, d = .90$ . Respondents preferred addressing MH concerns via military resources and preferred care from a MH professional.

**Implications for Military Nursing:** Future research should focus on understanding stigma in other service branches and military providers. Stress may be more relevant to treatment-seeking than stigma.

**TSNRP Research Priorities that Study or Project Addresses**

**Primary Priority**

|                                    |   |
|------------------------------------|---|
| Force Health Protection:           | <input checked="" type="checkbox"/> Fit and ready force<br><input type="checkbox"/> Deploy with and care for the warrior<br><input type="checkbox"/> Care for all entrusted to our care   |
| Nursing Competencies and Practice: | <input type="checkbox"/> Patient outcomes<br><input type="checkbox"/> Quality and safety<br><input type="checkbox"/> Translate research into practice/evidence-based practice<br><input type="checkbox"/> Clinical excellence<br><input type="checkbox"/> Knowledge management<br><input type="checkbox"/> Education and training |
| Leadership, Ethics, and Mentoring: | <input type="checkbox"/> Health policy<br><input type="checkbox"/> Recruitment and retention<br><input type="checkbox"/> Preparing tomorrow's leaders<br><input type="checkbox"/> Care of the caregiver   |
| Other:                             | <input type="checkbox"/>  |

**Secondary Priority**

|                                    |   |
|------------------------------------|---|
| Force Health Protection:           | <input type="checkbox"/> Fit and ready force<br><input type="checkbox"/> Deploy with and care for the warrior<br><input type="checkbox"/> Care for all entrusted to our care  |
| Nursing Competencies and Practice: | <input type="checkbox"/> Patient outcomes<br><input type="checkbox"/> Quality and safety<br><input type="checkbox"/> Translate research into practice/evidence-based practice<br><input type="checkbox"/> Clinical excellence<br><input type="checkbox"/> Knowledge management<br><input type="checkbox"/> Education and training |
| Leadership, Ethics, and Mentoring: | <input checked="" type="checkbox"/> Health policy<br><input type="checkbox"/> Recruitment and retention<br><input type="checkbox"/> Preparing tomorrow's leaders<br><input type="checkbox"/> Care of the caregiver  |
| Other:                             | <input type="checkbox"/>  |

### **Progress Towards Achievement of Specific Aims of the Study or Project**

#### **Findings related to each specific aim, research or study questions, and/or hypothesis:**

The specific aim of this investigation was to assess perceived stigma and barriers to accessing mental health (MH) services, perceived stress, and resilience among active component Air Force (AF) nursing personnel (46XX/4NX). To accomplish this aim, the following research questions were answered:

1. What are the perceived stigma and barriers to accessing mental health services and levels of perceived stress and resilience among AF nursing personnel?
2. What are the magnitude and direction of associations among stigma and barriers to accessing mental health services, perceived stress, and levels of resilience in AF nursing personnel?
3. To what extent are demographic characteristics, military grade, past deployment, and access to mental health services related to perceived stigma and barriers to accessing mental health services, perceived stress, and resilience among AF nursing personnel?
4. To what extent are perceptions of stigma and barriers to accessing mental health services, perceived stress, and resilience related to mental health treatment-seeking by AF nursing personnel?

**Findings for Research Questions 1 and 2:** What are the perceived stigma and barriers to accessing mental health services and levels of perceived stress and resilience among AF nursing personnel? What are the magnitude and direction of associations among stigma and barriers to accessing mental health services, perceived stress, and levels of resilience in AF nursing personnel?

All scales demonstrated adequate internal consistency reliability. Table 1 provides descriptive statistics for and bivariate correlations among the Stigma and Barriers to Care scales, Conner-Davidson Resilience scale (CD-RISC), and Perceived Stress Questionnaire (PSQ). Mean scores were consistent with a response of *neither agree or disagree* for the Stigma scale and *disagree* for the Barriers scale. Mean CD-RISC scores were consistent with an item-level of *often*. The PSQ mean score was consistent with an item-level between *sometimes* and *often*. Significant relationships were found among stigma, barriers to care, resilience, and stress (Table 1). Resilience was weakly and negatively associated with stigma and with barriers to care. Barriers to Care scores were correlated positively but weakly with stress and moderately with stigma. A stronger, positive association was found between stress and stigma, and a strong, negative correlation was found between perceived stress and resilience.

Table 1. *Summary of Correlations, Means, and Standard Deviations for Scores, and Cronbach's Alphas for the Stigma, Barriers to Care, Resilience, and Stress Scales* (Hernandez, Morgan, & Parshall, 2016).

| Scale                               | 1     | 2     | 3     | 4 | Mean | SD    | Cronbach's $\alpha$ |
|-------------------------------------|-------|-------|-------|---|------|-------|---------------------|
| 1. Stigma Scale                     | —     |       |       |   | 3.1  | .88   | .86                 |
| 2. Barriers to Care Scale           | .28*  | —     |       |   | 2.1  | .74   | .73                 |
| 3. Perceived Stress Questionnaire   | .40*  | .23*  | —     |   | .43  | .18   | .95                 |
| 4. Connor-Davidson Resilience Scale | -.24* | -.23* | -.53* | — | 75.4 | 12.68 | .92                 |

Note. SD = standard deviation, \* $p < .01$ .

Individual items for the Stigma and Barriers scales were examined as continuous scores (Mean and SD) and for modal category and percentage agreeing or strongly agreeing that the item was stigmatizing or a barrier (Table 2).

**Findings for Research Question 3:** To what extent are demographic characteristics, military grade, past deployment, and access to mental health services related to perceived stigma and barriers to accessing mental health services, perceived stress, and resilience among AF nursing personnel?

Table 2. *Stigma Scale and Barriers to Care Scale Item Means, Standard Deviations, Modes (Response Category), and Dichotomized Responses to the Stigma and Barriers to Care Scales* (Hernandez et al., 2016)

