#### **Regis University**

## ePublications at Regis University

All Regis University Theses

Spring 2019

## Unintended Consequences: The Potential Impact of Expectations on Members of the Armed Forces

Katherine Skowronski

Follow this and additional works at: https://epublications.regis.edu/theses

#### **Recommended Citation**

Skowronski, Katherine, "Unintended Consequences: The Potential Impact of Expectations on Members of the Armed Forces" (2019). *All Regis University Theses*. 916. https://epublications.regis.edu/theses/916

This Thesis - Open Access is brought to you for free and open access by ePublications at Regis University. It has been accepted for inclusion in All Regis University Theses by an authorized administrator of ePublications at Regis University. For more information, please contact epublications@regis.edu.

Running Head: HONORS THESIS

## UNINTENDED CONSEQUENCES: THE POTENTIAL IMPACT OF EXPECTATION ON MEMBERS OF THE ARMED FORCES

A thesis submitted to
Regis College
The Honors Program
in partial fulfillment of the requirements
for Graduation with Honors

By

Katie Skowronski

May 2019

### HONORS THESIS

#### Acknowledgements

Thank you to everyone who helped me through my writing process. Specifically, thank you to my amazing adviser, Dr. Basham, for listening, teaching, guiding, and calming me along the way, somehow always knowing which to do. Thank you to my kind-hearted reader, Dr. McCall, for not only fearlessly editing but for also checking on me throughout as well. Thank you to the entire Regis Honors community, with special mention of Dr. Howe and Dr. Kleier, who have encouraged and inspired me to be a lifelong learner. A tremendous thank you to all of the interviewees; this thesis would not have been possible without the time each set aside to answer my questions fully and thoughtfully. And last but certainly not least, thank you to my family and friends for the hours spent supporting and listening to me as I worked through my thoughts.

#### **Prologue**

From the beginning of my thesis work, I wanted to work with a topic involving the military population because it is a topic that is close to me after having seen the effects of a military life firsthand. I began looking at problems that plague members of the military; typically, the leading disorder that springs to mind when discussing the armed services is post-traumatic stress disorder, or PTSD. Consequently, my original goal was to evaluate the warrior mindset in PTSD. However, as my research and thought process progressed, I realized that the topic was extremely broad and there were missing steps between the cognitive part of developing a warrior mindset and the actual biological development of PTSD. Consequently, I had to delve deeper into how I was going to concretely analyze the warrior mindset. Around this time, I was enrolled in a class called "Stories from Wartime" where I read a book called What Have We Done: The Moral Injury of Our Longest Wars by David Wood (2016). I was introduced to the idea of moral injury and decided to focus on it because it has emerged as a prerequisite for PTSD (Wood, D., 2016). Since one commonality among all of the military branches is a training period, I decided to center my research on it in order to identify possible instances where moral injury could occur.

In order to narrow my thesis, I decided to focus on a single aspect of both moral injury and PTSD: expectation. I started to reflect on my learning and memory class. The idea of conditioning struck me as very interesting because it is one of the few phenomena in psychology that still occurs even if the participant knows that it is happening (Smith, Clark, Manns, & Squire, 2005). I decided to try to approach my thesis task from the

perspective of conditioning; however, I realized that it would be unethical to try to elicit a response from a veteran who has faced trauma. Consequently, I turned to rats. Following my enrollment in Advanced Neuroscience Methods, I have a great appreciation for animal research. I opted to apply my interest in conditioning to an animal model, leaving the moral aspect to a different component of my thesis because it would be difficult if not impossible to create an argument for morality in animals. I decided to focus on chronic stress and its relation to anxiety in rats because this angle certainly is a humanistic aspect that is attainable. It also still ties into the concept of moral injury because anxiety is a component of moral injury (Wood, D., 2016). I then decided to draw lines from my chronic unpredictable stress condition in the rats to real military life, especially in a combat zone, and from my chronic predictable stress condition in the rats to basic training and bootcamp.

My thesis outline started to come together, and I decided that most of all, I wanted my thesis to be interdisciplinary. I contend that a huge benefit of my liberal arts education has been that it draws from multiple different areas of expertise. Beyond the boundaries of Regis's campus, I maintain that taking an interdisciplinary approach is vital because there are few areas in life that are exclusively related to only one topic. Also, particularly with the population that I am interested in, I felt that reducing the thesis to only include one area of my major would not be an adequate enough depth to title the finished product "a thesis."

My thesis is divided into three components. The first section outlines my argument, which is that military training attempts to instill the necessary mentality of

stoicism but instead enforces a culture of hypermasculinity. The second section delineates interviews I conducted with veterans and active duty military in order to gain insight into the opinions of the population affected by military training. Lastly, the third section has two possible experimental designs that will move toward proving the notion that training fails to adequately prepare basic training and boot camp graduates for the reality of military life. In summary, I intend to reason that the missing component between trauma and post-traumatic stress disorder is moral injury, and that moral injury is brought about by violations in expectations, both in terms of the culture and the lifestyle, that are set during training.

## **Chapter I: My argument**

#### So what and who cares?

The "so what, who cares" question has been a theme among my entire time in the Honors Program at Regis. Students had to be ready to answer these two questions for every text, opinion, and paper encountered or turned in. The purpose of it is to encourage a reason behind every decision made. I contend that the topic of military training is relevant and important to a large number of individuals. While it is simple to write off the military population as "less than 1%," it affects millions. From a pure number standpoint, according to 2010 statistics, there are 1.4 million active duty military personnel. In 2016, there were 18.5 million veterans in the United States (U.S. Census Bureau, 2018). The heartbreaking aspect of these numbers comes about when looking at the number of suicides, which is 20 per day (Shane III, 2018). That is almost one per hour or 7300 lives lost over the course of a year. Moreover, these people do not operate in a vacuum and have spouses, children, parents, and friends who are affected. When considering the millions who have or are currently serving in the military, those that interact with them, and the fact that every single person recruited into a branch of the military experiences basic/bootcamp, the implications of training are not small scale. Consequently, it is our jobs as a people to care and actively attempt to make a difference.

#### My personal story

I will admit though, the numbers I have mentioned can be a bit difficult to wrap one's mind around. My personal interest came to life once I had faces to put to the

numbers. On January 11, 2009, a green minivan boasting Marine Corps stickers on the bumper pulled up to the house across the street from mine. My older brother gathered his single duffle bag and turned off the lights to his bedroom in the basement. My mother sat crying in the kitchen, and my father shook his hand with pride. My brother's fiancée hunched silently in the corner of the entryway. I sobbed into his jacket. He gave everyone a last round of hugs and left. The rest of the day proceeded with my family attempting to celebrate my 12th birthday. Fast forward to February 2011, my brother returned from a six-month deployment to greet his wife and year-old son. He watched all the events-birthdays, his son's first steps, Christmas—that his wife had captured on a video recorder. He laughed with everyone and tried to share in the merriment of his return, while also secretly struggling with the horrors of what he witnessed in Afghanistan. He questioned his faith, had a hard time in crowds, and scared himself with his reaction when his son startled him.

The events I have described are not uncommon in my family. I have six older brothers who have or are currently serving in the military (three in the Marine Corps, one in the Air Force, one in the Army, and one in the Navy), a retired Air Force father who served during Desert Shield, and a retired Marine Corps uncle who served in the Vietnam War and is a purple heart recipient. I have witnessed my nephews experiencing nightmares because their fathers are deployed; my sister-in-laws attempting to cram all feelings of support and comfort and hurt into a 30 second phone call that had to be cut short because their beloved was worried about being spotted and engaged from their rooftop location in the combat zone; my mother's eyes welling with tears of both

heartbreak and pride as she hung the yellow ribbon from the tree in our front yard; my father's excitement at being able to finally get the video chat working, if only for a moment. I have felt the absences of Christmas traditions in which I would spend the night in my brother's room while my parents decorated the living room, and I have been at a loss for words when my brothers have shared slivers of their absolute devastation at the events they have seen and even been part of. I have reveled in the funny stories my siblings have told me from basic training and boot camp and held dear the moments when they have felt comfortable enough to share an experience with me. I have observed changes in my brothers, as well as the people around them, that are a direct result of their military experiences.

#### $Trauma \rightarrow Moral Injury \rightarrow PTSD$

According to the Diagnostic and Statistical Manual of Mental Disorders, or DSM-5, post-traumatic stress disorder is classified by intrusive symptoms, such as flashbacks or nightmares, following exposure to trauma. It also includes alterations in cognition, arousal, mood, and reactivity, as well as avoidance of trauma-related stimuli ("DSM-5 Criteria for PTSD," 2018). Overall, PTSD causes functional impairment that persist for longer than one month. However, one of the strange characteristics of PTSD is it does not affect everyone exposed to trauma. There are certain risk factors that increase the likelihood of PTSD, such as gender, degree of exposure to trauma, and family relationships (Du, N., Zhou, P., SiTu, M., Zhu, C., & Huang, Y., 2019). With that said, risk factors are not deterministic and are sometimes merely correlational, not causational

(Ponce de León, B., Andersen, S., Karstoft, K.-I., & Elklit, A., 2018). So what is the missing link?

