

August 2020

## Gender Role Conflict, Emotion Regulation, and PTSD Symptom Severity in Acutely Injured Trauma Survivors

Katelyn Elaine Heyrman  
*University of Wisconsin-Milwaukee*

Follow this and additional works at: <https://dc.uwm.edu/etd>



Part of the [Cognitive Psychology Commons](#)

---

### Recommended Citation

Heyrman, Katelyn Elaine, "Gender Role Conflict, Emotion Regulation, and PTSD Symptom Severity in Acutely Injured Trauma Survivors" (2020). *Theses and Dissertations*. 2520.  
<https://dc.uwm.edu/etd/2520>

This Dissertation is brought to you for free and open access by UWM Digital Commons. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of UWM Digital Commons. For more information, please contact [open-access@uwm.edu](mailto:open-access@uwm.edu).

GENDER ROLE CONFLICT, EMOTION REGULATION, AND PTSD SYMPTOM  
SEVERITY IN ACUTELY INJURED TRAUMA SURVIVORS

by

Katelyn Heyrman

A Dissertation Submitted in  
Partial Fulfillment of the  
Requirements for the Degree of

Doctor of Philosophy  
in Educational Psychology

at

The University of Wisconsin-Milwaukee

August 2020

## ABSTRACT

### GENDER ROLE CONFLICT, EMOTION REGULATION, AND PTSD SYMPTOM SEVERITY IN ACUTELY INJURED TRAUMA SURVIVORS

by

Katelyn Heyrman

The University of Wisconsin-Milwaukee, 2020  
Under the Supervision of Professor Stephen Wester

Within the acutely injured population, men are at an increased risk for trauma exposure and hospitalization. Previous literature has suggested that emotional dysregulation and masculine gender roles are associated with psychological distress and maintenance of PTSD symptoms. Despite these findings, researchers have focused their attention on masculine gender roles within the Veteran and college populations. The current study aimed to assess the Gender Role Conflict within the acutely injured population and determine if emotion regulation strategy moderated the relationship between masculine gender roles and PTSD symptom severity. Participants consisted of 90 traumatically injured, cisgender males ( $M_{age} = 44.88$  years; 60% White) who were recruited from a large Midwest Level 1 Trauma Center. Findings suggest a significant positive association between Conflict Between Work and Family (CBWFR) and PTSD symptom severity ( $p = .001$ ) and Restricted Emotionality (RE) and PTSD symptom severity ( $p = .040$ ). Despite these significant associations, emotion regulation did not significantly moderate the relationship between Gender Role Conflict and PTSD symptom severity. Results and treatment implications are discussed.

© Copyright by Katelyn Heyrman, 2020  
All Rights Reserved

To  
my husband, Nick  
my parents, Peter and Mary  
and my sister, Melissa.

Thank you for always believing in me and  
supporting me throughout this journey.

## TABLE OF CONTENTS

LIST OF FIGURES.....	vi
LIST OF TABLES.....	vii
ACKNOWLEDGEMENTS.....	ix
CHAPTER ONE: INTRODUCTION .....	1
Problem Statement.....	6
Purpose of the Study.....	7
CHAPTER TWO: LITERATURE REVIEW.....	9
Gender Role.....	10
Emotion Regulation.....	19
Posttraumatic Stress Disorder (PTSD).....	26
Significance of the Study.....	30
Professional Relevance.....	31
CHAPTER THREE: METHODS.....	32
Problem.....	32
Purpose.....	33
Aim 1.....	34
Aim 2.....	35
Research Design.....	37
Participants.....	37
Procedure.....	38
Measures.....	41
CHAPTER FOUR: RESULTS.....	45
Statistical Analyses.....	45
Hypotheses.....	47
Post-hoc Analyses.....	52
CHAPTER FIVE: DISCUSSION.....	53
Interpretations.....	55
Limitations.....	60
Strengths.....	63
Future Directions.....	65
Conclusion.....	67
REFERENCES.....	69
APPENDICES.....	96
CURRICULUM VITAE.....	101

## LIST OF FIGURES

Figure 1. Hypothesized Success, Power, and Competition and Cognitive Reappraisal Moderation Model for Question 2.....	80
Figure 2. Hypothesized Success, Power, and Competition and Expressive Suppression Moderation Model for Question 2.....	81
Figure 3. Hypothesized Restricted Emotionality and Cognitive Reappraisal Moderation Model for Question 2.....	82
Figure 4. Hypothesized Restricted Emotionality and Expressive Suppression Moderation Model for Question 2.....	83
Figure 5. Hypothesized Restricted Affectionate Behavior Between Men and Cognitive Reappraisal Moderation Model for Question 2.....	84
Figure 6. Hypothesized Restricted Affectionate Behavior Between Men and Expressive Suppression Moderation Model for Question 2.....	85
Figure 7. Hypothesized Conflicts Between Work and Family Relations and Cognitive Reappraisal Moderation Model for Question 2.....	86
Figure 8. Hypothesized Conflicts Between Work and Family Relations and Expressive Suppression Moderation Model for Question 2.....	87
Figure 9. Cognitive Reappraisal on Conflicts Between Work and Family Relations and PTSD Symptom Severity.....	88
Figure 10. Cognitive Reappraisal on Success Power and Competition and PTSD Symptom Severity.....	89
Figure 11. Cognitive Reappraisal on Restricted Affectionate Behavior Between Men and PTSD Symptom Severity.....	90
Figure 12. Cognitive Reappraisal on Restricted Emotionality and PTSD Symptom Severity.....	91
Figure 13. Expressive Suppression on Conflicts Between Work and Family Relations and PTSD Symptom Severity.....	92
Figure 14. Expressive Suppression on Success Power and Competition and PTSD Symptom Severity.....	93

Figure 15. Expressive Suppression on Restricted Affectionate Behavior Between Men  
and PTSD Symptom Severity.....94

Figure 16. Expressive Suppression on Restricted Emotionality and PTSD  
Symptom Severity.....95



## LIST OF TABLES

Table 1. Unstandardized Multiple Linear Regression: GRC and Cognitive Reappraisal on PTSD severity.....	50
Table 2. Unstandardized Multiple Linear Regression: GRC and Expressive Suppression on PTSD severity.....	52

## ACKNOWLEDGEMENTS

First, I would like to thank my advisor, Dr. Stephen Wester for all his help and support with this project. Second to Dr. Terri deRoos-Cassini, thank you for your mentorship throughout my clinical and research training. I am incredibly grateful to you and thrilled to be able to continue on with these practices throughout my career. Additionally, I would like to thank Dr. Razia Azen and Dr. Marty Sapp for all their help with this project.