| Item   | Mean | SD   | Mode (Response Category)                               | Stigmatizing or Barrier to Care, % |
|--|------|------|--|------------------------------------|
| Stigma Scale   |      |      |  |                                    |
| It would be too embarrassing. ( <i>n</i> = 250)                                  | 2.8  | 1.15 | 2<br>(disagree)  | 35.6                               |
| It would harm my career. ( <i>n</i> = 250)                                       | 3.4  | 1.26 | 4<br>(agree)   | 46.8                               |
| Members of my unit might have less confidence in me. ( <i>n</i> = 248)           | 3.4  | 1.13 | 4<br>(agree)   | 54.0                               |
| My unit leadership might treat me differently. ( <i>n</i> = 248)                 | 3.5  | 1.08 | 4<br>(agree)   | 57.6                               |
| My leaders would blame me for the problem. ( <i>n</i> = 249)                     | 2.6  | 1.12 | 2<br>(disagree)  | 20.8                               |
| I would be seen as weak. ( <i>n</i> = 248)                                       | 3.2  | 1.16 | 4<br>(agree)   | 46.8                               |
| Barriers to Care Scale   |      |      |  |                                    |
| I don't know where to get help. ( <i>n</i> = 247)                                | 1.8  | 0.95 | 1<br>(strongly disagree)                               | 6.0                                |
| I don't have adequate transportation. ( <i>n</i> = 249)                          | 1.4  | 0.60 | 1<br>(strongly disagree)                               | 0.4                                |
| It is difficult to schedule an appointment. ( <i>n</i> = 248)                    | 2.5  | 1.24 | 1<br>(Strongly disagree) and 4<br>(agree) <sup>a</sup> | 20.8                               |
| There would be difficulty getting time off work for treatment. ( <i>n</i> = 250) | 3.0  | 1.40 | 4<br>(agree)   | 45.2                               |
| Mental health care costs too much money. ( <i>n</i> = 250)                       | 2.0  | 0.96 | 1<br>(strongly disagree)                               | 6.0                                |

Note. *SD* = standard deviation, <sup>a</sup>Response was bimodal.

**Findings for Research Question 3:** To what extent are demographic characteristics, military grade, past deployment, and access to mental health services related to perceived stigma and barriers to accessing mental health services, perceived stress, and resilience among AF nursing personnel?

The MANOVA analyses showed no significant interaction among sex, ethnicity, or race and no significant multivariate or univariate main effects of any of those variables on stigma, barriers, resilience, and stress, either jointly or separately. There was no significant difference between registered nurses (46XX; RNs) and medical technicians (4NX) in terms of previous deployment and no significant multivariate interaction effect between rank and previous

deployment status with respect to stigma, barriers, resilience, or stress. There was no significant multivariate effect or univariate main effect of deployment status on stigma, barriers, resilience, and stress, either jointly or separately.

Military grade accounted for approximately 10% of the variance overall in the composite of stigma, barriers, resilience, and stress, Wilks'  $\lambda = .899$ ,  $F(4, 230) = 6.47$ ,  $p < .001$ . There were significant univariate main effects of RN versus medical technician status on stigma ( $p = .019$ ), resilience ( $p = .004$ ), and stress ( $p = .044$ ), accounting for approximately 2% of the variance in stigma and stress and approximately 4% of variance in resilience. Two-sample  $t$  tests were used as post hoc tests to generate Cohen's  $d$  effect size estimates and 95% confidence intervals (CIs) for differences between RNs and medical technicians for each scale (Table 3). RNs reported significantly higher levels of stigma and resilience and significantly lower levels of stress compared with medical technicians. However, the effect sizes for these differences were small.

Table 3. *Differences in Stigma, Barriers, Resilience, and Stress by Military Grade* (Hernandez et al., 2016)

| Scale          | Officer Mean (SD) | Enlisted Mean (SD) | ES   | $p$  | Difference in Group Means [95% CI] |
|----------------|-------------------|--------------------|------|------|------------------------------------|
| Stigma Scale   | 3.25 (0.89)       | 2.99 (0.86)        | 0.29 | .027 | 0.25 [0.03, 0.47]                  |
| Barriers Scale | 2.20 (0.69)       | 2.03 (0.80)        | 0.23 | .069 | 0.17 [-0.01, 0.36]                 |
| CD-RISC        | 77.00 (12.03)     | 72.84 (13.16)      | 0.32 | .012 | 4.16 [0.94, 7.37]                  |
| PSQ            | 0.41 (0.17)       | 0.46 (0.18)        | 0.27 | .044 | -0.05 [-0.09, -0.001]              |

*Note.* Enlisted:  $n = 100-104$ ; officers:  $n = 135-141$ .  $SD$  = standard deviation; ES = effect size (Cohen's  $d$ ); CI = confidence interval for difference in means; CD-RISC = Connor-Davidson 25-item Resilience Scale; PSQ = Perceived Stress Questionnaire.

Because of differences in stigma scores based on military grade, a comparison was made between RNs' and medical technicians' dichotomized stigma items. Fisher's exact tests were used to assess for differences in RNs' versus medical technicians' responses to each dichotomized stigma item. RNs were more likely than medical technicians to agree that accessing MH services *would be too embarrassing* (41.8% vs. 27.9%, respectively; difference =

13.9%, 95% CI [0.02, 0.25],  $\phi = .14$ ,  $p = .031$ ) and that *unit leaders might treat me differently* (63.6% vs. 50.5%, respectively; difference = 13.1%, 95% CI [0.005, 0.25],  $\phi = .13$ ,  $p = .049$ ).

**Findings for Research Question 4:** To what extent are perceptions of stigma and barriers to accessing mental health services, perceived stress, and resilience related to mental health treatment-seeking by AF nursing personnel?

Binary logistic regression showed no significant association with treatment seeking for either sex or military grade after controlling for stigma, barriers to care, perceived stress, and resilience. There were no significant differences in stigma, barriers, or resilience based on treatment seeking, but a significant independent association of PSQ scores with treatment seeking was present in both logistic regression models. Because stress was the only significant covariate associated with treatment seeking, we used an independent groups *t*-test to assess the direction and magnitude of association. Significantly higher levels of perceived stress were reported by individuals who had accessed treatment for a stress or an emotional problem within the past 6 months compared with those who had not accessed care,  $t(232) = 4.87$ ,  $p < .001$  ( $r = .41$ ,  $d = .90$ ; Table 4).

Table 4. *Scale Means, SDs, and 95% CIs by Treatment Seeking in the Last 6 Months* (Hernandez, Morgan, & Parshall, in press)

| Scale                            | Yes           | No            | Difference (95% CI)               |
|----------------------------------|---------------|---------------|-----------------------------------|
|                                  | Mean (SD)     | Mean (SD)     |                                   |
| Stigma Scale                     | 3.21 (0.98)   | 3.16 (0.85)   | .06 (−0.27, 0.38)                 |
| Barriers to Care Scale           | 2.03 (0.79)   | 2.16 (0.71)   | −.13 (−0.40, .14)                 |
| Connor-Davidson Resilience Scale | 70.38 (16.47) | 76.40 (11.70) | −6.03 <sup>†</sup> (−12.16, 0.11) |
| Perceived Stress Questionnaire   | 0.57 (0.19)   | 0.41 (0.17)   | .16* (0.10, 0.22)                 |
| Views of Psychological Problems  | 11.06 (3.08)  | 13.01 (3.25)  | −1.95** (−.74, −3.16)             |

Abbreviation: CI, confidence interval; SD, standard deviation. <sup>†</sup> $p = .054$ , equal variances not assumed; Mann-Whitney test  $p = .074$ , \* $p < .001$ . \*\* $p < .002$ .