I contend that it is moral injury, which is essentially a violation of expectation (Wood, D., 2016). By way of illustration, the rates of PTSD among veterans of different wars based on the U.S. Department of Affairs' estimations are nearly 31% for Vietnam veterans, 11% for Afghanistan veterans, and 20% for Iraqi war veterans ("Feature: Post Traumatic Stress Disorder PTSD: A Growing Epidemic / Neuroscience and PTSD Treatments | NIH MedlinePlus the Magazine," 2009). Of those who sought psychiatric treatment, 37% of World War II veterans and 80% of the Korean War veterans met the criteria for post-traumatic stress disorder (Friedman, M. J., Schnurr, P. P., & Mcdonagh-Coyle, A., 1994). The horrors witnessed in war violated the lessons the military personnel had been taught growing up. Suddenly, friends could and did die, children were not to be trusted because of their possible use as a weapon, and the basic human right to life and liberty were not guaranteed. It is therefore unsurprising that our nation's most horrific wars resulted in the highest rates of post traumatic stress disorder. The difference between how Americans are traditionally raised and taught morality compared to their experiences in the military create a cognitive dissonance between expectation and reality. Moreover, these stressors are constant in a combat zone.

Beyond the confines of an actual war zone, I contend that moral injury expands throughout the military through the lessons learned in basic training and boot camp, one of which is stoicism. The Oxford English Dictionary defines stoicism as "Conduct or practice comfortable to the principles of the Stoics; austerity, repression of feeling,

fortitude" ("Oxford English Dictionary: Stoicism," n.d.). Influenced by Socratic, Cynicism, and Aristotelianism schools of thought, stoicism originally placed a heavy emphasis on virtue (Pigluicci, M., n.d.). The concentration on virtue was consequently a focus on "ethics," which was defined by Stoics as the study of how to live one's life (Pigluicci, M., n.d.). Originally, stoicism was a way of thinking and living that prized logic, cognitive and physical science, and philosophy of language (Pigluicci, M., n.d.; White, M.J., 2003). However, contemporary stoicism has strayed from its roots after having been interpreted through Greek and Roman times (Bugh, G.R., 1992; Sedley, D., 2003). The modern English word "stoic," without the capitalization, means repression of emotion or indifference to pleasure ("Oxford English Dictionary: stoic," n.d.). While the contemporary meaning still has traces of the historical one, it has been oversimplified and now has the damaging connotation of apathy or neutrality instead of an intentional focus on morality and dignity (Moore, A., Grime, J., Campbell, P., & Richardson, J., 2013). The problem is that the modern day meaning of stoicism is applied in military training instead of the original.

#### *My argument: Stoicism = hypermasculinity*

In its original form, stoicism is a principle that most abide by. For instance, many people working in a customer service position act professionally and focus on abiding by ethical conduct; following the shift, though, they are then able to acknowledge their true emotions and ideas on the interactions they had at work. When applied to members of the military, the concept of stoicism is helpful because it allows them to operate against their

natural fight or flight instinct and charge into a dangerous condition, act in an otherwise paralyzing situation, and detach from human emotions of discomfort or grief (Shields, D. M., Kuhl, D., & Westwood, M. J., 2017; Basham, K., 2008; Fowler, 2010).

However, I contend that stoicism has come to be synonymous with a culture of hypermasculinity, and culture is much more difficult to simply turn on and off because it is a constant stream of influence (Arnett, J.J. & Maynard, A.E., 2017). Western society as a whole, and particularly in the military, typically pressures men to limit their emotional expression (Reigeluth, C. S., Pollastri, A. R., Cardemil, E. V., & Addis, M. E., 2016). Studies have observed that military training promotes a traditional masculine gender role in order to prepare recruits for combat and sacrifice (Brooks, G.R., 2010; Fox, J. & Pease, B., 2012; Hale, H.C., 2012). The strong-but-silent personna, though, has negative consequences. Hypermasculinity in general correlates with attitudes of entitlement and abuse (Hickey, C., 2008), as well as an inhibited ability to manage change (Keats, P.A., 2010). Additionally, it decreases the likelihood that men will seek help if they need it due to fear or shame. By way of example, males utilize the free mental health services offered by the military significantly less than their female counterparts following deployment, and have higher dropout rates when they do use the service (Brooks, G.R., 2010; van der Kolk, B., McFarlane, A. C., & Weisaeth, L., 2007). Veterans also voice feelings of shame and disgrace when admitting they need help (Shields, D. M., Kuhl, D., & Westwood, M. J., 2017; Fox, J. & Pease, B., 2012). This illustrates that the masculine expectation of remaining mentally stoic persists following deployment, meaning that the cultural pressures continue despite the situation passing. As a result, the constant expectation to

remain a model of masculinity acts as a dysfunctional barrier to expressing emotion in a healthy environment (Martin, S., 2016). Furthermore, the social pressure of remaining hypermasculine then causes cognitive dissonance when emotions do inevitably arise, leaving men to reconcile their expected image with their reality (Creighton, G., Oliffe, J. L., Butterwick, S., & Saewyc, E., 2013). Essentially, the idea of stoicism, which can be applied when necessary, has been replaced with the expectation of hypermasculinity. Consequently, the moral injury men feel stems from the unrealistic assumption that military personnel never feel emotions, such as remorse, sadness, or depression, that is associated with the more feminine gender norm.

Studies have shown that the rigid gender roles enforced through social and physical training and conditioning is a significant correlate of suicide (Braswell, H., & Kushner, H. I., 2012; Burns, S. M., & Mahalik, J. R., 2011; Sterling, A. G., IV, Bakalar, J. L., Perera, K. U., DeYoung, K. A., Harrington-LaMorie, J., Haigney, D., & Ghahramanlou-Holloway, M., 2017). Men in the military, in an attempt to avoid the shame associated with speaking against the social norm, opt for a different strategy that does not require reliance on emotional vulnerability (Braswell, H., & Kushner, H. I., 2012; Martin, R. L., Bauer, B. W., Ramsey, K. L., Green, B. A., Capron, D. W., & Anestis, M. D., 2018). Therefore, the implications of the contemporary stoic mentality that is enforced in today's military training is that members feel trapped within their own bodies and minds due to a culture that dictates that they should not feel the need to speak out anyway. Admitting that they need help, which is normal, is associated with negative,

### HONORS THESIS

self-deprecating feelings because the entire environment in which military members reside enforces the idea that help should not be necessary.

## **Chapter II: The Interviews**

The interviews are an important aspect of the thesis because the military personnel provide a unique, irreplaceable insight into a population's experiences that I, realistically, will never truly understand unless I join the armed forces. As Regis has taught, it is important to listen to the actual problem before attempting to fix it. I refer to all of the personnel in basic training or boot camp as "recruits" in order to speak uniformly about the people going through this process, though I do recognize that at different points in time and in different branches, other terms such as "trainee" or "private" are used as well. After the interviews were conducted, the answers were deidentified. The reason for this is two-fold. First, some of the members are active duty or have security clearances and out of respect, I did not want their opinions to hurt their careers. Second, studies have shown that people in general are more willing to speak truthfully when the conversation is confidential (Lesesne, C. A., Rasberry, C. N., Kroupa, E., Topete, P., Carver, L. H., Morris, E., & Robin, L., 2015; Bacchus, L. J., Bullock, L., Sharps, P., Burnett, C., Schminkey, D. L., Buller, A. M., & Campbell, J., 2016). Overall, I had 17 people respond to my request for an interview, and each provided an irreplaceable perspective.

The purpose of the questions was to investigate the expectations the interviewees had during their recruitment and basic training or bootcamp, and then how it compared to the reality of military life. I also posed a question about their feelings toward stoicism, which I will discuss further in Chapter III. The stoic mindset is a complex issue that I hypothesized may affect moral injury, particularly because cultural expectations about

the military stereotypically fall into the stoic category. The following questions were posed during the interview. I used a standardized script in order to prevent myself from leading their answers. Additionally, the questions are intentionally very vague in order to maintain open-ended, non-leading responses. I did debrief participants afterwards to delineate the reasoning behind the questions. All responses were recorded on a Word document. Any of my interpretations or speculations are reserved for after all of the answers were summarized.

- 1. Please describe your experience in basic training or boot camp.
- 2. How did this compare with your expectations you had during recruitment?
- 3. How did your basic or boot camp experience impact your expectations of regular military life?
  - a. Did you feel overprepared? Underprepared? Just the right amount?
- 4. What, if anything, do you think is lacking from military training?
  - a. How would you improve it?
- 5. (Are you familiar with the stoic philosophy? Oxford English Dictionary definition given if not.) Do you think that the stoic mentality is more helpful or harmful?
  Why?