Further, I would like to thank my classmate, Jamie Zalasin for all her help and support throughout my graduate training. I would have never gotten through doctoral school without you. To my husband, Nick thank you for all the sacrifices you have made to help make my dreams come true. You have been my biggest support and I could have never done this without you. To my parents, Peter and Mary thank you for your unconditional love and believing in me. Despite challenges, you both have always believed in me and have encouraged me to persevere regardless of the obstacles. To my sister, Melissa thank you for your endless phone calls, care packages, and visits. You have made me feel so supported and have had my back throughout this whole process. Brooklyn, Tom, and Fina thank you all for your love. Finally, to my best friend, Nicole thank you for your support and encouragement. I am so grateful to each and every one of you.

## **Chapter 1**

### **Introduction**

Trauma exposure can have a significant impact on an individual's physical and psychological functioning. According to the National Comorbidity Survey, over half of the United States population has experienced a traumatic event (Kessler et al., 1995). Of these individuals, 3.7% will go on to develop posttraumatic stress disorder (PTSD) (American Psychological Association, 2013). The prevalence rate of PTSD significantly increases in acute care setting (O'Donnell, Creamer, Pattison, & Atkin, 2004). Approximately 10% of individuals that present to acute care settings and emergency departments will go on to develop PTSD (O'Donnell, Creamer, Pattison, & Atkin, 2004). In both the general population and acute care settings, men are more likely to experience a traumatic event and their injuries are more likely to require hospitalization (Kessler et al., 1995; Powers et al., 2014; Ramstad, Russo, & Zatzick, 2004).

Type of trauma can have a significant impact on the development of PTSD symptoms (deRoon-Cassini, Mancini, Rush, & Bonanno, 2010; Ramstad, Russo, & Zatzick, 2004). In acute care settings, men are more likely to experience intentional traumas, such as assaults, gunshot wounds, and stabbings. In addition, the interpersonal nature of these traumas increases the risk of developing PTSD (Ramstad, Russo, and Zatzick, 2004). Intentional traumas often require hospitalization, which not only impacts the individual's psychological health but also their physical health. Researchers have concluded that physical injury after a traumatic event complicates the recovery and increases the risk in developing PTSD (Verger et al., 2004). As a result, men that present to acute care setting following a traumatic injury are at an increased risk for developing PTSD (Powers et al., 2014; Ramstad, Russo, & Zatzick, 2004).

It is possible that men face double jeopardy; Men are more likely to experience a traumatic event and they are more likely to exhibit psychological distress as a result of their socialized gender roles (Blazina and Watkins, 1996; Kessler et al., 1995; O'Neil, 1982; Wester, Fowell Christianson. Vogal, & Wei, 2007). In Western culture, men are encouraged to exhibit strong, aggressive, and independent traits, along with limited emotional expression (O'Neil, 1982). Although society encourages these rigid gender roles, adherence to them is often unattainable. As a result, men often behave in a manner that contradicts these gender roles, which results in psychological distress. One theory that conceptualizes this psychological distress, from a discrepancy between masculine gender roles and behavior, is the Gender Role Conflict theory (GRC). The GRC theory suggests that psychological distress arises from conflict between gender role expectations and behavior (O'Neil, 1982). For example, men are encouraged to be strong and aggressive; however when they experience a traumatic event they may feel vulnerable, which in turn conflicts with these socialized gender roles. It is possible that this conflict between gender roles and behavior exacerbates mental health symptoms after trauma exposure.

In addition to encouraging strength, independence, and aggressiveness, men are also encouraged to limit their emotional expression (O'Neil, 1982). This is a concern because emotions are an important part of human functioning and survival (Szezygiel & Maruszewski, 2015). One primary function of emotions is to adapt to environmental demands through emotion regulation (Richards & Gross, 2000; Szezygiel & Maruszewski, 2015). Koole (2009) defines emotion regulation as an individual's attempt to manage their own emotional states. Emotion regulation is an important component to survival; however, dysregulation can have a negative

impact on overall well-being (Schlatter & Cameron, 2010; Richards & Gross, 2006; Meyer, Smeets, Giesbrecht, & Merckelbach, 2012; Hoyt, 2009).

Several theorists have hypothesized the process in which individuals regulate their emotions. Gross (2001) proposed A Process Model of Emotion Regulation. The Process Model of Emotion Regulation suggests that emotions develop as a result of salient stimuli which in turn trigger an experiential, behavioral, or physiological response. These responses are then adapted through emotion regulation techniques. Two main strategies for emotion regulation are cognitive reappraisal and expressive suppression. Cognitive reappraisal is defined as reevaluating the emotionally eliciting stimuli through cognitive methods, which in turn decreases emotional intensity. For example, an individual may be stuck in traffic and think “I am going to be late for work” which then elicits the emotion anger. After cognitively reappraising the situation, the individual then may think “Well at least I didn’t get in a car accident and my boss will understand if I am late”. As a result, changing the thought through cognitive reappraisal will likely reduce the intensity of the emotion or elicit a pleasant emotion, such as gratitude.

The second main emotion regulation technique is expressive suppression. Expressive suppression is defined as inhibiting emotionally expressive behavior (Gross, 2001). In contrast to cognitive reappraisal, expressive suppression does not change the emotion. Instead expressive suppression inhibits the expression of the emotion. For example, an individual may get cut off in traffic. Instead of expressing anger or cognitively reappraising the situation, the individual suppresses the expression of the emotion and maintain a calm expression. Expressive suppression is considered to be the hallmark of emotional dysregulation (Butler, Egloff, Wilhelm, Smith, & Gross, 2003). In addition, individuals that utilize emotional suppression not

only suppress negative emotions but also positive emotions which in turn impacts social relationships and overall well-being.