In addition, in an exploratory analysis, we assessed the association between views of psychological problems and treatment seeking. There was a significantly lower tendency to view

psychological problems as something that individuals should be able to handle on their own among those who had accessed treatment for a stress or an emotional problem within the past 6 months compared with those who had not,  $t(232) = 3.18, p = .002 (r = .29, d = .62)$ .

**Additional Findings:** Treatment-Seeking Behaviors, Subjective Norms, Attitudes Toward Treatment Seeking, and Views of Psychological Problems

Over 40% of the sample reported accessing MH services at some point in their lives (Table 5). Among those who had accessed MH services, a majority reported having done so while in the military, but indicated that it was unrelated to a deployment. Less than 30% of the sample reported accessing MH services in the past 6 months, and few reported they were likely to access care in the next 30 days.

Table 5. Sample's Access to MH Services and Current Stress or Emotional Problem (Hernandez et al., in press)

| Characteristic  | <i>n</i> (%) |
|---|--------------|
| Ever accessed MHS   | 113 (42.2)   |
| How MHS was accessed in past  |              |
| Before commissioning/enlistment                                     | 6 (5.3)      |
| During service, not related to deployment                           | 69 (61.1)    |
| Predeployment   | 3 (2.7)      |
| Postdeployment  | 31 (27.4)    |
| Other   | 4 (3.5)      |
| Currently experiencing a stress or an emotional problem             | 117 (43.7)   |
| Level of current stress or emotional problem                        |              |
| Mild  | 27 (23.1)    |
| Moderate  | 74 (63.2)    |
| Severe  | 16 (13.7)    |
| Sought MHS for current stress or emotional problem in past 6 months | 32 (27.4)    |
| Likelihood would access MHS or counseling in the next 30 days       |              |
| Very Unlikely   | 135 (50.4)   |
| Unlikely  | 45 (16.8)    |
| Neither Likely nor Unlikely   | 30 (11.2)    |
| Likely  | 11 (4.1)     |
| Very Likely   | 17 (6.3)     |
| Unknown   | 30 (11.2)    |

When asked "If you felt you needed to access MH services, what type of provider or service would you prefer to consult?", 47% reported preferring to access care through military

resources, and 34% preferred accessing care through civilian resources (Table 6). The mean response for current attitudes was *Neutral* ( $M = 4.4$ ,  $SD = 1.85$ ); however, the modal response was *Positive*. Current attitudes were negative for 32.8% and positive for 45% of the sample (Table 7). The mean response for subjective norms was *Neither Agree or Disagree* ( $M = 5.0$ ,  $SD = 1.54$ ), but the modal response was *Agree* (Table 7). Fifty-six percent agreed *most people important to me would think I should seek treatment if I were having a problem* (Table 7).

Table 6. *Reported MH Access Preferences* (Hernandez et al., in press)

| Access Preference  | <i>n</i> (%) |
|--|--------------|
| A military primary care provider (physician, nurse practitioner, or physician's assistant) | 16 (6.7)     |
| A civilian primary care provider (physician, nurse practitioner, or physician's assistant) | 4 (1.7)      |
| A military MH professional   | 68 (28.5)    |
| A civilian MH professional   | 63 (26.4)    |
| A military chaplain  | 27 (11.3)    |
| A civilian clergy member   | 14 (5.9)     |
| Face-to-face counseling arranged through MOS   | 34 (14.2)    |
| A telephone consultation arranged through MOS  | 4 (1.7)      |
| An online consultation arranged through MOS  | 3 (1.3)      |
| Preferred another route to access MH services or counseling                                | 6 (2.5)      |

$n = 239$ . Abbreviations: MH, mental health; MOS, Military One Source.

Table 7. *Attitudes<sup>a</sup> and Subjective Norms* (Hernandez et al., in press)

| Attitude/Subjective Norm  | <i>n</i> (%) |
|---|--------------|
| Current attitude toward seeking treatment.  |              |
| Very Negative   | 15 (6.3)     |
| Negative  | 24 (10.1)    |
| Slightly Negative   | 39 (16.4)    |
| Neutral   | 53 (22.3)    |
| Slightly Positive   | 31 (13.0)    |
| Positive  | 58 (24.4)    |
| Very Positive   | 18 (7.6)     |
| Most people who are important to me would think I should seek treatment if I were having a psychological problem. |              |
| Strongly Disagree   | 8 (3.4)      |
| Disagree  | 14 (5.9)     |
| Somewhat Disagree   | 14 (5.9)     |
| Neither Agree or Disagree   | 44 (18.5)    |
| Somewhat Agree  | 49 (20.6)    |
| Agree   | 75 (31.5)    |
| Strongly agree  | 34 (4.3)     |

$n = 238$ . <sup>a</sup>Attitudes toward treatment seeking.

On average, participants disagreed that psychological problems should be dealt with by oneself (Views of psychological problems  $M = 12.8$ ,  $SD = 3.31$ ,  $\alpha = .68$ ). A majority of the sample *Strongly Disagreed* or *Disagreed* that individuals with a strong character can overcome a psychological problem (62.1%), should solve a psychological problem by themselves (66.3%), or that focusing on work is a solution (60.4%; Table 7). Significant bivariate correlations among stigma, views, attitudes, and subjective norms (Table 8) were in expected directions as described by Britt et al. (2011), and concurrent validity among those measures was supported.

Table 8. *Spearman's Correlations Among Stigma, Attitudes,<sup>a</sup> and Subjective Norms* (Hernandez et al., in press)

| Variable                  | 1       | 2      | 3     | 4 | <i>n</i> |
|---------------------------|---------|--------|-------|---|----------|
| 1. Stigma                 | —       |        |       |   | 250      |
| 2. Views <sup>b</sup>     | .234*   | —      |       |   | 239      |
| 3. Attitudes <sup>a</sup> | -.435*  | -.352* | —     |   | 238      |
| 4. Subjective Norms       | -.182** | -.246* | .288* | — | 238      |

Abbreviations: <sup>a</sup>Attitudes toward treatment seeking. <sup>b</sup>Views of psychological problems. \* $p < .001$ . \*\* $p = .005$ .

### **Relationship of current findings to previous findings:**

As in the study by Hernandez, Bedrick, and Parshall (2014), substantial percentages of RNs and medical technicians agreed that seeking care for MH issues would be stigmatizing in terms of what unit peers and leaders might think of them and potential adverse consequences for career advancement. The proportions agreeing with those items were within ranges previously reported by combat veterans who screened positive for an MH concern (Gorman et al., 2011; Hoge et al., 2004; Kim et al., 2011). Concerns about stigma were more prevalent among RNs, despite higher levels of resilience and lower levels of stress compared with medical technicians. Concerns about barriers to seeking MH care were substantially less than concerns about stigma.