#### (1) Please describe your experience in basic training or boot camp.

The consensus was that training was different than any other experience. While some of the interviewees felt prepared after watching YouTube videos on the subject and

others felt completely out of their element, the overwhelming theme of the first question was that training was a condition unlike any other. There was also a component of shock and awe, even for the interviewees who had prior experience with the rigor and schedule of training. Many struggled as it was their first experience away from home and loved ones; one interviewee disclosed that leaving home made the training the most difficult feat he/she had ever had to do. Most of the interviewees unknowingly corroborated others' perspectives of training in that it was more of a mind game than anything else. Interviewee no. 16 specifically stated that "the more mentally draining days were the worst."

In regard to the physical part of training, I got varied responses. Part of the cause for this is due to a difference in the year that the person went through training, the type and duration of the training, and/or the branch that the person was in. Some of the respondents stated that the orders given were not necessarily difficult but did require high speed and intensity along with perfection. In one interview, the person reported that the timelines given for the recruits to complete a task were often unrealistic; however, the constraints of the human body did not keep instructors from using physical ramifications for those who were unable to complete a task in the desired amount of time. Other respondents, such as interviewee no. 9, stated that the training was less difficult than he/she had imagined it would be. While different people had different experiences, it was undeniably evident that each person had done many pushups, sit-ups, and runs.

Quite importantly, all the interviewees, to some degree or another, emphasized that training was important. Responses ranged from mentioning that it was necessary in

order to learn the culture and to condition recruits to respond automatically to orders to commenting on its importance because it builds friendships that are necessary once out of training. On a grander scale, interviewee no. 17 said that it was the most essential three months of his/her life because it taught him/her a new mentality about success. This was echoed by another who said that it was a life-changing experience; there was a big sense of commitment and a push to grow up. Interviewee no. 7 expressed an appreciation for the training because many of the skills he/she learned are applicable to civilian life. It is necessary to acknowledge that training has an impact, and if my interviews are representative of the population, a positive one.

#### (2) How did this compare with your expectations you had during recruitment?

Prior to the interviews, I had my own personal beliefs about the responses to this question. However, I was surprised to find that the answers really challenged my understanding of recruitment process. Having spoken to recruiters in high school myself, my idea was that recruiters were, first, the primary source of expectations about basic training. Second, I believed that they made promises that were not necessarily kept or were more complicated than initially thought to be.

My first assumption was incorrect because, with two exceptions, most expectations were gained from watching movies or from family members who had already served. Many of the interviewees said that he/she learned almost all of what to expect of training from movies, and that the movies actually were fairly correct. Others mentioned that they had heard horror stories and thought training was going to be much more strict. Interviewee no. 6 specifically expressed that training was a letdown

physically after his/her expectations during the recruitment period. Regardless most seemed to agree that, no matter how ill or well prepared he/she was, training was still a shock. For example, interviewee no. 1 was one of the exceptions as he/she stated that the recruiter was helpful in preparing for the transition. Nonetheless, even with the additional assistance, the first day of training was "night and day compared to anything that [he/she] had done during recruitment." Interviewee no. 16 was the only truly positive feedback I received regarding recruiters. He/she felt the recruiter adequately prepared him/her for training and the two still remain friends to this day. With that said, even having felt like the necessary information was given, the recruit still felt that expectations matched reality roughly 70% of the time.

My second assumption was both true and untrue. On the one hand, interviewee no. 8 divulged that recruiters do not tell every detail of training or else people would not join the military. On the other hand, interviewee no. 5 articulated that his/her recruiter did not really sugar coat how difficult the training would be. The common theme among all the answers was that recruiters do delineate that training will be physically challenging. However, beyond the emphasis on fitness, the mental preparation and gritty details varied a great deal from person to person.

(3) How did your basic or boot camp experience impact your expectations of regular military life? Did you feel overprepared? Underprepared? Just the right amount?

I received mixed answers. It is important to point out that, once graduated from training, members continue on to some sort of specialty school. The duration, location,

and intensity varies depending upon the type of role the person will be fulfilling. Specialization schools can last anywhere between 4 and 72 weeks ("Technical training," n.d.). Many of the responses I received seemed largely dependent on the type of job the recruit continued to. For instance, interviewee no. 5 declared that he/she felt appropriately prepared because the hours were largely a 7-4 job; many of the requirements were the same as a civilian role. Conversely, interviewee no. 14 whose additional training was much longer, stated that basic training is exactly that: basic. Recruits learn how to follow orders and stay in optimal physical condition, but the actual nuances of the assignments change with the base, the unit, and so on. To illustrate, it is the equivalent of learning how to cook an egg, perhaps pasta and rice, or chicken, then promptly being thrown into a high-end restaurant and being asked to prepare a meal. A few respondents replied that they knew that military life outside of training was going to be different because, according to interviewee no. 4, no one would commit to the military otherwise or because, according to interviewee no. 12, they were told by instructors during training. Naturally, there were also some respondents, such as interviewees no. 3, no. 6, and no. 13, who felt underprepared going into everything following training. With that said though, they quickly adapted, and there is a sharp learning curve for those who felt underprepared.

The one theme I noticed from the responses is that preparedness is not necessarily ever truly "prepared" in the military. The interviewees who stated that they felt they were ready for military life following training still did not necessarily know what to expect; they just had the understanding that there would be a difference between the lifestyle in

training and the lifestyle following. Some expectations were still better informed than others. Overall, the actual experience of being in the military is different than any other experience. In certain ways, the transition from training to regular life is helpful because it is more relaxed and less micromanaged than training. In other ways, the transition is not as smooth because there is excessive anxiety of struggle going into a new unit.

# (4) What, if anything, do you think is lacking from military training? How would you improve it?

I had no idea what to expect, but I received genuinely interesting answers. A few, such as interviewee's no.1, no. 10, no.11, no. 12, and no. 13, mentioned that it would be nearly impossible to add anything more to the training, given the average length of training is about 10 weeks. They thought that the instructors did as much as they could in the allotted amount of time, considering the task at hand of tearing recruits down to nothing and completely rebuilding. There was certainly an age effect, in that people who had gone through training fairly recently did not really have any suggestions as to ways to improve it because they felt it was perfect as is. Individuals who are a little older and had more time in service while not necessarily being old enough to retire were a little more critical in terms of the intensity and testing that recruits must go through. Beyond roughly 10 years, the interviewees stated that they felt they were too far removed to adequately judge the effectiveness of the training beyond what they had experienced.

A handful of the subjects called for a more intense training. Interviewee no. 2 suggested that opportunities to perform correctly be given more conservatively, so that

recruits receive few chances to get the task right or are kicked out. Additionally, he/she thought that greater psychological testing should be administered prior to training in order to eliminate those mentally ill-equipped for the high rigor training. Interviewee no. 6 echoed the former sentiment in saying that training is "too soft." According to him/her, training lacks the grit and reality needed to properly prepare recruits for the life of the military. Interviewee no. 8 agreed with the idea of a lacking realness to the training because the recruits do not have the opportunity for the hands-on training that is necessary for success.

Other respondents focused more heavily on the mental aspect of military training. Interviewee no. 7 stated that there needs to be more emphasis on discipline. Anecdotally, he/she relayed that new members out of training would not respond with the proper way to address a senior ranking member and would use terms like "naw" or "nope." Interviewee no. 9 also agreed with the idea that mental training should be better, but in a different way. Members leave physically prepared but not mentally prepared. Particularly in terms of combat, the recruits are trained with exercises with tear gas and marksmanship but not with the consequences of actually needing to use those skills in a real scenario. Interviewee no. 9's answers are complicated when placed into conversation with interviewee no. 14 because he/she stated that "you can't teach [recruits] how to cope with a problem that does not exist yet, or maybe won't at all." The statement reflects the idea that it is hard to address a problem that does not exist yet, or may not at all.

Interviewee no. 14, despite the complication, still mentioned that the mental environment needs to be improved even if he/she does not necessarily know the solution. Currently,

mental disorders or illnesses are viewed so harshly. Many members consequently hesitate with seeking help because their jobs would then be placed into question, which therefore means their livelihood would be at stake.

Interviewee's no 16 and 17 had unique answers that did not align with any of the other respondents or themes. Interviewee no. 16 said that many members, as they climb higher through the ranks, become detached from training and the reality that lowerranking members face. Consequently, more superior members make decisions that are far removed from the needs of the newer people, which causes a "poor distribution of information and serious miscommunication in training," In summary, interviewee no.16 emphasized a need for change in how decisions are made for those going through training, or perhaps a more frequent requirement to repeat training in order for those in power to gain greater insight into how the standards have changed. Interviewee no. 17 stated that the military should be its own entity, separate from the policymakers that control regular society and civilian life. His/her reasoning for this is because training has changed in response to a new society; however, this may be compromising to certain aspects of training. Young people, only 18 or 19 years old, may be asked to hold a rifle or be selfless, which may including his/her life. Therefore, civilians will not understand what is being asked of today's military nor how policy changes may affect its members.