Although cognitive reappraisal and expressive suppression are two of the most common emotion regulation techniques, long-term expressive suppression is considered to be harmful and less effective than cognitive reappraisal (Moore, Zoellner, Niklas, 2007). Due to suppression of both negative and positive expressions, this type of emotion regulation strategy negatively impacts physiological health, psychological health, and relationships with others (Butler, Egloff, Wilhelm, Smith, & Gross, 2003; Eftekhari, Zoellner, & Vigil, 2008; Gross & Oliver, 2003). Individuals that continuously utilize expressive suppression are likely to exhibit depression, reduction in self-esteem, reduced positive emotions, an increase in negative emotions, memory impairments, and impairment in social relationships (Gross & Oliver, 2003; Richards & Gross, 1999). In contrast, individuals that continuously utilize cognitive reappraisal are more optimistic, experience more positive emotions, have closer relationships, exhibit higher levels of self-esteem, and report higher levels of overall well-being and satisfaction. In addition, they are able to repair bad moods more effectively than suppressors.

Researchers have found a significant relationship between expressive suppression and PTSD (Moore, Zoellner, & Mollenholt, 2008). Moore, Zoellner, and Mollenholt (2008) found that expressive suppression was associated with higher levels of PTSD, anxiety, and depression. In addition, expressive suppression has been associated with higher levels of arousal and stress, and appears to maintain PTSD symptoms (Roemer, Litz, Orsillo, & Wagner, 2001). This is concerning because trauma survivors attempt to cope with the traumatic event by utilizing expressive suppression (Moore, Zoellner, & Mollenholt, 2008). However, this type of emotion regulation strategy appears to have the opposite effect, thus exacerbating their symptoms and

leading to chronic PTSD (Roemer, Litz, Orsillo, & Wagner, 2001). Not only does expressive suppression exacerbate and maintain PTSD symptoms, but it also leads to other co-morbid disorders, such as depression and anxiety, which in turn complicates the recovery and treatment for PTSD (Moore, Zoellner, & Mollenholt, 2008).

Further illustrating the negative consequences of expressive suppression, researchers have found that people that recover after a traumatic event utilize emotional expression (Felus, Gillett, & Joseph, 2011). In addition, trauma survivors that cope through cognitive reappraisal experience less depression and anxiety symptoms (Moore, Zoellner, & Mollenholt, 2008). This indicates that changing one's thinking and expressing emotions improves overall quality of life and decreases depression and anxiety (Gross & Oliver, 2003; Moore, Zoellner, & Mollenholt, 2008; Richards & Gross, 1999). It is possible that utilizing cognitive reappraisal following a traumatic event improves emotion regulation and reduces the risk for developing PTSD and other psychiatric disorders (Moore, Zoellner, & Mollenholt, 2008).

One concerning finding is that men are more likely to regulate their emotions through expressive suppression (Gross & Oliver, 2003). This finding is concerning because research has demonstrated that expressive suppression is associated with poorer outcomes (Gross & Oliver, 2003; Moore, Zoellner, & Mollenholt, 2008; Richards & Gross, 1999). In addition, previous research suggests that men are at an increased risk for developing PTSD due to the type of trauma that men typically experience (Powers et al., 2014; Ramstad, Russo, & Zatzick, 2004; Verger et al., 2004). All of this is concerning since Western society encourages men to adhere to rigid gender roles, which is known to cause conflict and psychological distress (O'Neil, 1982). It is possible that after a traumatic event men are socialized to cope with their emotions through expressive suppression, which in turn exacerbates PTSD symptoms (O'Neil, 1982; Roemer, Litz,

Orsillo, & Wagner, 2001). On the contrary, it is possible that men who do not adhere to traditional masculine gender norms are able to regulate their emotions through cognitive reappraisal, which in turn reduces the risk for PTSD and improves outcomes (Gross & Oliver, 2003; Moore, Zoellner, & Mollenholt, 2008; O'Neil, 1982; Richards & Gross, 1999).

### **Problem Statement**

Previous literature suggests mixed findings on the relationship between the male gender role and PTSD symptoms (Garcia, Finley, Lorber, & Jakupcak, 2011; Jakupcak, Blais, Grossbard, Garcia, & Okiishi, 2014; Jakupcak, Osborne, Michael, Cook, & McFall, 2006; McDermott, Tull, Soenke, Jakupcak, & Gratz 2010) One reason these findings have been inconsistent is because researchers have assessed the subscription to male gender ideologies rather than the GRC (Garcia, Finley, Lorber, & Jakupcak, 2011; Jakupcak, Osborne, Michael, Cook, & McFall, 2006). A primary difference between the GRC and subscription to traditional masculine ideologies is the negative consequences that occur as a result of these socialized gender roles (O'Neil, 1982). The GRC suggests that conflict arises from unattainable gender norms that impacts men's thoughts, feelings, and behaviors, which results in psychological distress. Another potential reason for these inconsistent findings is that previous research has assessed ideology rather than the behavioral manifestation of these beliefs (Garcia, Finley, Lorber, & Jakupcak, 2011; Jakupcak, Osborne, Michael, Cook, & McFall, 2006). In essence, the research has tested male attitudes on PTSD rather than the behavioral consequences of these attitudes. It may be the case that GRC on PTSD is solely dependent on the level of emotion regulation behaviors, such as expressive suppression and cognitive reappraisal; we call this moderation.



Another limitation to these studies is that they have primarily focused on the veteran population rather than on acutely injured trauma survivors (Garcia, Finley, Lorber, & Jakupcak, 2011; Jakupcak, Osborne, Michael, Cook, & McFall, 2006; Jakupcak, Blais, Grossbard, Garcia, & Okiishi, 2014). Acutely injured trauma survivors are at an increased risk for developing PTSD since they are more likely to experience intentional traumas and are more likely to require hospitalization as a result of their injuries (Ramstad, Russo, and Zatzick, 2004). To date, there have been no studies assessing the relationship between the GRC and PTSD symptom severity in acute care settings. Since trauma exposure is three times higher in acute care settings and men are at an increased risk for developing PTSD, it is important to examine and clarify the relationship between GRC, emotion regulation, and PTSD symptoms in this population.

### **Purpose of the Study**

This study will examine the relationship between the GRC, emotion regulation strategies, and PTSD symptom severity in acutely injured trauma survivors. This study aims to determine the relationship between the four subscales of the GRCS-SF (Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; and Conflicts Between Work and Family Relations) and PTSD symptom severity (PCL-5) in male trauma survivors. In addition, this study aims to determine if the type of emotion regulation strategy (ERQ) moderates the relationship between the four subscales of the GRCS-SF and PTSD (PCL-5) symptom severity.