Consistent with expectations, stigma and barriers were positively correlated, although the relationship was weaker than previously reported among military service members who were not health care providers ( $r \approx 0.4$ ; Britt et al., 2011). As might be expected, there was a moderately

strong inverse relationship between perceived stress and resilience, whereas resilience was inversely, although only weakly, correlated with stigma. In part, this may reflect the generally high levels of resilience reported by participants. The level of resilience was comparable to what has been reported among veterans who did not have PTSD or suicidal ideation (Green et al., 2010; Pietrzak et al., 2010; Pietrzak, Russo, Ling, & Southwick, 2011; Pietrzak & Southwick, 2011). We also found that stigma was more strongly correlated with stress than with resilience. Although differences were not large, we found lower levels of resilience and higher levels of stress among medical technicians compared with RNs. It is conceivable that interventions focused on stress reduction and enhancing resilience may be of greater utility for enlisted nursing personnel.

The sample reported an overall preference of accessing military resources, if needed, to address a MH concern (Table 6), which is consistent with preferences reported in the literature (Gorman et al., 2011; Britt, Jennings, Cheung, Pury, & Zinzow, 2015). However, approximately one third indicated a preference to access care through a civilian resource. The majority of the sample (54.9%) reported a preference to seek care from a military or civilian MH professional. Comparatively, few individuals (17.2%) preferred accessing care through Military One Source, an online resource for service members that offers access to confidential counseling services.

Finally, in this sample, levels of stress measured by the PSQ were significantly higher in individuals who accessed MH care than in those who did not access care, and there were no differences between the groups' perceptions of stigma and barriers to care or levels of resilience. This finding was consistent with previous research that reported stigma was decreased or not predictive or associated with the intent or action of seeking MH treatment (Adler, Britt, Riviere, Kim, & Thomas, 2015; Britt et al., 2015; Kehle et al., 2010; Kim et al., 2011).

**Effect of problems or obstacles on the results:**

Liaisons at each study location were able to provide basic information regarding numbers of RNs and medical technicians assigned to those locations, but were unable to provide more detailed demographic information for their personnel. Col Morgan was able to contact the Air Force Personnel Center to obtain information regarding the number of personnel at each site, but this information was not always identical to the information provided by each site. Col Morgan was able to obtain more detailed demographic information from the Air Force RAW database; however, information was only available at the Wing level rather than Medical Group level. This resulted in the need to rely on estimations of personnel who were based at each location.

The estimated response rate of 18% was less than the 30% participation rate expected. The response rate for officers was approximately 28%, but the response rates for enlisted personnel was considerably less (approximately 12%). It is possible that the low response rate is consistent with the declining survey response rates that have been observed in the relatively large population of younger, junior enlisted Airmen (Miller & Aharoni, 2015).

It is our belief that the in person informational sessions were beneficial despite the low response from enlisted personnel. In the preliminary study, response rate for officers was approximately 28%, and the response rates for enlisted personnel was 16% after two separate visits for informational sessions (Hernandez et al., 2014). Because of the reported decreased response rates seen in younger service members, it will be essential for researchers to continue to have as much "face time" with potential participants as possible in order to communicate a study's importance so that potential participants understand the impact of their participation.

**Limitations:**

This study had several limitations. First, because the survey was anonymous, we were unable to target follow-up reminders to nonrespondents. Consequently, our response rate was

low, and the sample size was about 8% below the target. Second, self-selection bias may have influenced responses. The REDCap system has the capacity to determine whether an individual had completed a survey; however, that functionality depends on the researcher having the e-mail distribution lists. Due to AF policy and the need to protect anonymity, we were not able to house the e-mail lists. Therefore, we used an open link that was accessible to anyone who received the invitation to participate, and we cannot rule out the possibility that some individuals may have completed the survey more than once.

Because sampling and data collection were cross-sectional, it is possible that some MH problems identified by the participants predated their military service, and MH care was readily available as a benefit after joining the military. Fourth, the internal consistency reliability of the views of psychological problems scale was not optimal, and we were unable to assess for the reliability for the single items assessing treatment seeking, attitudes toward treatment seeking, and subjective norms. Another limitation was that the PSQ had not been used in previous research to assess stress in a military population. However, concurrent validity was demonstrated by the significantly higher PSQ scores for those who sought treatment compared with those who did not report seeking treatment in the past 6 months. A final limitation is that the sample was smaller than the sample size of 278 determined by the power analysis necessary to detect small differences in group means.

**Conclusion:**

Despite the limitations of the study, we were able to answer each research question and accomplish the specific aim of the study. Key study findings included:

- Statistically significant relationships found between stigma and barriers to accessing mental health services, perceived stress, and levels of resilience,

- Statistically significant differences found in reported stigma, resilience, and perceived stress based upon military grade,
- Statistically significant differences found in perceived stress with individuals who had sought treatment for a mental health concern within the past six months, and
- Relatively small, but statistically significant differences and effect sizes in perceived stress scores for those who had reported accessing MH care in the previous 6 months were detected.

### **Significance of Study or Project Results to Military Nursing**

This was the first known multisite study to assess stigma and barriers to accessing MH services, stress, and resilience among AF RNs and medical technicians. Despite the lower than expected response rate, the sample size was adequate to detect statistically significant differences and correlations corresponding to small standardized effect sizes. Substantial percentages of RNs and medical technicians agreed seeking care for MH issues would be stigmatizing in terms of what unit peers and leaders might think of them and potential adverse consequences for career advancement. Concerns about stigma were more prevalent among RNs, despite higher levels of resilience and lower levels of stress compared with medical technicians. Because of the consistency of study findings with the preliminary study by Hernandez et al. (2014), we believe the findings of nursing personnel's perceptions of stigma and barriers to care are representative of the overall active component AF Nurse Corps. Additionally, we believe the findings would be similar in a study with nursing personnel from other service branches.

These findings were of concern for several reasons. First, if caregivers have concerns about the consequences of seeking MH care, they may communicate ambivalence to those they should be encouraging to get help. Next, nursing personnel receive formal education regarding the care of individuals experiencing an MH disorder. In addition, concerns about stigma persist despite efforts to encourage service members to seek help for stress or psychological problems. Because stigma has been associated with service members prematurely ceasing their MH treatment (Britt et al., 2015), research is needed to determine the effect stigma may have on treatment-seeking intentions, actual treatment seeking, and the completion of MH treatment.

Reasons communicated in free-text entry fields for preferring accessing care through civilian resources included concerns of stigma, lack of confidentiality, and adverse career effects.