(5) (Are you familiar with the stoic philosophy?) Do you think that the stoic mentality is more helpful or harmful? Why?

The contemporary definition of stoicism is repression of emotion or indifference to pleasure ("Oxford English Dictionary: stoic," n.d.). The responses to my last question regarding the helpfulness or harmfulness of stoicism naturally had a degree of variability but were more synonymous with one another than the previous answers. Interviewee no. 6 stated that stoicism is very helpful. Interviewee no. 11 said that it is beneficial because it contributes to the ability to adapt to new situations, particularly those that one does not necessarily have time to sit and think about. Interviewee no. 12 echoed the sentiment in saying that it assists with keeping a professional manner. On the other hand, interviewee no. 10 asserted that the stoic mentality is harmful because it inhibits members from seeking help when they need it. Interviewee no. 4 mentioned that, in his/her experience, those that tried to remain stoic ended up in trouble.

Aside from the five responses that were either "all good" or "all bad," the other 12 declared that it was a balance. Stoicism was helpful in certain instances and harmful in others. In the short term, stoicism is necessary, particularly in dangerous or violent situations. Attempting to deal with those emotions can cause hesitation or an inappropriate response. Following the situation, though, most of the interviewees agreed that it is necessary to deal with those emotions, whatever they may be. Interviewee no. 17 added the nuance that one's feelings should remain outside of the workplace. Specifically for training, respondents agreed that the stoic mentality was necessary to get through it. However, once outside of training, emotional expression becomes more important. In special cases of deployments or the like, stoicism becomes more essential once again but for shorter bursts of time. Interviewee no. 15 eloquently said that "It's easy to make a

decision, but it's hard to live with it."

#### Debrief

Overall, the responses I received were immensely helpful. While I was surprised at how the answers varied, I was even more surprised to note how similar some of the respondents' answers were. The impression I gained from responses to question 1 and 2 is that training is necessary, but recruits did not always feel adequately prepared. Part of this, I do recognize, is the same as with most any experience; it is the difference between reading about a country and actually going to visit it. There are limitations to words. However, there does not seem to be much of a standardized process recruiters are tied to beyond a short checklist. According to my respondents, it was unique to gain insight to training from recruiters as opposed to movies or family members. Furthermore, people seemed to have more intense ideas of training than the actuality of it in terms of physical demands, but there was a lack of mental preparedness. Then, moving from training to the job, there is a certain aspect of expectation that is not necessarily met either.

Notwithstanding the differences, people seemed more ready to forgive this because training already packs in many other skills.

The cause for the age effect for answers to question 4 would be purely speculation on my behalf. The military is constantly changing in terms of training and expectations given the outside demands, so it is possible that the newer military feels more adequately prepared because they really are following a more rigorous and fine-tuned training. Or, it could also be a difference in societal expectations; during previous wartimes, the military

was "supposed" to be the toughest members of society because they were the front lines. Another possibility could be that military culture, for better or worse, is changing. For instance, despite what is seen in movies, instructors are no longer allowed to physically touch or curse ar recruits. While I am not naive to the fact that it does still happen, the frequency has declined. It could also be a combination of all three of the aforementioned possibilities or none. Also, in response to 4 and 5, some interviewees mentioned that mental illness still holds a stigma. Studies corroborate this, particularly with post-traumatic stress disorder, in that both the public and the victims of it, hold a harsh opinion (Bonfils, K. A., Lysaker, P. H., Yanos, P. T., Siegel, A., Leonhardt, B. L., James, A. V., ... Davis, L. W., 2018; Caldwell, H., & Lauderdale, S. A., 2018). The reason the knowledge of stigma is important is because it decreases the likelihood of members seeking help if/when they need it (Blais, R. K., Renshaw, K. D., & Jakupcak, M., 2014).

The overall impression I gleaned from question 5 is that members of the military see the necessity of stoicism while also seeing the dangers of it. Stoicism provides the courage to charge into novel situations, maintain composure during hard times like training or deployment, and makes one think before speaking. However, it also can be difficult to turn off and becomes expected in order to maintain a military image. The mentality then turns into a threat to mental health because, as interviewee no. 9 expressed, "You can either deal with your demons now or your demons will deal with you later." If people remain the modern definition of stoic 100% of the time, their demons are not being dealt with.

To reiterate, the interviews allowed me to gain a small insight into the military population. I had my own ideas of what the answers would be, but it was incredibly educational to hear it from the mouths of active duty military and veterans.

## **Chapter III: Experiments**

In order to gain concrete results that would either go toward proving or disproving my hypothesis regarding expectation, the following hypothetical experiments could be performed. I am comparing basic training and boot camp to a chronic predictable stress condition, and military life to a chronic unpredictable stress condition. Expectations of military life are set in training but are not met, which results in chronic unpredictable stress. Rats have been used to aid in the understanding of anxiety through their performance on a variety of tests, including the elevated plus maze (Paduraiu, M., Antioch, I., Balmus, I., Ciobica, A., El-Lethey, H., & Kamel, M., 2017). Additionally, rats have been shown to exhibit classical conditioning related to anxiety (Deal, A.L., Erickson, K.J., Shiers, S.I., & Burman, M.A., 2016). Therefore, rats could be used for the following studies.

#### Experiment 1

Background: Stress resilience is mediated by the amount of perceived control and the probability that the stress will occur. Chronic predictable stress and chronic unpredictable stress have different effects on both the body and the brain in terms of performance and response to future exposure to stress. For instance, in rats, exposure to chronic unpredictable stress causes an enhanced response to cocaine compared to rats exposed to predictable stress (Haile, GrandPre, & Kosten, 2001), allowing the animal to form expectations about the stress allows it to develop coping mechanisms to minimize the aversive effects of psychoactive drugs. There is a direct correlation between ulcers and

fear due to chronic unpredictable stress (Seligman, M.E. & Meyer, B., 1970), demonstrating that the unknown likelihood of a shock occurring affects behavioral fear and its consequent physiology. In terms of the response of the brain, the predictability of a threat affects the neural activity in areas related to emotional regulation, such as the hippocampus and ventromedial prefrontal cortex (Wood, K.H., Wheelock, M.D., Shumen, J.R., Bowen, K.H., Ver Hoef, L.W., & Knight, D.C., 2015). Furthermore, chronic predictable stress vs. chronic unpredictable stress have different behavioral effects as well in terms of anxiety and social phobia. Constant psychosocial stress manifested into increased anxiety in social situations in participants with diagnosed anxiety (Havranek, Bolliger, Roos, Pryce, Quednow, and Seifritz, (2016). While the current literature does address differences in chronic predictable stress and chronic unpredictable stress in terms of drug use (Haile C.N., GrandPre, T., & Kosten, 2001; Araujo, A.P.N., DeLucia, R., Scavone, C., & Planeta, C.S., 2003; Hefner, K.R., Starr, M.J., & Curtin, J.J., 2018; Doyle, J.R. & Yamamoto, B.K., 2010) and effects on generalized anxiety disorder (de Brito Guzzo Soliano, F.C., Cabbia, R., Kumpel, V.D., Batistela, M.F., Almedia, A.G., Yamuchi, L., Jr., & Sprea de Andrade, T.G.C., 2018; Grillon, C., Pine, D.S., Lissek, S, Rabin, S., Bonne, O., & Bythilingam, M., 2009), to this researcher's knowledge, the effects of chronic predictable stress compared to chronic unpredictable stress have not been observed in regard to manifestation of behavioral anxiety in "normal" participants. The intended results are important for the advancement of knowledge when put into conversation with the effects that chronic stress has on military personnel, and how this affects their consequent stress and performance.

Additionally, the study can be used to articulate conditions in which prolonged anxiety may occur, which may result in the development of a problem given the fact that stress increases the likelihood of drug and alcohol abuse (Peters, S., Slattery, D.A., Flor, P.J., Neumann, I.D., & Reber, S.O., 2013; Bahi, A., 2013; Boyce-Rustay, J.M., Cameron, H.A., & Holmes, A., 2007).

*Hypothesis:* Rats given chronic predictable stress will exhibit less anxiety than rats given chronic unpredictable stress.

Animals and Experimental Design: Fifteen young adult male Sprague-Dawley rats will be kept in cages with standard bedding, food *ad libitum*, and water at 72°F in the animal facilities at Regis University. The animals will have a 12/12 light/dark cycle. The rats will be randomly assigned to three condition: two experimental and one control. The first experimental condition, consisting of 5 rats, will receive chronic predictable stress. The second experimental condition, consisting of 5 rats, will receive chronic unpredictable stress. The third and final condition, also consisting of 5 rats, will not be stressed.