This study attempts to answer the following questions: (1-4) Is there a significant relationship between each of the individual subscales of the GRCS-SF (Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; Conflicts Between Work and Family Relations) and the PCL-5 in male trauma survivors? (5-8) Does

emotion regulation (ERQ) moderate the association between the individual GRCS-SF subscales (Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; Conflicts Between Work and Family Relations) and PTSD symptom severity (PCL-5) in male trauma survivors?

It is hypothesized that each of the four subscales of the GRCS-SF (Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; and Conflicts Between Work and Family Relations) will be positively correlated with the PTSD symptom severity (PCL-5) in male trauma survivors. It is further hypothesized that the cognitive reappraisal subscale of the ERQ will predict PTSD symptom severity (PCL-5) via a significant buffering interaction with each of the independent subscales of the GRCS-SF (Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; and Conflicts Between Work and Family Relations) while controlling for the main effects of both emotion regulation (ERQ) and the four independent subscales of the GRCS-SF. (9-12) It is also hypothesized that the expressive suppression subscale of the ERQ will predict PTSD symptom severity (PCL-5) via a significant enhancing interaction with each of the independent subscales of the GRCS-SF (Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; and Conflicts Between Work and Family Relations) while controlling for the main effects of both emotion regulation (ERQ) and the four independent subscales of the GRCS-SF.

## Chapter 2

### Literature Review

Over 5.2 million people in the United States have a diagnosis of PTSD (American Psychological Association, 2013). In acute care settings, the prevalence rate of PTSD is three times higher than the general population (O'Donnell, Creamer, Pattison, & Atkin, 2004). In both the general population and acute care settings, men are more likely to experience a traumatic event and be hospitalized as a result of their injuries (Kessler et al., 1995; Powers et al., 2014; Ramstad, Russo, & Zatzick, 2004). This is concerning because these traumatic events are more likely to be interpersonal, such as, assaults, gunshot wounds, and stabbings (deRoos-Cassini, Mancini, Rush, & Bonanno, 2010; Ramstad, Russo, & Zatzick, 2004). Several studies have identified interpersonal trauma and hospitalization as significant risk factors in developing PTSD (deRoos-Cassini, Mancini, Rush, & Bonanno, 2010; Ramstad, Russo, & Zatzick, 2004; Verger et al., 2004).

Although men in acute care settings are at an increased risk for developing PTSD, they are less likely to receive mental health treatment (Vogel, Wester, & Larson, 2007; Vogel, Wester, Hammer, & Downing-Matibag, 2014; Magovcevic & Addis, 2005). In addition, men are more likely to regulate their emotions through suppression, which in turn exacerbates PTSD symptoms (Hoyt, 2009; Goldsmith, Chesney, Heath, Barlow, 2013; Ehring & Ehlers, 2013; Moore, Zoellner, & Mollenholt, 2008). Finally, these individuals are likely to isolate themselves as a result of their symptoms, which in turn diminishes social support and impacts multiple areas of functioning (Ray & Vanstone, 2009).

## **Gender Role**

Identities are a central component to an individual's self-concept (Turner & Brown, 2007). One salient identity is gender identity. Gender identity is a socially constructed identity, based on which gender an individual identifies with. These identities typically emerge in childhood, however these identities can be fluid or constant, meaning that they can change or remain the same throughout a lifespan. Traditionally, western society acknowledges two main types of gender identities (Vegter, 2013). These identities include, female and male (Vegter, 2013). Although there are several gender identities, western culture has historically acknowledged this binary classification for gender.

In addition to gender identity, western culture has also developed roles or expectations based these gender identities (O'Neil, 1982). In other words, society constructs specific roles or norms on how an individual should behave, think, and feel based on an individual's gender identity; this is known as gender roles (O'Neil, 1982; Wester, Fowell Christianson, Vogel, & Wei, 2007). These gender roles are a socially constructed and often encourage unrealistic behaviors, cognitions, and emotions. In regards to men, western culture encourages masculine traits such as, toughness and aggressiveness (Levant, 2001). In addition, males are often taught that they need to be strong, aggressive, independent, and limit their emotional expression (O'Neil, 1982; Wester, Vogel, Fowell Christianson, & Wei, 2007). Although these traits may be beneficial in some situations, these continuous unobtainable expectations, can lead to psychological distress. Theorist have suggested that when an individual behaves in a way that contradicts their gender role, they experience psychological distress (O'Neil, 1982). This contradictory behavior is known as the Gender Role Conflict.

O'Neil (1982) first hypothesized the Gender Role Conflict as a discrepancy between individual's behavior and gender role, which then results in psychological distress or impairment. In other words, men receive messages from society that they should behave in a certain way. These behaviors are often unrealistic and unobtainable. As a result, when men behave in a manner that is inconsistent with their socialized gender roles, it results in psychological distress. On the contrary, when these roles are obtained they can also have a negative impact on social relationships.

Researchers have since argued that these rigid gender roles can have a negative impact on individual's psychological health, physical health, and social relationships. Good and Mintz (1990) found a significant relationship between all four subscales of the GRCS and depression. The researchers used the Gender Role Conflict Scale (GRCS-I) to measure GRC and used the Center for Epidemiological Students Depression Scale to assess for depression. In addition, when assessing attitudes towards the masculine gender roles, with the Attitudes toward Men Scale (AMS), the researchers did not find a significant relationship, indicating that conflict, not attitudes is significantly related to depression. Although this was one of the first empirical studies assessing the gender role conflict in men, the sample may not be generalizable due to the sample consisting of college aged men. In addition, based on the studies design causation cannot be determined.

Sharpe and Heppner (1991) were also interested in assessing the relationship between gender role, the gender role conflict, and psychological well-being in men. The researchers used the Gender Role Conflict Scale (GRCS) to assess for gender role conflict, the PAQ to assess sexual role orientation, the Coopersmith Self-Esteem Inventory (SEI) to assess self-esteem, the State-Trait Anxiety Inventory (STAI) to assess for anxiety, the Beck Depression Inventory (BDI)

to assess depression, and the Austin Contentment/Distress (ACD) to assess relationship satisfaction. They concluded that GRC was associated with higher rates of anxiety and depression. In addition, the researchers found that individuals that endorsed high levels of masculinity reported lower levels of self-esteem and lower levels of psychological well-being. On the contrary, GRC was not significantly associated with relationship satisfaction. Although the researchers concluded that GRC was related to lower levels of overall psychological well-being, the authors noted that these rates may be higher in older men and the sample may be a limitation to the study. In addition, causation cannot be inferred based on the study's design.