One respondent stated, “I know other military personnel who have received help in the private sector, even if they have to pay out of pocket because it seems to be a stigma if you seek mental help in the military sector.” Another individual replied, “I would break regulation and see an outside civilian mental health professional and incur out-of-pocket cost outside of Tricare. Military mental health professionals are not completely confidential and do not completely uphold privileged communication as the civilian sector does.” This view was supported by a respondent who stated, “I feel that any care associated with the military for mental health is detrimental to a military career. I was seen for anxiety nearly 8 years ago and I was denied a flight nursing slot because of it. I was not medically managed, just counseled.” It was troubling these concerns were expressed by nursing personnel who represent the largest number of military health care workers who provide care to other service members, dependents, and veterans.

It would be helpful to continue to formally evaluate military service members’ preferences to accessing MH care. Because of the relatively low proportions of service members who expressed a preference to access care through Military One Source in the current study and in a study of National Guard members and their family members (Gorman et al., 2011), additional research into the utilization and benefit of this resource and methods to improve member access through this resource would be beneficial.

In addition to using findings to better identify those in need of MH services and enhancing access to MH services, Future studies should investigate stigma, barriers, resilience, and stress among nursing personnel in other service branches and other categories of military health care providers. A broader base of research in these areas will be vital for informing the development of evidence-based interventions to reduce stigma to seeking MH services among military health care providers and support “care for the caregiver.”

**Changes in Clinical Practice, Leadership, Management, Education, Policy, and/or Military Doctrine that Resulted from Study or Project**

No changes in clinical practice, leadership, management, education, policy, and/or military doctrine have resulted from this study to date. A report of the study findings was provided to the Chief Nurse at each participating site. A scientific poster was sent to each site for display in order to disseminate the findings to the nursing staff.

### References Cited

- Adler, A. B., Britt, T. W., Riviere, L. A., Kim, P. Y., & Thomas, J. L. (2015). Longitudinal determinants of mental health treatment-seeking by US soldiers. *British Journal of Psychiatry*, *207*(4), 346-350. doi:10.1192/bjp.bp.114.146506
- Britt, T. W., Bennett, E. A., Crabtree, M., Haugh, C., Oliver, K., McFadden, A., & Pury, C. L. S. (2011). The theory of planned behavior and reserve component veteran treatment seeking. *Military Psychology*, *23*(1), 82-96. doi:10.1080/08995605.2011.534417
- Britt, T. W., Jennings, K. S., Cheung, J. H., Pury, C. L. S., & Zinzow, H. M. (2015). The role of different stigma perceptions in treatment seeking and dropout among active duty military personnel. *Psychiatric Rehabilitation Journal*, *38*(2), 142-149. doi:10.1037/prj0000120
- Gorman, L. A., Blow, A. J., Ames, B. D., & Reed, P. L. (2011). National Guard families after combat: Mental health, use of mental health services, and perceived treatment barriers. *Psychiatric Services*, *62*(1), 28-34. doi:10.1176/appi.ps.62.1.28
- Green, K. T., Calhoun, P. S., Dennis, M. F., & Beckham, J. C. (2010). Exploration of the resilience construct in posttraumatic stress disorder severity and functional correlates in military combat veterans who have served since September 11, 2001. *Journal of Clinical Psychiatry* *71*(7), 823-830. doi:10.4088/JCP.09m05780blu
- Hernandez, S. H. A., Bedrick, E. J., & Parshall, M. B. (2014). Stigma and barriers to accessing mental health services perceived by Air Force nursing personnel. *Military Medicine*, *179*(11), 1354-1360. doi:10.7205/MILMED-D-14-00114
- Hernandez, S., Morgan, B., & Parshall, M. (2016). Resilience, stress, stigma, and barriers to mental health care in Air Force nursing personnel. *Nursing Research*, *65*(6), 481-486.

doi: 10.1097/NNR.000000000000182. Available at:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5091011/>

- Hernandez, S., Morgan, B., & Parshall, M. (in press). Treatment-seeking beliefs and behaviors in Air Force nursing personnel. *Military Medicine*.
- Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine*, 351(1), 13-22. doi:10.1056/NEJMoa040603
- Kehle, S. M., Polusny, M. A., Murdoch, M., Erbes, C. R., Arbisi, P. A., Thuras, P., & Meis, L. A. (2010). Early mental health treatment-seeking among U.S. National Guard soldiers deployed to Iraq. *Journal of Traumatic Stress*, 23(1), 33-40. doi:10.1002/jts.20480
- Kim, P. Y., Britt, T. W., Klocko, R. P., Riviere, L. A., & Adler, A. B. (2011). Stigma, negative attitudes about treatment, and utilization of mental health care among soldiers. *Military Psychology*, 23(1), 65-81. doi:10.1080/08995605.2011.534415
- Miller, L., & Aharoni, E. (2015). Understanding low survey response rates among young U.S. military personnel, The RAND Corporation, Document No.: RR-881-AF, retrieved from [http://www.rand.org/pubs/research\\_reports/RR881.html](http://www.rand.org/pubs/research_reports/RR881.html)
- Pietrzak, R. H., Goldstein, M. B., Malley, J. C., Rivers, A. J., Johnson, D. C., & Southwick, S. M. (2010). Risk and protective factors associated with suicidal ideation in veterans of Operations Enduring Freedom and Iraqi Freedom. *Journal of Affective Disorders*, 123(1-3), 102-107. doi:10.1016/j.jad.2009.08.001
- Pietrzak, R. H., Russo, A. R., Ling, Q., & Southwick, S. M. (2011). Suicidal ideation in treatment-seeking Veterans of Operations Enduring Freedom and Iraqi Freedom: The role

of coping strategies, resilience, and social support. *Journal of Psychiatric Research*, 45(6), 720-726. doi:<http://dx.doi.org/10.1016/j.jpsychires.2010.11.015>

Pietrzak, R. H., & Southwick, S. M. (2011). Psychological resilience in OEF–OIF Veterans: Application of a novel classification approach and examination of demographic and psychosocial correlates. *Journal of Affective Disorders*, 133(3), 560-568. doi:<http://dx.doi.org/10.1016/j.jad.2011.04.028>