*Methods:* Each rat in each experimental condition will be placed outside of its cage (at separate times) into another chamber in which the floor has the capacity to administer a mild shock. The rat will remain in the chamber for 5 minutes prior to the start of the experimental condition in order to allow the animal to habituate to the newenvironment (Zimmermann, A., Stauffacher, M., Langhans, & W., Wurbel, H., 2001). The chronic

predictable stress group will be exposed to a 440 Hz tone for 5 seconds before receiving a mild shock, which consists of a 0.8mA shock for 0.5 seconds (Rock, E.M., Limebeer, C.L., Petire, G.N., Williams, L.A., MEchoulam, R., & Parker, L.A., 2017). The tone and shock will be repeated every 30 seconds for five minutes. There will be 11 shocks administered. This will cause conditioning to the tone in the chronic predictable stress group (White, N.M. & Legree, P., 1984). Following the shock, the rat will remain in the chamber for an additional five minutes before being placed on the elevated plus maze. The second experimental condition, the chronic unpredictable stress, will also be placed in the chamber for 5 minutes to allow habituation. However, the rats in this condition will not receive a tone, only the 0.8 mAshock for 5 seconds. Once again, the rat will randomly receive 11 shocks over 5 minutes. The rat will remain in the chamber for an additional five minutes before being placed on the elevated plus maze. A third group will remain in the chamber for 15 minutes with exposure to the tone but no exposure to the shock, and then will be placed on the elevated plus maze. Anxiety in rats manifests as freezing behavior and apprehension of exploration (Zangrossi, H. & File, S.E., 1992; Griebel, G., Moreau, J.-L., Jenck, F., Misslin, R., & Martin, J. R., 1994). Consequently, the rat's anxiety will be quantified by the amount of time it spends on the open arms compared to the amount of time it spends in the enclosed arms over a 5 minute period (Triet, D., Pesold, C., & Rotzinger, S., 1993). Time in the open arm will be determined by all four paws crossing the threshold (Kniss, J.R., 2012). The number of times the rat rears, which will be defined as both front paws coming off of the ground will also be recorded as an

indication of anxiety (Steenbergen, H.L., Heinsbroek, R.P., Van Hest, A., & Van dePoli, N.E.,1990).

#### Experiment 2

Background: While most people throughout their lifetime experience one form of hardship or another, some experience a more fundamental deprivation of security, such as physical assault, abuse, serious health problems, or war. Whether one intense instance or chronic exposure, trauma can open the possibility to a debilitating, physiological anxiety called post-traumatic stress disorder, or PTSD. Post-traumatic stress disorder affects roughly 20% of the population at some point in time with 5% affected at any given time ("Post Traumatic Stress Disorder Fact Sheet," n.d.; Robinson, S., Christ, C. C., Cahill, M. M., Aldrich, S. J., & Taylor-Yeremeeva, E., 2019). It is a rather new idea, first being added to the Diagnostic and Statistical Manual of Mental Disorder, 3rd edition (DSM-3) in 1980 (Pai, A., Suris, A., & North, C., 2017). Due to its wide range of expression in individuals, it can be rather difficult to diagnose (Pai, A., Suris, A., & North, C., 2017). However, it can be a rather debilitating disorder that causes a biological fight or flight response to select stimuli (Wood, D.B., 2016). Furthermore, it is difficult to predict because everyone who experiences extreme trauma does not develop PTSD. There are risk factors, however, that do make some individuals more likely than others. For example, repeated exposure or a history of traumatic events has been identified as a risk factor (Steele, M., Germain, A., & Campbell, J. S., 2017; Jones, M., Sundin, J., Goodwin, L., Hull, L., Fear, N. T., Wessely, S., & Rona, R. J., 2013). Additionally, particular

personality traits such as neuroticism have been positively correlated with the acquisition of PTSD (Steele, M., Germain, A., & Campbell, J. S., 2017). Importantly, chronic stress has been implicated in the acquisition of post traumatic stress disorder, which supports literature cited from experiment 1. Chronic stress causes dendritic hypertrophy in the basolateral amygdala and hypotrophy in the medial prefrontal cortex (Moench, K. M., Maroun, M., Kavushansky, A., & Wellman, C., 2016). A greater dendrite density in the amygdala accounts for a greater fear response, while less dendrite density in the prefrontal cortex inhibits the executive functioning and logic of the brain. Furthermore, chronic stress enhances fear learning and inhibits extinction in a novel context (Hoffman, A. N., Lorson, N. G., Sanabria, F., Foster Olive, M., & Conrad, C. D., 2014). Therefore, previous literature establishes the adverse effects of chronic stress on the brain's capacity to learn fear-related responses and is, as a result, implicated in the development of post traumatic stress disorder. Due to the research on chronic stress and the research from the Experiment 1 on the adverse effects of chronic unpredictable stress in particular, the aim of this study is to explore the relationship between different types of chronic stress and PTSD acquisition.

*Hypothesis:* Rats exposed to chronic unpredictable stress will display post-traumatic stress disorder symptoms in a shorter amount of time than rats exposed to chronic predictable stress.

Animals and Experimental Design: Twenty-four young adult male Sprague-Dawley rats will be kept in cages with standard bedding and food and water *ad libitum*. The animals will have a 12/12 light/dark cycle. The rats will be randomly assigned to three condition: 8 rats will receive chronic predictable stress, 8 rats will receive chronic unpredictable stress, and 8 rats will receive no stress.

*Methods:* The same experiment as described in experiment 1 will be executed in which the rats in the chronic predictable stress condition will be conditioned with a tone followed by a 0.8mA shock, and the chronic unpredictable stress condition will only receive the 0.8mA shock (Rock, E.M., Limebeer, C.L., Petire, G.N., Williams, L.A., MEchoulam, R., & Parker, L.A., 2017). Once again, the control condition will be placed in the chamber but will not receive any shock. The only modification to the prior procedure is that none of the rats will be placed on the elevated plus maze until after the the predator stressor is administered. Following the five days of the aforementioned experiment, an animal model of post-traumatic stress disorder will be utilized by using a previously established method (Kniss, J.R., 2012). Rats in the chronic unpredictable stress condition and chronic predictable stress condition will be placed one at a time in a chamber and receive a moderate shock (1.5mA intensity) for 0.5 seconds every 30 seconds for 10 minutes combined with bobcat urine, which acts as a predator stressor (Kniss, J.R., 2012; Ferrero, D. M., Lemon, J. K., Fluegge, D., Pashkovski, S. L., Korzan, W. J., Datta, S. R., ... Liberles, S. D., 2011). Immediately following the 10 minutes with the bobcat urine, the rats will then be placed on the elevated plus maze to evaluate

maladaptive post-traumatic stress-like symptoms such as anxiety (Robinson, S., Christ, C. C., Cahill, M. M., Aldrich, S. J., & Taylor-Yeremeeva, E., 2019; Taurino, A., Vergatti, L. V., Colavitto, M. T., Bastianoni, P., Godelli, S., & Del Castello, E., 2012).

Consequently, the rat's anxiety will be quantified by the amount of time it spends on the open arms compared to the amount of time it spends in the enclosed arms over a 5 minute period (Triet, D., Pesold, C., & Rotzinger, S., 1993). Time in the open arm will be determined by all four paws crossing the threshold (Kniss, J.R., 2012). The number of times the rat rears, which will be defined as both front paws coming off of the ground will also be recorded as an indication of anxiety (Steenbergen, H.L., Heinsbroek, R.P., Van Hest, A., & Van dePoli, N.E., 1990). In order to compare the development of PTSD-like symptoms, the measurements will occur everyday following the exposure to the bobcat urine. At the end of a two week period, the percentage of time spent in the open arm, calculated by time spent in the open arm divided by total time multiplied with 100, will be graphed between the three conditions.

## **Conclusion**

### Tying it all together

In chapter I, I argued that stoicism has come to be applied as an overall hyper masculine culture as opposed to a mindset that can be used in isolated incidents. In other words, contemporary stoicism is the same as hypermasculinity. In chapter II, I conducted interviews in order to better understand expectations set during recruitment and in training, and how these matched regular military life. I contend that, while not always, most people are unprepared to varying degrees when entering the working force following training. In chapter III, I attempted to establish that chronic unpredictable stress was more harmful than chronic predictable stress in terms of anxiety. I also designed another experiment that could be performed in order to concretely tie poor expectation to post-traumatic stress disorder.

In summary, first, hypermasculinity is revered but cannot be achieved at all times. The expectations set during training mixed with the constancy of culture can ultimately lead to a detrimental mindset for a population that sacrifices so much. I agree with the majority of my interviewees in that stoicism does have a time and place; there are instances when one needs to respond logically and quickly. My interviews and research suggests that training absolutely needs to be physically and mentally rigorous because unmotivated members in the military will negatively affect others in their team. However, I also maintain that emotions have a time and place as well. Mental health is incredibly important, and the stigma for emotional vulnerability that continues to pervade the military today is harmful and unsustainable. Overall, the original Stoic mentality should

replace the contemporary stoic mentality in that members should be revered for their dedication, focus, and integrity as opposed to how well they are able to emulate traditional male gender expectations. Additionally, cognitive dissonance occurs because members were taught in training that they are tough and invincible, which is not always true.