Blazina and Watkins (1996) also found that the GRC was associated with lower levels of psychological well-being and higher rates of substance use. They concluded that the subscale Success, Power, and Competition (SPC) of the GRCS was associated with higher levels of anger and higher levels of substance use. The researchers suggested that men are encouraged to utilize anger as a tool to reestablish power and control. In addition, they suggested that it is possible that men experience an increase in anger because it is the only socially acceptable emotion. In addition, they suggested that men may use this emotion as a channel to express all other emotions. In regards to alcohol, they suggested that men are socialized to see alcohol consumption as masculine, however noted that addiction and intoxication are often seen as a weakness. One limitation to this study is that the sample consisted of predominantly white, undergraduate students, which is not generalizable to the entire population. Another limitation is the substance use assessment classifies people as either dependent or not, rather than assessing substance usage. As a result, the study was assessing for dependence rather than usage.

Additionally, Korcuska and Thombs (2003) found that the GRC was associated with higher levels of alcohol consumption in men and women. They suggested that when stress from

gender role increases, men cope with by using alcohol. It is important to note that the sample consisted of undergraduate students, which may not be generalizable to the entire population. In addition, due to the sensitivity of the questions (e.g., substance use) minimization may have occurred which could have impacted the results.

Other researchers have concluded that the GRC can have a negative effect on social relationships. Good and Wood (1995) found that although all four of the subscales of the GRCS negatively impacted psychological well-being, restricted emotions was the most significant predictor of impairment in social relationships. They found that men that endorsed high levels of restricted emotions were likely to suppress them, which in turn negatively impacted their relationships. In other words, the researchers suggested that due to rigid gender roles, men are likely to suppress and restrict their emotions because society tells them that that is how they should behave. In addition, this restriction and suppression negatively impacts relationships, psychological well-being, and seeking help when needed.

Wester, Christianson, Vogel, and Wei (2007) also concluded that GRC can have a negative impact social relationships, which in turn can exacerbate psychological distress. The researchers suggested that men that endorse high levels of Restricted Emotionality (RE) and Restricted Affectionate Behavior Between Men (RABBM) are less likely to engage in social relationships, which in turn can worsen mental health symptoms. One limitation to this study is the researchers assessed GRC in college aged men, which may not be generalizable. In addition, the data did not suggest any significant psychological distress, indicating that these results may differ in a clinical population.

Researchers have also been interested in the impact of the GRC on coping and psychological distress. Hoyt (2009) was interested in assessing the relationship between

psychological distress and emotion focused coping in men with cancer. Hoyt (2009) suggested that expression of emotions is an effective coping skill in men with cancer, however he noted that men with high levels of GRC may limit their emotional expression. On the contrary, he concluded that expression of emotions can actually increase distress in certain environments. As a result, it is possible that in certain situations expression of emotions is beneficial for men, however in others it may be harmful. This is consistent with the GRC hypothesis, that when men behave in a way that contracts their masculine gender role, they experience distress. It is possible that emotional expression may be beneficial in situations that do not challenge a man's masculinity. However, it is important to note that the study did not demonstrate a significant relationship between the GRC and emotional processing.

Nguyen, Lui Hernandez, and Stinson (2012) were also interested in how the GRC can impact coping and exacerbate distress. Using the GRCS, the Problem Solving Inventory (PSI), the Attitudes Towards Seeking Professional Psychological Help Scale (ATSPPHS), and the Brief Symptom Inventory-18 (BSI-18), they concluded that higher GRCS scores were significantly associated with psychological distress. In addition, they concluded that high scores on the GRCS indicated an impairment in problem solving skills and decreased the likelihood of utilizing mental health resources. The researchers suggested that homeless men were more likely to experience GRC, which then led to negative appraisal and avoidance of treatment. They noted that the subscale RE was a significant predictor of appraisal and avoidance, which is similar in the college population. It is important to note that the assessments used in this study were not normed on the homeless population, which may have an impact on the results. In addition, the study cannot infer causation due to study's procedure. Finally, the homeless population may



experience significantly more psychological distress in comparison to the general population, which may skew the results of the study.

In addition to conflict, researchers have also been interested understanding the relationship between masculine ideologies and psychological distress. Berke, Reidy, Miller, and Zeichner, (2017) found that men that were presented with feedback that threatened their masculine ideologies, identified more aggressive words, endorsed more gender discrepancies, and endured more pain than men that were not exposed to gender threatening stimuli. In other words, when masculinity was threatened participants exhibited more aggression, distress, and endured more pain, than participants whose masculinity was not threatened. In addition, the authors concluded that the reason men only endorsed anger rather than anxiety, is because anger is a socially acceptable emotion. Although this study is one of the few empirical studies that utilized a control group, the researchers assessed ideologies rather than conflict. In other words, the researchers used the Masculine Gender Role Discrepancy Stress scale (MGRDS). Using this measure and then inferring behaviors may be a limitation. In other words, the study suggests that these ideologies increase behavioral outcomes. Although this may be the case, other measures, such as the GRCS, that assesses behavioral manifestations of these beliefs, may be a better measure.

Moore and Stuart (2004) were interested in how these ideologies can influence cognitions and emotions. Using the Masculine Gender Role Stress Scale (MGRSC), the State Anger Scale of the State-Trait Anger Expression Inventory (STAXI), the Negative Affect Schedule (NAS) of Positive and Negative Affect Schedule, the Negative Intentions Questionnaire (NIQ), the Conflict Resolution Questionnaire from the Conflict Tactics Scale (CTS) and arousal measures; The researchers concluded that when situations challenged a man's masculinity they cognitively

appraised the situation as threatening, thus producing negative emotions (e.g., anger) and behavioral outcomes such as, verbal aggression. The researchers noted that these findings are inconsistent with previous literature and note the importance of continuing to explore the relationship between masculine ideologies and cognitions.