### Summary of Dissemination

| Type of Dissemination                | Citation  | Date and Source of Approval for Public Release   |
|--------------------------------------|---|--|
| Publications                         | <p>Hernandez, S., Morgan, B., &amp; Parshall, M. (2016). Resilience, stress, stigma, and barriers to mental health care in Air Force nursing personnel. <i>Nursing Research</i>, 65(6), 481-486. doi: 10.1097/NNR.0000000000000182. Available at: <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5091011/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5091011/</a></p> | <p>Date: 02 March 2016</p> <p>Source: Memorandum for Record from Director, Clinical Investigations &amp; Research Support, 59<sup>th</sup> Medical Wing</p>  |
| Publications in Press                | <p>Hernandez, S., Morgan, B., &amp; Parshall, M. (in press). Treatment-seeking beliefs and behaviors in Air Force nursing personnel. <i>Military Medicine</i>.</p> <p>Hernandez, S., Morgan, B., &amp; Parshall, M. (in press). A concept analysis of stigma perceived by military service members who seek mental health services. <i>Nursing Forum</i>.</p>                   | <p>Date: 20 October 2016</p> <p>Source: Memorandum for Record from Director, Clinical Investigations &amp; Research Support, 59<sup>th</sup> Medical Wing</p> <p>Date: 14 August 2015</p> <p>Source: Memorandum for Record from Director, Clinical Investigations &amp; Research Support, 59<sup>th</sup> Medical Wing</p> |
| Manuscripts Currently Under Revision | <p>Hernandez, S., Morgan, B., &amp; Parshall, M. Building Academic-Military Research Collaborations to Improve the Health of Service Members. <i>Nursing Outlook</i>.</p>   | <p>Date: 18 August 2016</p> <p>Source: Memorandum for Record from Director, Clinical Investigations &amp; Research Support, 59<sup>th</sup> Medical Wing</p>   |

|                      |  |   |
|----------------------|--|---|
| Published Abstracts  | <p>Hernandez, S. H. A., Morgan, B. J., &amp; Parshall, M. B. (2016). <i>Treatment-Seeking Beliefs and Behaviors in Air Force Nursing Personnel</i>. San Antonio Military Health System and Universities Research Forum. San Antonio, TX, May 2016.</p> <p>Hernandez, S. H. A., Morgan, B. J., &amp; Parshall, M. B. (2015). <i>Resilience, stigma and barriers to mental health care in Air Force nursing staff</i>. Podium presentation: TSNRP Research &amp; EBP Dissemination Course. San Antonio, TX, September 2015.</p> <p>Hernandez, S., Morgan, B., &amp; Parshall, M. (April 2015). <i>Resilience, Stigma and Barriers to Mental Health Care in Air Force Nursing Staff</i>. Western Institute of Nursing, 48th Annual Communicating Nursing Research Conference Albuquerque, NM.</p> | <p>Date: 04 February 2016</p> <p>Source: Memorandum for Record from Director, Clinical Investigations &amp; Research Support, 59<sup>th</sup> Medical Wing</p> <p>Date: 18 August 2015</p> <p>Source: Memorandum for Record from Deputy Chief, 59<sup>th</sup> Medical Wing Research Division</p> <p>Date: 14 October 2014</p> <p>Source: Memorandum for Record from the TSNRP Executive Director</p> |
| Podium Presentations | <p>Hernandez, S. H. A., Morgan, B. J., &amp; Parshall, M. B. (2016). <i>Treatment-Seeking Beliefs and Behaviors in Air Force Nursing Personnel</i>. Podium presentation: San Antonio Military Health System and Universities Research Forum. San Antonio, TX, May 2016.</p> <p>Hernandez, S., Morgan, B., &amp; Parshall, M. (Accepted for September 2015). <i>Resilience, Stigma and Barriers to Mental Health Care in Air Force Nursing Staff</i>. TriService Nursing Research Program's Research and Evidence-Based Practice Dissemination Course in San Antonio, TX.</p>   | <p>Date: 04 February 2016</p> <p>Source: Memorandum for Record from Director, Clinical Investigations &amp; Research Support, 59<sup>th</sup> Medical Wing</p> <p>Date: 18 August 2015</p> <p>Source: Memorandum for Record from Deputy Chief, 59<sup>th</sup> Medical Wing Research Division</p>   |

|                      |  |  |
|----------------------|--|--|
| Poster Presentations | <p>Hernandez, S. H. A., Morgan, B. J., &amp; Parshall, M. B. (2015). Results: Resilience, stigma and barriers to mental health care in Air Force nursing staff. TSNRP Research &amp; EBP Dissemination Course. San Antonio, TX, September 2015.</p> <p>Hernandez, S. H. A., Morgan, B. J., &amp; Parshall, M. B. (2015). Background and Design: Resilience, stigma and barriers to mental health care in Air Force nursing staff. Western Institute of Nursing Annual Conference, Albuquerque, NM, April 2015.</p> | <p>Date: 18 August 2015</p> <p>Source: Memorandum for Record from Deputy Chief, 59<sup>th</sup> Medical Wing Research Division</p> <p>Date: 31 March 2015</p> <p>Source: Memorandum for Record from the TSNRP Executive Director</p> |
| Media Reports        | <p>“Collaborating to Advance Health Care”, featured in the FY 2016 University of New Mexico, College of Nursing Annual Report</p> <p>“Stigma vs. Treatment”, featured in the Albuquerque Journal, November 15, 2015</p> <p>“Helping Healers When They Need Healing”, featured in the FY 2015 University of New Mexico, Health Sciences Center Research Annual Report</p>   | <p>N/A</p> <p>N/A</p> <p>N/A</p>   |
| Other                | N/A  |  |

**Reportable Outcomes**

| <b>Reportable Outcome</b>              | <b>Detailed Description</b> |
|--|-----------------------------|
| Applied for Patent                     | None                        |
| Issued a Patent                        | None                        |
| Developed a cell line                  | None                        |
| Developed a tissue or serum repository | None                        |
| Developed a data registry              | None                        |

**Recruitment and Retention Table**  
Wright-Patterson Air Force Base (88<sup>th</sup> Medical Group)

| Recruitment and Retention Aspect   | Number of<br>Subjects This<br>Reporting<br>Period | Total<br>Number of<br>Subjects<br>Since Study<br>or Project<br>Began |
|--|---|--|
| Number of Subjects Projected in Grant Application  | 46XX = 284<br>4NX = 288                           |  |
| Subjects Available   | 46XX = 226<br>4NX = 287                           | 46XX = 226<br>4NX = 287  |
| Subjects Contacted or Reached for In-Person Informational Sessions   | 159 (30.6% of<br>available)                       | 159  |
| Subjects Contacted or Reached by Approved Recruitment Method<br>(E-mail Invitation to Participate in Survey) | 513   | 513  |
| Subjects Screened  | N/A   | N/A  |
| Subjects Ineligible  | N/A   | N/A  |
| Subjects Refused   | N/A   | N/A  |
| Human Subjects Consented <sup>1</sup>  | 98  | 98   |
| Subjects Who Withdrew <sup>2</sup>   | 9   | 9  |
| Subjects Who Completed Study   | 89  | 89   |
| Subjects With Complete Data  | 80  | 80   |
| Subjects with Incomplete Data  | 9   | 9  |

Notes: <sup>1</sup> The UNM HSC HRRC approved a waiver of written informed consent. Members consented to complete the survey by opening the survey link and then selecting a “yes” response to proceed and answer the survey questions. <sup>2</sup> Subjects who selected a “yes” response to begin the survey, but then provided either “no” responses or answered demographic questions only.