Second, while basic training and boot camp instill the expectation of hypermasculinity in its recruits, it fails to adequately prepare them in other ways. Training operates as a chronic predictable stress because recruits typically have some idea, whether it be through family, recruiters, or movies, about what to do once shipped away. While not an easy feat, the recruits understand the expectations, and that their safety needs will be met. As established in the rat experiment, I expected that the chronic predictable stress condition would experience a degree of anxiety but would still be operational. Put differently, military training acts as a chronic predictable stress that results in manageable anxiety. Once graduated though, actual military life becomes a chronic unpredictable stress, which is detrimental for one's health, because there is less routine and less adequate expectation. The combination of increased anxiety from the need for new on-the-job learning and cognitive dissonance of expectation and reality between training and military life subsequently leads to moral injury. As echoed by my interviewees, military life was different than training in a multitude of ways, but those differences were experienced rather than taught. Additionally, the hypermasculine culture interacts and makes it more difficult to adapt to change (Keats, P.A., 2010). As a result of the higher unpredictability, military personnel experience a higher degree of

anxiety. Therefore, it is another way in which expectations are violated in that new basic training or boot camp graduates still have a sharp learning curve despite having just completed school.

#### Final thoughts

The purpose of this thesis was to articulate a slightly complex domino effect that occurs in the United States military, stemming from its training practices. The reason that the idea of misinformed expectations is important to study is because it can lead to moral injury, which is a precursor for post-traumatic stress disorder. Training needs to enforce the idea that yes, stoicism does have a time and a place. The original definition of stoicism aligns with the Jesuit question of how ought we to live, which I contend encourages a strong sense of self-reflection and responsibility. Therefore, it absolutely does have a place in military training. Additionally, I am not arguing that military training should be "softer" or easier. The physical demands are necessary to the success and discipline of the recruits. With that said though, support of mental health and a recognition that emotions will eventually occur are also key components to developing a healthy yet strong military. Stoicism in its original definition gives power to the individual to self-regulate and take off the tough exterior when appropriate where as a constant culture of harmful expectation does not. Additionally, training needs to better match real military life and vice versa. While I recognize that training is expensive, the phrase, "You get what you pay for" comes to mind. Training is necessary and completed by every military recruit who cycles through, so it should lay an airtight foundation.

From a broader perspective, this matter is important because, in the words of Father Pedro Arrupe, S.J., "Men and women completely convinced that love of God which does not issue in justice for others is a farce" (Arrupe, P., SJ, 1973). The violation of expectations that ultimately is setting up members in the military for moral injury and consequently post-traumatic stress disorder is an injustice. As a result, in order to be men and women for God, we must be men and women for others that love within the realm of justice and action.

#### References

- Araujo, A. P. N., DeLucia, R., Scavone, C., & Planeta, C. S. (2003). Repeated predictable or unpredictable stress: Effects on cocaine-induced locomotion and cyclic AMP-dependent protein kinase activity. Behavioural Brain Research, 139(1–2), 75–81. https://doi.org/10.1016/S0166-4328(02)00088-8
- Arnett, J.J. & Maynard, A.E., (2017). *Child Development, 2nd edition*. Boston: MA: Pearson.
- Arrupe, P., SJ. (1973). Men for others. Speech presented in Spain, Valencia.
- Bacchus, L. J., Bullock, L., Sharps, P., Burnett, C., Schminkey, D. L., Buller, A. M., & Campbell, J. (2016). Infusing technology into perinatal home visitation in the United States for women experiencing intimate partner violence: Exploring the interpretive flexibility of an mHealth intervention. Journal of Medical Internet Research, 18(11), 37–53. Retrieved from <a href="http://dml.regis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true-wdb=psyh&AN=2016-57039-004&site=ehost-live&scope=site">http://dml.regis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true-wdb=psyh&AN=2016-57039-004&site=ehost-live&scope=site</a>
- Bahi, A. (2013). Increased anxiety, voluntary alcohol consumption and ethanol-induced place preference in mice following chronic psychosocial stress. Stress: The International Journal on the Biology of Stress, 16(4), 441–451. https://doi.org/10.3109/10253890.2012.754419
- Basham, K. (2008). Homecoming as safe haven or the new front: Attachment and detachment in military couples. Clinical Social Work Journal, 36, 83–96. 10.1007/s10615-007-0138-9

- Blais, R. K., Renshaw, K. D., & Jakupcak, M. (2014). Posttraumatic stress and stigma in active-duty service members relate to lower likelihood of seeking support. Journal of Traumatic Stress, 27(1), 116–119. <a href="https://doi-org.dml.regis.edu/10.1002/jts.21888">https://doi-org.dml.regis.edu/10.1002/jts.21888</a>
- Bonfils, K. A., Lysaker, P. H., Yanos, P. T., Siegel, A., Leonhardt, B. L., James, A. V., ... Davis, L. W. (2018). Self-stigma in PTSD: Prevalence and correlates.

  Psychiatry Research, 265, 7–12. <a href="https://doi-org.dml.regis.edu/10.1016/j.psychres.2018.04.004">https://doi-org.dml.regis.edu/10.1016/j.psychres.2018.04.004</a>
- Boyce-Rustay, J. M., Cameron, H. A., & Holmes, A. (2007). Chronic swim stress alters sensitivity to acute behavioral effects of ethanol in mice. Physiology & Behavior, 91(1), 77–86. https://doi.org/10.1016/j.physbeh.2007.01.0249
- Braswell, H., & Kushner, H. I. (2012). Suicide, social integration, and masculinity in the U S military. Social Science & Medicine, 74(4), 530–536. <a href="https://doiorg.dml.regis.edu/10.1016/j.socscimed.2010.07.031">https://doiorg.dml.regis.edu/10.1016/j.socscimed.2010.07.031</a>
- Brooks, G. R. (2010). Beyond the crisis of masculinity: A transtheoretical model for male-friendly therapy. Washington, DC: American Psychological Association.
- Bugh, G.R. (1992) Athenion and Aristion of Athens. Phoenix 46:108-123.
- Burns, S. M., & Mahalik, J. R. (2011). Suicide and dominant masculinity norms among current and former United States military servicemen. Professional Psychology:

  Research and Practice, 42(5), 347–353. <a href="https://doi-org.dml.regis.edu/10.1037/a0025163">https://doi-org.dml.regis.edu/10.1037/a0025163</a>

- Caldwell, H., & Lauderdale, S. A. (2018). Public stigma for men and women veterans with combat-related posttraumatic stress disorder. Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues. <a href="https://doi-org.dml.regis.edu/10.1007/s12144-018-9940-5">https://doi-org.dml.regis.edu/10.1007/s12144-018-9940-5</a>
- Creighton, G., Oliffe, J. L., Butterwick, S., & Saewyc, E. (2013). After the death of a friend: Young men's grief and masculine identities. Social Science & Medicine, 84, 35–43. <a href="https://doi-org.dml.regis.edu/10.1016/j.socscimed.2013.02.022">https://doi-org.dml.regis.edu/10.1016/j.socscimed.2013.02.022</a>
- de Brito Guzzo Soliani, F. C., Cabbia, R., Kümpel, V. D., Batistela, M. F., Almeida, A. G., Yamauchi, L., Jr., & Spera de Andrade, T. G. C. (2018). Unpredictable chronic prenatal stress and manifestation of generalized anxiety and panic in rat's offspring. Progress in Neuro-Psychopharmacology & Biological Psychiatry, 85, 89–97. https://doi.org/10.1016/j.pnpbp.2018.03.005
- Deal, A. L., Erickson, K. J., Shiers, S. I., & Burman, M. A. (2016). Limbic system development underlies the emergence of classical fear conditioning during the third and fourth weeks of life in the rat. Behavioral Neuroscience, 130(2), 212–230. <a href="https://doi-org.dml.regis.edu/10.1037/bne0000130">https://doi-org.dml.regis.edu/10.1037/bne0000130</a>
- Doyle, J. R., & Yamamoto, B. K. (2010). Serotonin 2 receptor modulation of hyperthermia, corticosterone, and hippocampal serotonin depletions following serial exposure to chronic stress and methamphetamine.

  Psychoneuroendocrinology, 35(4), 629–633.