Other researchers have been interested in understanding how these ideologies can influence PTSD symptoms. Garcia, Finley, Lorber, and Jakupcak, (2011) were interested in understanding the relationship between masculine gender norms and PTSD symptoms in OEF/OIF veterans. They used the Masculine Behaviors Scale (MBS) to assess masculine gender norms, Combat Exposure Scale (CES) to assess combat exposure, and PTSD Checklist-Military (PCL-M) to assess PTSD symptom severity. The researchers concluded that masculine gender ideologies were not significantly associated with overall PTSD symptoms, however they noted that these ideologies were related to specific symptom clusters of PTSD. For example, they found that Restrictive Emotionality, Inhibited Affection, and Exaggerated Self-Reliance and Control were associated with the avoidance symptom cluster of PTSD. In addition, they suggested that Success Dedication subscale was a significant protective factor for avoidance symptoms. In other words, certain subscales may predict PTSD, while others (e.g., Success Dedication) may be protective. Overall, the researchers suggest that men that endorse high levels of Restrictive Emotionality, Inhibited Affection, and Exaggerated Self-Reliance and Control are likely to experience distress. Although the study was a preliminary analysis, the sample size (e.g., 69) may have been too small to achieve statistical power. In addition, due to the methods, causation cannot be determined.

Jakupcak, Osborne, Michael, Cook, and McFall (2006) also conducted a study with veterans and found that masculine gender stress was related to an inability to understand

emotions and decrease in social support. In addition, they did not find a significant relationship between gender role stress and PTSD symptom severity, indicating that men who endorse high levels of gender role stress were not at an increased risk for developing PTSD. Similar to previous studies, small sample size (e.g., 53), cross sectional design, and self-report measures are limitations to this study. In addition, the sample consisted of veterans admitted to the inpatient unit at a VA medical center, which could not accurately represent the population and may be an overestimate of PTSD.

When assessing for masculine gender role stress in the civilian population, McDermott, Tull, Soenke, Jakupcak, and Gratz (2010) found that gender role stress was significantly associated with PTSD symptoms. They suggested that men that hold extreme masculine ideologies and are then exposed to a traumatic event, are at an increased risk for developing PTSD. In this study the researchers used the Clinician Administered PTSD Scale (CAPS) to assess for PTSD. This assessment differs from previous studies, in that they used a diagnostic assessment rather than a symptom severity assessment. The difference in these measures could have had an impact on these results, adding to the inconsistency in literature. For example, the CAPS and the PCL both demonstrate strong psychometric properties, however the CAPS is the preferred method when diagnosing PTSD, the PCL is the preferred method when assessing for symptom severity (Weathers, Litz, et al., 2013).

In addition to the assessments, these studies differed on their populations. For example, Garcia, Finley, Lorber, Jakupcak, (2011) and Jakupcak, Osborne, Michael, Cook, and McFall (2006) both assessed masculine gender role stress in the veteran population. However, McDermott, Tull, Soenke, Jakupcak, and Gratz (2010) assessed it in the civilian population. Cultural variables, such as military culture, may have had an impact on the results. In addition,

both Jakupcak, Osborne, Michael, Cook, and McFall, (2006) and McDermott, Tull, Soenke, Jakupcak, and Gratz (2010) both assessed masculine gender stress in higher levels of care (e.g., inpatient units and residential treatment), however their results were inconclusive. Overall the literature is inconsistent regarding masculine ideologies and PTSD. Population differences, cultural variables, and differences in assessments may contribute to these inconsistent findings. In addition, assessing for ideologies rather than conflict may also contribute to these inconsistent findings.

Although the literature has primarily focused on how masculinity can negatively impact relationships and mental health functioning, researchers have begun to assess how these gender roles can function as a protective factor. Barlow and Hetzel-Riggin (2017) were interested in how gender role adherence can facilitate growth after a traumatic event. They concluded that masculine role adherence positively predicted Posttraumatic Growth (PTG) in a college sample. In other words, masculine traits such as, risk-taking, dominance, goal orientation, and pursuit of status, can actually buffer against the negative effects of trauma and facilitate growth. Although other studies have suggested that certain masculine traits are protective against specific PTSD symptoms clusters (e.g., avoidance), a limitation to this study is assessing these beliefs in a relatively healthy population. As a result, this population may see more growth than a clinical population and may not be generalizable.

A review of the literature suggests that GRC can have a negative impact on psychological health, social relationships, and overall functioning in men (Blazina and Watkins, 1996; Good & Mintz, 1990; Good & Wood, 1995; Hoyt, 2009; Korcuska & Thombs, 2003; Nguyen, Lui Hernandez, & Stinson, 2012; Sharpe & Heppner, 1991; Wester, Vogel, Fowell Christianson, & Wei, 2007). Although the literature is sound in demonstrating the relationship between GRC and

distress, the majority of the literature is in a college population. As a result, these studies may not be generalizable to the clinical population, which is a concern since most treatments occur in this setting. In addition, the studies that assess masculinity in the clinical population are assessing ideologies rather than conflict. This is concern since the researchers are inferring the behavioral consequences of these ideologies. As a result, a measure such as, the GRCS, may better assessment tool in assessing the negative impact of these ideologies on behaviors. In addition, discrepancies in the dependent variable (e.g., PTSD) may also contribute to the inconstantly in the literature. Clarifying this relationship in a clinical population, along with using a behavioral manifestation assessment (e.g., GRCS-SF) would be beneficial.

### **Emotion Regulation**

Emotions are an essential part of human functioning (Szezygiel & Maruszewski, 2015). Emotions can be conceptualized as an affective response, to internal (e.g., thoughts) and external (e.g., environment) stimuli (Barrett, Mesquita, Ochsner, & Gross, 2007). These responses function as a way to motivate behavior, direct attention, and produce feelings. Several theorists have argued how and why we experience emotions. Although there are conflicting theories on emotions, two main ideas emerge from these theories. One idea is emotions occur as a result of physiological responses to external and internal stimuli. On the contrary, other theorists have suggested that we cognitively appraise the situation, which in turn creates a physiological and emotional responses.

Emotions can be theorized as an adaptive way to manage internal or external stimuli. However, when these responses become extreme they need to be regulated through emotion regulation strategies. Emotion regulation is defined as an attempt to change one's emotions and/or behaviors in response to emotionally provoking stimuli (Gross, 2001; Koole, 2009;

Tamir, 2009). The primary function of these emotion regulation strategies is to minimize distress, increase pleasure, and adapt to environmental demands (Gross, 2001; Tamir, 2009). When an individual is unable to regulate their emotions, they experience emotion dysregulation. Emotion dysregulation is defined as a reduced or diminished ability to regulate one's emotional states (Miles et al. 2016). Researchers have discussed the negative impact of emotion dysregulation on overall well-being (Klemanski, Mennin, Borelli, Morissey, & Aikins, 2012; Miles et al. 2016).