Summary regarding recruitment and retention: The Principal Investigator traveled to WP AFB and provided in-person informational sessions from 21 October to 24 October 2014 to approximately 159 (approximately 31% of available) personnel. The initial request for participation was sent to potential participants on 23 October 2014. Reminder e-mails were sent to potential participants on 29 October, 5 November, and 17 November 2014. The survey was closed to participants on 3 December 2014, and data collection is complete for this site.

**Recruitment and Retention Table**  
Joint Base Andrews (779<sup>th</sup> Medical Group)

| Recruitment and Retention Aspect   | Number of<br>Subjects This<br>Reporting<br>Period | Total<br>Number of<br>Subjects<br>Since Study<br>or Project<br>Began |
|--|---|--|
| Number of Subjects Projected in Grant Application  | 46XX = 154<br>4NX= 208                            |  |
| Subjects Available   | 46XX = 78<br>4NX= 230                             | 46XX = 78<br>4NX= 230  |
| Subjects Contacted or Reached for In-Person Informational Sessions   | 165 (53.6% of<br>available)                       | 165  |
| Subjects Contacted or Reached by Approved Recruitment Method<br>(E-mail Invitation to Participate in Survey) | 308   | 308  |
| Subjects Screened  | N/A   | N/A  |
| Subjects Ineligible  | N/A   | N/A  |
| Subjects Refused   | N/A   | N/A  |
| Human Subjects Consented <sup>1</sup>  | 94  | 94   |
| Subjects Who Withdrew <sup>2</sup>   | 4   | 4  |
| Subjects Who Completed Study   | 90  | 90   |
| Subjects With Complete Data  | 89  | 89   |
| Subjects with Incomplete Data  | 1   | 1  |

Notes: <sup>1</sup> The UNM HSC HRRC approved a waiver of written informed consent. Members consented to complete the survey by opening the survey link and then selecting a “yes” response to proceed and answer the survey questions. <sup>2</sup> Subjects who selected a “yes” response to begin the survey, but then provided either “no” responses or answered demographic questions only.

Summary regarding recruitment and retention: The Principal Investigator traveled to Joint Base Andrews and provided in-person informational sessions from 20 January to 23 January 2015 to approximately 165 (approximately 54% of available) personnel. The initial request for participation was sent to potential participants on 26 January 2015. Reminder e-mails were sent on 11 February and 23 February 2015. The final e-mail reminder was sent on 2 March 2015. The survey was closed to participants on 10 March 2015, and data collection is complete for this site.

**Recruitment and Retention Table**  
Travis Air Force Base (60<sup>th</sup> Medical Group)

| <b>Recruitment and Retention Aspect</b>   | <b>Number of<br/>Subjects<br/>This<br/>Reporting<br/>Period</b> | <b>Total<br/>Number of<br/>Subjects<br/>Since<br/>Study or<br/>Project<br/>Began</b> |
|---|---|--|
| Number of Subjects Projected in Grant Application   | 46XX = 292<br>4NX = 403   |  |
| Subjects Available  | 46XX = 201<br>4NX = 375   | 46XX = 201<br>4NX = 375  |
| Subjects Contacted or Reached for In-Person Informational Sessions  | 298<br>(51.7% of available)                                     | 298  |
| Subjects Contacted or Reached by Approved Recruitment Method (E-mail Invitation to Participate in Survey) | 576   | 576  |
| Subjects Screened   | N/A   | N/A  |
| Subjects Ineligible   | N/A   | N/A  |
| Subjects Refused  | N/A   | N/A  |
| Human Subjects Consented <sup>1</sup>   | 76  | 76   |
| Subjects Who Withdrew <sup>2</sup>  | 5   | 5  |
| Subjects Who Completed Study  | 71  | 71   |
| Subjects With Complete Data   | 1   | 1  |
| Subjects with Incomplete Data   | 70  | 70   |

Notes: <sup>1</sup> The UNM HSC HRRC approved a waiver of written informed consent. Members consented to complete the survey by opening the survey link and then selecting a “yes” response to proceed and answer the survey questions. <sup>2</sup> Subjects who selected a “yes” response to begin the survey, but then provided either “no” responses or answered demographic questions only.

Summary regarding recruitment and retention: The Principal Investigator traveled to Travis Air Force Base and provided in-person informational sessions from 23 February to 26 February 2015 to approximately 298 (approximately 52% of available) personnel. The initial request for participation was sent to potential participants on 2 March 2015. Reminder e-mails were sent on 11 March and 24 March 2015. The final e-mail reminder was sent on 6 April 2015. The survey was closed to participants on 13 April 2015, and data collection is complete for this site.

### Demographic Characteristics of the Sample

| Characteristic                      |             |
|-------------------------------------|-------------|
| <b>Age* (yrs), n (%)</b>            |             |
| 18-24                               | 34 (13.6)   |
| 25-29                               | 56 (22.4)   |
| 30-34                               | 44 (17.6)   |
| 35-39                               | 45 (18.0)   |
| ≥ 40                                | 70 (28.0)   |
| Unknown                             | 1 (0.4)     |
| <b>Gender</b>                       |             |
| Male                                | 86 (34.4)   |
| Female                              | 161 (64.4)  |
| Unknown                             | 3 (1.2)     |
| <b>Race</b>                         |             |
| American Indian or Native Alaskan   | 9 (3.6)     |
| Asian                               | 18 (7.2)    |
| Black                               | 33 (13.2)   |
| Native Hawaiian or Pacific Islander | 3 (1.2)     |
| White                               | 196 (78.4)  |
| More than one                       | 15 (6)      |
| Unknown                             | n/a         |
| <b>Ethnicity</b>                    |             |
| Hispanic or Latino/Latina           | 22 (8.8)    |
| Not Hispanic or Latino/Latina       | 226 (90.4)  |
| Unknown                             | 2 (0.8)     |
| <b>Military Service or Civilian</b> |             |
| Air Force, n (%)                    | 250 (100)   |
| <b>Service Component</b>            |             |
| Active Duty, n (%)                  | 250 (100% ) |
| <b>Military Grade</b>               |             |
| Officer                             | 141 (56.4)  |
| Enlisted                            | 104 (41.6)  |

*Notes.*  $n = 250$ . \*We are unable to provide a *SD* for age.

## Final Budget Report

*HSC Contract & Grant Accounting*

February 8, 2017

I have reviewed the official budget and Table 1. Financial Report for the Period 9/1/14-11/30/16 included in the TriService Nursing Research Program Progress Report (below). The amounts reported as actual expenses through 8/31/15 accurately reflect the information in our general ledger.