  <a href="https://doi.org/10.1016/j.psyneuen.2009.10.001">https://doi.org/10.1016/j.psyneuen.2009.10.001</a>

- DSM-5 Criteria for PTSD. (2018, March). Retrieved from https://www.brainline.org/article/dsm-5-criteria-ptsd
- Du, N., Zhou, P., SiTu, M., Zhu, C., & Huang, Y. (2019). Post-traumatic stress disorder and depression symptoms of adolescents survived from a seriously-hit area in China: A 3-year follow-up study. Psychiatry Research, 273, 288–295. <a href="https://doiorg.dml.regis.edu/10.1016/j.psychres.2019.01.063">https://doiorg.dml.regis.edu/10.1016/j.psychres.2019.01.063</a>
- Feature: Post Traumatic Stress Disorder PTSD: A Growing Epidemic / Neuroscience and PTSD Treatments | NIH MedlinePlus the Magazine. (2009). Retrieved from https://medlineplus.gov/magazine/issues/winter09/articles/winter09pg10-14.html
- Ferrero, D. M., Lemon, J. K., Fluegge, D., Pashkovski, S. L., Korzan, W. J., Datta, S. R., ... Liberles, S. D. (2011). Detection and avoidance of a carnivore odor by prey.

  PNAS Proceedings of the National Academy of Sciences of the United States of America, 108(27), 11235–11240. <a href="https://doi-org.dml.regis.edu/10.1073/pnas.1103317108">https://doi-org.dml.regis.edu/10.1073/pnas.1103317108</a>
- Fowler, R. (2010). Courage under fire: Defining and understanding the act. The Canadian Army Journal, 13, 37–49.
- Fox, J., & Pease, B. (2012). Military deployment, masculinity and trauma: Reviewing the connections. The Journal of Men's Studies, 20, 16–31. 10.3149/jms.2001.16
- Friedman, M. J., Schnurr, P. P., & Mcdonagh-Coyle, A. (1994). Post-traumatic stress disorder in the military veteran. Psychiatric Clinics of North America, 17(2), 265-277. doi:10.1016/s0193-953x(18)30113-8

- Griebel, G., Moreau, J.-L., Jenck, F., Misslin, R., & Martin, J. R. (1994). Acute and chronic treatment with 5-HT reuptake inhibitors differentially modulate emotional responses in anxiety models in rodents. Psychopharmacology, 113(3–4), 463–470. https://doi-org.dml.regis.edu/10.1007/BF02245224
- Grillon, C., Pine, D. S., Lissek, S., Rabin, S., Bonne, O., & Vythilingam, M. (2009).

  Increased anxiety during anticipation of unpredictable aversive stimuli in posttraumatic stress disorder but not in generalized anxiety disorder. Biological Psychiatry, 66(1), 47–53. <a href="https://doi.org/10.1016/j.biopsych.2008.12.028">https://doi.org/10.1016/j.biopsych.2008.12.028</a>
- Haile, C. N., GrandPre, T., & Kosten, T. A. (2001). Chronic unpredictable stress, but not chronic predictable stress, enhances the sensitivity to the behavioral effects of cocaine in rats. Psychopharmacology, 154(2), 213–220.
  <a href="https://doi.org/10.1007/s002130000650">https://doi.org/10.1007/s002130000650</a>
- Hale, H. C. (2012). The role of practice in the development of military masculinities.

  Gender, Work and Organization, 19, 699–722. 10.1111/j.14680432.2010.00542.x
- Havranek, M. M., Bolliger, B., Roos, S., Pryce, C. R., Quednow, B. B., & Seifritz, E. (2016). Uncontrollable and unpredictable stress interacts with subclinical depression and anxiety scores in determining anxiety response. Stress: The International Journal on the Biology of Stress, 19(1), 53–62. <a href="https://doi.org/10.3109/10253890.2015.1117449">https://doi.org/10.3109/10253890.2015.1117449</a>

- Hefner, K. R., Starr, M. J., & Curtin, J. J. (2018). Heavy marijuana use but not deprivation is associated with increased stressor reactivity. Journal of Abnormal Psychology, 127(4), 348–358. https://doi.org/10.1037/abn0000344
- Hickey, C. (2008). Physical education, sport and hyper-masculinity in schools. Sport, Education and Society, 13(2), 147–161. <a href="https://doi-org.dml.regis.edu/10.1080/13573320801957061">https://doi-org.dml.regis.edu/10.1080/13573320801957061</a>
- Hoffman, A. N., Lorson, N. G., Sanabria, F., Foster Olive, M., & Conrad, C. D. (2014).

  Chronic stress disrupts fear extinction and enhances amygdala and hippocampal

  Fos expression in an animal model of post-traumatic stress disorder.

  Neurobiology of Learning and Memory, 112, 139–147. <a href="https://doi-org.dml.regis.edu/10.1016/j.nlm.2014.01.018">https://doi-org.dml.regis.edu/10.1016/j.nlm.2014.01.018</a>
- Jones, M., Sundin, J., Goodwin, L., Hull, L., Fear, N. T., Wessely, S., & Rona, R. J. (2013). What explains post-traumatic stress disorder (PTSD) in UK service personnel: Deployment or something else? Psychological Medicine, 43(8), 1703–1712. https://doi-org.dml.regis.edu/10.1017/S0033291712002619
- Keats, P. A. (2010). Soldiers working internationally: Impacts of masculinity, military culture, and operational stress on cross-cultural adaptation. International Journal for the Advancement of Counselling, 32(4), 290–303. <a href="https://doi-org.dml.regis.edu/10.1007/s10447-010-9107-z">https://doi-org.dml.regis.edu/10.1007/s10447-010-9107-z</a>
- Kniss, J. R. (2012). "Propranolol: a Treatment for Posttraumatic Stress Disorder (Ptsd) Or a Breach in Neuroethics?". All Regis University Theses. 571.
  <a href="https://epublications.regis.edu/theses/571">https://epublications.regis.edu/theses/571</a>

- Lesesne, C. A., Rasberry, C. N., Kroupa, E., Topete, P., Carver, L. H., Morris, E., & Robin, L. (2015). Communicating with school staff about sexual identity, health and safety: An exploratory study of the experiences and preferences of Black and Latino teen young men who have sex with men. LGBT Health, 2(3), 258–264. https://doi-org.dml.regis.edu/10.1089/lgbt.2014.0087
- Martin, S. (2016). 'How can you be strong all the time?' Discourses of stoicism in the first counselling session of young male clients. Counselling & Psychotherapy Research, 16(2), 100–108. Retrieved from <a href="http://dml.regis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true">http://dml.regis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true</a> &db=psyh&AN=2016-53201-003&site=ehost-live&scope=site
- Martin, R. L., Bauer, B. W., Ramsey, K. L., Green, B. A., Capron, D. W., & Anestis, M. D. (2018). How distress tolerance mediates the relationship between posttraumatic stress disorder and the interpersonal theory of suicide constructs in a uS Military sample. Suicide and Life-Threatening Behavior. <a href="https://doiorg.dml.regis.edu/10.1111/sltb.12523">https://doiorg.dml.regis.edu/10.1111/sltb.12523</a>
- Moench, K. M., Maroun, M., Kavushansky, A., & Wellman, C. (2016). Alterations in neuronal morphology in infralimbic cortex predict resistance to fear extinction following acute stress. Neurobiology of Stress, 3, 23–33. <a href="https://doiorg.dml.regis.edu/10.1016/j.ynstr.2015.12.002">https://doiorg.dml.regis.edu/10.1016/j.ynstr.2015.12.002</a>
- Moore, A., Grime, J., Campbell, P., & Richardson, J. (2013). Troubling stoicism:

  Sociocultural influences and applications to health and illness behaviour. Health:

An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine, 17(2), 159–173. <a href="https://doi-org.dml.regis.edu/10.1177/1363459312451179">https://doi-org.dml.regis.edu/10.1177/1363459312451179</a>
Oxford English Dictionary: stoic. (n.d.) Retrieved from <a href="http://www.oed.com.dml.regis.edu/view/Entry/190673?redirectedFrom=stoic+&">http://www.oed.com.dml.regis.edu/view/Entry/190673?redirectedFrom=stoic+&</a>

- Oxford English Dictionary: Stoicism. (n.d.). Retrieved from <a href="http://www.oed.com.dml.regis.edu/view/Entry/190681?redirectedFrom=stoicism#">http://www.oed.com.dml.regis.edu/view/Entry/190681?redirectedFrom=stoicism#</a> eid
- Paduraiu, M., Antioch, I., Balmus,m Ciobica, A., El-Lethey, H., & Kamel, M. (2017).

  Describing some behavioural animal models of anxiety and their mechanistics with special reference to oxidative stress and oxytocin relevance. International Journal of Veterinary Science Medicine, 5(2), 98-104.

  <a href="https://doi.org/10.1016/j.ijvsm.2017.08.003">https://doi.org/10.1016/j.ijvsm.2017.08.003</a>
- Pai, A., Suris, A., & North, C. (2017). Posttraumatic stress disorder in the *DSM-5*:

  Controversy, change, and conceptual differences. Behavioral Sciences, 7.

  https://doi.org/10.3390/bs7010007
- Peters, S., Slattery, D. A., Flor, P. J., Neumann, I. D., & Reber, S. O. (2013). Differential effects of baclofen and oxytocin on the increased ethanol consumption following chronic psychosocial stress in mice. Addiction Biology, 18(1), 66–77.