In regards to emotion regulation strategies, Gross (2001) hypothesized a Process Model for emotion regulation. Gross (2001) suggested that emotion regulation involves both conscious and unconscious processes, that regulate an individual's emotional response. These regulation strategies vary depending on the situation and the time point. In other words, people utilize these strategies when they are most effective. At a general level, there are two main type of emotion regulation strategies. These strategies include, antecedent-focused and response-focused strategies. Antecedent-focused strategies consists of a preliminary response that occur prior the full activation of the emotional response; this is commonly known as cognitive reappraisal. In other words, a stimulus activates an emotional response. Prior to the full activation of this emotion an individuals copes by utilizing cognitive reappraisal, which in turn changes the psychological or behavioral response. For example, an individual may experience an emotional response (e.g., anxiety) after remembering they have an exam tomorrow. However, the individual copes with the situation by changing how they think about the exam (e.g. cognitive reappraisal). Instead of seeing the exam as a threat, which provokes the emotional response of anxiety, they see the exam as a way to test their knowledge, which in turn evokes a different response (e.g., motivation).

On the other hand, response-focused strategies are responses that decrease the emotional impact of an already elicited emotion; this is known as expressive suppression. For example, an individual that gets voted class president over their good friend. Their emotional response would be joy and excitement, however the individual does not want to hurt their friend's feelings. As a result, the person utilizes expressive suppression to humbly accept the position. Although there are several emotion regulation strategies, expressive suppression and cognitive reappraisal are two of the most common emotion regulation strategies.

Both expressive suppression and cognitive reappraisal are effective emotion regulation strategies, however continuous use of expressive suppression can have a negative impact on an individual's physical and mental health (Gross, 2001). Gross and John (2003) found that participants that continuously utilized cognitive reappraisal reported better relationships, an increase in positive emotions, and were effective at managing stress. On the contrary, participants that endorsed higher levels of expressive suppression endorsed impairments in social relationships, an increase in psychological distress, and were ineffective at managing stress. Although these findings are consistent with Gross's theoretical Process Model for emotion regulation, the sample consisted of college age students. As a result, the results of the study may not be generalizable to the entire population. In addition, college students may not experience as much psychological distress and they cope more effectively than clinical populations, which in turn could also impact the generalizability of this study. Finally, the one of the researchers of the study developed the process model of emotion regulation. As a result, the results may be biased towards this theoretical approach.

Richards and Gross (2000) were interested in how emotion regulation can impact cognitive functioning. They suggested that emotion regulation is an effortful task that requires a

significant amount of cognitive resources. The researchers conducted three different studies and found that participants that utilized expressive suppression performed worse on memory tasks when compared to a control or a cognitive reappraisal condition. The results of the studies suggest that expressive suppression requires more cognitive resources than reappraisal, which in turn impacts memory recall. There are several limitations to these studies. First the researchers did not use psychometrically validated assessments in first two studies. As a result, it is difficult to determine the validity and reliability of these measures. Another limitation is thought suppression may have also occurred in these studies. Thought suppression is a different construct than expressive suppression. As a result, the researchers may have been assessing thought suppression instead of expressive suppression. Finally, similar to the previous study, the researcher's bias may have impacted the interpretation of the results of these studies.

The researchers expanded on this idea and were interested in how expressive suppression impacts memory when exposed to distressing stimuli (Richards & Gross, 2006). Again, the researchers found that expressive suppression was related to memory impairment. In addition, the researchers noted that when the stimulus was upsetting (e.g., disgust) participants remember even less details. Indicating that suppression of emotionally distressing stimuli requires even more cognitive resources, which in turn impact memory. The researchers concluded expressive suppression requires more cognitive effort and impacts overall cognitive functioning. Although the researchers found similar conclusions as previous studies, the methodology of their study did not allow for causation to be determined. In addition, the sample (e.g., college students) is not generalizable to the entire population. Finally, cultural factors may have an impact on emotion regulation strategies.



Szczygiel and Maruszewski (2015) were also interested in the effects of expressive suppression on memory and cognitions. They concluded that expressive suppression leads to an impairment in working memory, decrease in cognitive performance, and an increase in arousal. They suggested that expressive suppression not only impact memory but also cognitions. Additionally, they concluded that suppression not only impacts cognitive functioning but also physiological functioning. One limitation to this study is the researchers used subjective arousal (e.g., Polish adaptation of the UWIST Mood Adjective Checklist) rather than objective arousal measures (e.g., heart rate, skin conductance, etc.). As a result, the results may be limited due to the subjective measures of arousal. In addition, the sample may not be generalizable since the study was conducted in Poland. In addition, there may be cultural differences that may impact the generalizability.

Other researchers have been interested in examining individual and cultural differences in emotion regulation strategies. Haga, Kraft, and Corby (2009) were interested if regulation strategies varied across gender, age, and culture. Using the Emotion Regulation Questionnaire (ERQ), the Self-Reflection and Insight Scale (SRIS), the Extraversion and Neuroticism subscales of the Big Five Inventory, the Center for Epidemiological Studies Depression Scale (CES-D), the Satisfaction with Life Scale (SWLS) and the Positive and Negative Affect Schedule (PANAS), the researchers found that men scored higher on the expressive suppression, older participants utilized expressive suppression less, and Americans utilized expressive suppression more than other cultures. In addition, the researchers noted that although expressive suppression decreased with age, men continued to utilize this coping strategy more than women.

The researchers also concluded that there were no gender or age differences with cognitive reappraisal, indicating that regardless of age or gender, participants utilized cognitive

reappraisal. However, the researchers noted that Australians utilized cognitive reappraisal more than other cultures. Finally, the results of the study suggest that cognitive reappraisal was associated with higher overall well-being and expressive suppression was associated with more psychological distress. It is important to note that the study assessed participants from Austria, Norway, and the United States. Although there are cultural differences, all three of these cultures emphasize individualism, which does not reflect all cultures. In addition, the sample consisted of college students, which may not be generalizable to the entire population.