**PI: Dr. Stephen Hernandez**

**Project Title: Stress, Resilience, Stigma and Barriers to Mental Health Care Among Air force Nursing Staff**  
2/7/2017

**Table 1.*****Financial Report for the Period 9/1/2014-11/30/2016***

| <i>Budget Description</i>               | <i>Budget Amount</i> | <i>Actual Expenses</i> | <i>Balance</i> |
|---|----------------------|------------------------|----------------|
| Salaries                                | \$51,071             | \$51,076               | (\$5)          |
| Fringe                                  | \$13,328             | \$13,360               | (\$32)         |
| Travel                                  | \$8,332              | \$7,960                | \$372          |
| Supplies                                | \$2,554              | \$2,676                | (\$122)        |
| Other Expenses                          | \$3,591              | \$3,799                | (\$208)        |
|   |                      |                        | \$0            |
| <b>Total Direct Costs</b>               | <b>\$78,876</b>      | <b>\$78,872</b>        | <b>\$4</b>     |
| <b>Total Indirect Costs @ 26%</b>       | <b>\$20,508</b>      | <b>\$20,506</b>        | <b>\$2</b>     |
| <b>Total Direct and Indirect Costs:</b> | <b>\$99,384</b>      | <b>\$99,378</b>        | <b>\$6</b>     |

Sincerely,

A handwritten signature in blue ink, appearing to read "Jason Galloway".

Jason Galloway

Associate Controller, Contract and Grant Accounting

# 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. **PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.**

|   |  |  |
|---|--|--|
| <b>1. REPORT DATE</b> (28/02/2017)  | <b>2. REPORT TYPE</b><br><p style="text-align: center;"><b>FINAL</b></p>   | <b>3. DATES COVERED</b> (01/09/2014 – 30/11/2016)        |
| <b>4. TITLE AND SUBTITLE</b><br>Stress, Resilience, Stigma and Barriers to Mental Health Care<br><br>in AF Nursing Staff  | <b>5a. CONTRACT NUMBER</b><br>N/A  |  |
|   | <b>5b. GRANT NUMBER</b><br>HU0001-14-1-TS12  |  |
|   | <b>5c. PROGRAM ELEMENT NUMBER</b><br>N/A   |  |
| <b>6. AUTHOR(S)</b><br><br>Hernandez, Stephen, PhD, RN, Lt Col , USAFR, NC  | <b>5d. PROJECT NUMBER</b><br>N14-P17   |  |
|   | <b>5e. TASK NUMBER</b><br>N/A  |  |
|   | <b>5f. WORK UNIT NUMBER</b>  |  |
| <b>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</b><br><br>779 MDG/SGN<br>1050 Perimeter Rd<br>Joint Base Andrews<br>Prince Georges County, MD<br>20762<br><br>University of New Mexico<br>1650 University Blvd, Suite<br>2200<br>Albuquerque, NM 87131   | <b>8. PERFORMING ORGANIZATION REPORT NUMBER</b><br>N/A   |  |
|   | <b>9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)</b><br>TriService Nursing Research<br>Program, 4301 Jones Bridge RD<br>Bethesda, MD 20814 |  |
|   |  | <b>10. SPONSOR/MONITOR'S ACRONYM(S)</b><br>TSNRP         |
|   |  | <b>11. SPONSOR/MONITOR'S REPORT NUMBER(S)</b><br>N14-P17 |
| <b>12. DISTRIBUTION / AVAILABILITY STATEMENT</b><br><br>Approved for public release; distribution unlimited   |  |  |
| <b>13. SUPPLEMENTARY NOTES</b><br>N/A   |  |  |
| <b>14. ABSTRACT</b><br><b>Purpose:</b> To assess if stigma and barriers to accessing mental health services (MHS) in Air Force (AF) nurses are influenced by resilience, stress, demographics, deployment, or use of MH services. <b>Methods:</b> AF registered nurses (RNs) and medical technicians completed a survey, including demographic items, stigma scale, barriers scale, Conner-Davidson Resilience scale, and Perceived Stress Questionnaire. <b>Sample:</b> n=250 (RNs = 141, Medical Technicians = 104, Unknown = 5). <b>Analysis:</b> Descriptive statistics characterized demographics, MH access, deployment(s), and questionnaire scores. Multivariate analysis of variance examined stigma, barriers, stress, and resilience based on demographics and deployment. Logistic regression determined whether treatment-seeking was influenced by military grade, gender, stigma, barriers, stress, and resilience. <b>Findings:</b> Respondents neither agreed nor disagreed accessing MH services would be stigmatizing ( $M=3.1, SD=.88$ ), and disagreed barriers would exist ( $M=2.1, SD=.74$ ). <i>Agree</i> was the modal response for items assessing if accessing MH services would harm my career, cause members to have less confidence in me, be treated differently by leadership, be seen as weak, and experience difficulty getting time off work for treatment. Resilience was high ( $M=75.4, SD=12.7$ ); stress was moderate ( $M=.43, SD=.18$ ). Multivariate analyses showed an effect of military grade on stigma, resilience, and stress ( $p<.05$ for each). RNs reported higher stigma and resilience and lower stress than enlisted personnel. The majority who accessed MHS did so during their service; care was unrelated to deployments. Approximately 44% reported a stress or emotional problem, and 28% accessed MHS within the past six months. Stress was higher in individuals who accessed care within the past six months ( $p <.001$ ). Respondents preferred addressing MH concerns via military resources and preferred care from a MH professional. <b>Implications for Military Nursing:</b> Future research should focus on understanding stigma in other service branches and military providers. Stress may be more relevant to treatment-seeking than stigma. |  |  |

|   |                                    |                                     |   |
|---|------------------------------------|-------------------------------------|---|
| <b>15. SUBJECT TERMS</b><br>Stigma, barriers, access, mental health services, stress, resilience, demographics<br>deployment, treatment seeking |                                    |                                     |   |
| <b>16. SECURITY CLASSIFICATION OF:</b>  |                                    |                                     | <b>17. LIMITATION<br/>OF ABSTRACT</b>                                       |
| <b>a. REPORT</b><br>UNCLASSIFIED  | <b>b. ABSTRACT</b><br>UNCLASSIFIED | <b>c. THIS PAGE</b><br>UNCLASSIFIED | UU  |
|   |                                    |                                     | <b>18. NUMBER<br/>OF PAGES</b><br>32  |
|   |                                    |                                     | <b>19a. NAME OF RESPONSIBLE PERSON</b><br>Pamela Moses                      |
|   |                                    |                                     | <b>19b. TELEPHONE NUMBER</b> <i>(include area<br/>code)</i><br>301-319-0596 |

**Standard Form 298 (Rev. 8-98)**  
Prescribed by ANSI Std. Z39.18