  <a href="https://doi.org/10.1111/adb.12001">https://doi.org/10.1111/adb.12001</a></a>
- Pigliucci, M. (n.d.). Stoicism. Retrieved from <a href="https://www.iep.utm.edu/stoicism/">https://www.iep.utm.edu/stoicism/</a>
- Ponce de León, B., Andersen, S., Karstoft, K.-I., & Elklit, A. (2018). Pre-deployment dissociation and personality as risk factors for post-deployment post-traumatic

stress disorder in Danish soldiers deployed to Afghanistan. European Journal of Psychotraumatology, 9(1). <a href="https://doi-org.dml.regis.edu/10.1080/20008198.2018.1443672">https://doi-org.dml.regis.edu/10.1080/20008198.2018.1443672</a>

- Post Traumatic Stress Disorder Fact Sheet. (n.d.). Retrieved from <a href="https://www.sidran.org/resources/for-survivors-and-loved-ones/post-traumatic-stress-disorder-fact-sheet/">https://www.sidran.org/resources/for-survivors-and-loved-ones/post-traumatic-stress-disorder-fact-sheet/</a>
- PTSD Statistics. (n.d.). Retrieved from http://www.ptsdunited.org/ptsd-statistics-2/
- Reigeluth, C. S., Pollastri, A. R., Cardemil, E. V., & Addis, M. E. (2016). "Mad scared" versus "I was sad": Emotional expression and response in urban adolescent males.

  Journal of Adolescence, 49, 232–243. <a href="https://doi-org.dml.regis.edu/10.1016/j.adolescence.2016.03.004">https://doi-org.dml.regis.edu/10.1016/j.adolescence.2016.03.004</a>
- Robinson, S., Christ, C. C., Cahill, M. M., Aldrich, S. J., & Taylor-Yeremeeva, E. (2019).

  Voluntary exercise or systemic propranolol ameliorates stress-related maladaptive behaviors in female rats. Physiology & Behavior, 198, 120–133. <a href="https://doiorg.dml.regis.edu/10.1016/j.physbeh.2018.10.012">https://doiorg.dml.regis.edu/10.1016/j.physbeh.2018.10.012</a>
- Rock, E. M., Limebeer, C. L., Petrie, G. N., Williams, L. A., Mechoulam, R., & Parker, L. A. (2017). Effect of prior foot shock stress and Δ^9^-tetrahydrocannabinol, cannabidiolic acid, and cannabidiol on anxiety-like responding in the light-dark emergence test in rats. Psychopharmacology, 234(14), 2207–2217. <a href="https://doiorg.dml.regis.edu/10.1007/s00213-017-4626-510">https://doiorg.dml.regis.edu/10.1007/s00213-017-4626-510</a>
- Sedley, D. (2003) The School, from Zeno to Arius Didymus. In: B. Inwood (ed.) The Cambridge Companion to the Stoics. Cambridge University Press.

- Seligman, M. E., & Meyer, B. (1970). Chronic fear and ulcers in rats as a function of the unpredictability of safety. Journal of Comparative and Physiological Psychology, 73(2), 202–207. https://doi.org/10.1037/h0030219
- Shane III, L. (2018). VA: Suicide rate for younger veterans increased by more than 10 percent. Retrieved from <a href="https://www.militarytimes.com/news/pentagon-congress/2018/09/26/suicide-rate-spikes-among-younger-veterans/">https://www.militarytimes.com/news/pentagon-congress/2018/09/26/suicide-rate-spikes-among-younger-veterans/</a>
- Shields, D. M., Kuhl, D., & Westwood, M. J. (2017). Abject masculinity and the military:

  Articulating a fulcrum of struggle and change. Psychology of Men & Masculinity,

  18(3), 215–225. <a href="https://doi-org.dml.regis.edu/10.1037/men0000114">https://doi-org.dml.regis.edu/10.1037/men0000114</a>

  Smith, C. N., Clark, R. E., Manns, J. R., & Squire, L. R. (2005). Acquisition of

  Differential Delay Eyeblink Classical Conditioning Is Independent of Awareness.

  Behavioral Neuroscience, 119(1), 78–86. <a href="https://doi-org.dml.regis.edu/10.1037/0735-7044.119.1.78">https://doi-org.dml.regis.edu/10.1037/0735-7044.119.1.78</a>
  - Steele, M., Germain, A., & Campbell, J. S. (2017). Mediation and moderation of the relationship between combat experiences and post-traumatic stress symptoms in active duty military personnel. Military Medicine, 182(5), e1632–e1639. https://doi-org.dml.regis.edu/10.7205/MILMED-D-16-00169
- Steenbergen, H. L., Heinsbroek, R. P., Van Hest, A., & Van de Poll, N. E. (1990). Sex-dependent effects of inescapable shock administration on shuttlebox-escape performance and elevated plus-maze behavior. Physiology &Behavior, 48(4), 571–576. <a href="https://doi-org.dml.regis.edu/10.1016/0031-9384(90)90302-K">https://doi-org.dml.regis.edu/10.1016/0031-9384(90)90302-K</a>

- Sterling, A. G., IV, Bakalar, J. L., Perera, K. U., DeYoung, K. A., Harrington-LaMorie, J., Haigney, D., & Ghahramanlou-Holloway, M. (2017). Perspectives of suicide bereaved individuals on military suicide decedents' life stressors and male gender role stress. Archives of Suicide Research, 21(1), 155–168. <a href="https://doiorg.dml.regis.edu/10.1080/13811118.2016.1166087">https://doiorg.dml.regis.edu/10.1080/13811118.2016.1166087</a>
- Taurino, A., Vergatti, L. V., Colavitto, M. T., Bastianoni, P., Godelli, S., & Del Castello, E. (2012). I minori stranieri non accompagnati tra trauma e riparazione Uno studio su disturbo post-traumatico da stress, ansia, depressione e tendenze dissociative in giovani migranti residenti in comunità = The unaccompanied foreign minors between trauma and repair interventions A study on post-traumatic stress disorder, anxiety, depression and dissociative tendencies in young migrants living in community health centers. Infanzia e Adolescenza, 11(1), 47–64.

http://dml.regis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true &db=psyh&AN=2012-11791-005&site=ehost-live&scope=site

- Technical training. (n.d.). Retrieved from <a href="https://www.airforce.com/education/technical-training">https://www.airforce.com/education/technical-training</a>
- Treit, D., Pesold, C., & Rotzinger, S. (1993). Dissociating the anti-fear effects of septal and amygdaloid lesions using two pharmacologically validated models of rat anxiety. Behavioral Neuroscience, 107(5), 770–785. <a href="https://doiorg.dml.regis.edu/10.1037/0735-7044.107.5.770">https://doiorg.dml.regis.edu/10.1037/0735-7044.107.5.770</a>

- US Census Bureau. (2018, August 03). Newsroom. Retrieved from https://www.census.gov/newsroom/facts-for-features/2017/veterans-day.html
- van der Kolk, B., McFarlane, A. C., & Weisaeth, L. (2007). Traumatic stress: The effects of overwhelming experience on mind, body, and society. New York, NY:

  Guilford Press.
- White, M.J. (2003) Stoic natural philosophy. In: B. Inwood (ed.) The Cambridge Companion to the Stoics. Cambridge University Press.
- White, N. M., & Legree, P. (1984). Effect of posttraining exposure to an aversive stimulus on retention. Physiological Psychology, 12(3), 233–236. <a href="https://doi-org.dml.regis.edu/10.3758/BF03332196">https://doi-org.dml.regis.edu/10.3758/BF03332196</a>
  Wood, D. B. (2016). What have we done: The moral injury of our longest wars.

New York: Little, Brown and Company.

- Wood, K. H., Wheelock, M. D., Shumen, J. R., Bowen, K. H., Ver Hoef, L. W., & Knight, D. C. (2015). Controllability modulates the neural response to predictable but not unpredictable threat in humans. NeuroImage, 119, 371–381.
  <a href="https://doi.org/10.1016/j.neuroimage.2015.06.086">https://doi.org/10.1016/j.neuroimage.2015.06.086</a>
- Zangrossi, H., & File, S. E. (1992). Behavioral consequences in animal tests of anxiety and exploration of exposure to cat odor. Brain Research Bulletin, 29(3–4), 381–388. https://doi-org.dml.regis.edu/10.1016/0361-9230(92)90072-6
- Zimmermann, A., Stauffacher, M., Langhans, W., & Würbel, H. (2001). Enrichment-dependent differences in novelty exploration in rats can be explained by

# HONORS THESIS

habituation. Behavioural Brain Research, 121(1-2), 11-20. https://doi-

 $\underline{org.dml.regis.edu/10.1016/S0166\text{-}4328(00)00377\text{-}6}$