Regarding physical health, Schlatter and Cameron (2010) found that suppression of negative emotions (e.g., anger) resulted in physiological concerns such as, decreased immune functioning, aches and pains, and skin related concerns. In addition, Mass, Cook, Cheng, and Gross (2007) found that cognitive reappraisal was associated with, less anger, less negative emotions, and more positive emotions. In addition, participants that did not utilize cognitive reappraisal experienced maladaptive cardiovascular responses, indicating that reappraisal can positively influence physiological functioning. Both of these studies demonstrate that expressive suppression can negatively impact psychological functioning.

Not only can expressive suppression impact physiological functioning, but it also can impact psychological well-being. Eftekhari, Zoellner, and Vigil (2009) found that individuals that endorsed high levels of anxiety, depression, and PTSD reported difficulties with emotion regulation. On the contrary, individuals that utilized cognitive reappraisal endorsed lower levels of depression, anxiety, and PTSD. They suggested that although cognitive reappraisal is associated with better outcomes than expressive suppression, using both of these methods infrequently was associated with higher levels of psychological distress. Thus indicating that emotion dysregulation was related to poorer outcomes when compared to expressive suppression

or cognitive reappraisal. It is important to note that the study consisted of only female undergraduate students. As a result, the results may not be generalizable. In addition, previous research suggests that men utilize expressive suppression more than females. As a result, the conclusions may be different if a male sample.

Other researchers have also been interested in the relationship between emotion regulation and PTSD. Moore, Zoellner, and Mollenholt (2008) were interested in replicating Gross and John (2003) study on emotion regulation, however conducting it in a trauma population. In addition, they were interested in understanding the relationship between emotion regulation and psychological distress. Using two populations (e.g., college sample and community sample of female trauma survivors) the researchers concluded that cognitive reappraisal was associated with lower levels of psychological distress and expressive suppression was associated with more severe psychopathology. In addition, the researchers concluded that the community based sample endorsed higher levels of suppression and more pathology in comparison to the college sample. Although the study may be more generalizable due to the two samples (e.g., college and community), the study only consisted of women. The researchers were aware of the gender differences in emotion regulation strategies, however men suppress more than women do. As a result, it would also be beneficial to assess emotion regulation strategies male trauma survivors as well.

Previous literature suggests that type of emotion regulation strategy is associated with overall psychological functioning and physiological health. Several researchers have discussed the negative impact of expressive suppression (Eftekhari, Zoellner, & Vigil, 2009; Gross & John, 2003; Haga, Kraft, & Corby, 2009; Mass, Cook, Cheng, & Gross, 2007; Moore, Zoellner, and Mollenholt, 2008; Richards & Gross, 2000; Richards & Gross, 2006; Schlatter & Cameron,

2010; Szczygiel and Maruszewski, 2015). These negative impacts include, cognitive impairments, memory impairments, psychological distress, exacerbation of mental health symptoms, impairments in social relationships, decreased immune functioning, aches and pains, skin related concerns, increase in arousal, cardiovascular concerns, and decrease in positive emotions. One concerning finding is men are at an increased risk for utilization of expressive suppression. In addition, American culture encourages expressive suppression more than other cultures. Finally, research suggests that expressive suppression decreases with age, however men continue to utilize this coping strategy. Overall, it appears that men are more likely to cope through expressive suppression, which in turn can negatively impact their mental health and physical health.

### **Posttraumatic Stress Disorder (PTSD)**

Trauma is defined as an extremely distressing experience that overwhelms the individual and produces lasting psychological effects (Briere & Scott, 2015). Over half of the United States population has experienced a traumatic event and 3.7% of them will develop PTSD (Kessler et al., 1995). The *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association, 2013) classifies PTSD as an exposure to a traumatic event, such as, threatened death, serious injury, or sexual violence, that results in intrusive symptoms, avoidance, negative changes in cognitions or mood, and changes in arousal and reactivity. In addition, these symptoms have to be present for at least a month and cause significant impairment in functioning.

Symptoms of PTSD can have a negative impact on social relationships, occupational functioning, and overall quality of life (Ray & Vanstone, 2009; Westphal, et al., 2011; Breslau, Lucia, & Davis, 2004). In a qualitative analysis researchers found that emotional numbing can

intensify feelings of isolation and negatively impact relationships. In addition, this social withdrawal and isolation further exacerbates symptoms due to the lack of support (Ray & Vanstone, 2009). This cyclical pattern often prolongs help seeking and increases PTSD symptoms. Other researchers have found that symptoms of PTSD continue to cause impairment even when they no longer meet diagnostic criteria (Westphal, et al., 2011). Westphal and colleagues found that even when PTSD symptoms were reduced, people continued to experience diminished mental health functioning. In addition, current PTSD symptoms were associated with an increase in missed work days, family conflict, and decrease in overall mental health.

PTSD not only influences psychological health but symptoms can also negatively impact physical health. Boscarino (2004) concluded that PTSD was associated with an increased risk for rheumatoid arthritis, hypothyroidism, and psoriasis. In addition, a diagnosis of PTSD increased the risk for premature mortality. Other researchers have found that trauma exposure, stress, and depression are associated with an increased risk for heart disease (Batten, Aslan, Maciejewski, & Mazure, 2004). In the acutely injured trauma population, these risk may be even higher due to the extent of their physical injuries.

### **Trauma I center.**

The American College of Surgeons (ACS) classifies trauma centers from the highest level of care (e.g., level I) to lowest level of care (e.g., level V) based on patient volume and capabilities (American College of Surgeons, 2014). A level I trauma center is capable of providing comprehensive care from prevention to rehabilitation for the most severely injured patients. These centers are often the primary intervention following a traumatic injury (Ramstad, Russo, & Zatzick, 2004). In the United States approximately 37 million people utilize acute care settings and emergency departments annually (Bonnie, Fulco, & Liverman, 1999). Of those 37

million, 2.5 million require hospitalization as a result of their injuries. Hospitalization and severity of injury significantly increases the risk for developing PTSD (O'Donnell, Creamer, Pattison, & Atkin, 2004).

Multiple risk factors have been identified in the development of PTSD. These risk factors include, severity of injury, history of trauma exposure, ethnocultural minority status, age, type of trauma, and SES (Chiu, deRoon-Cassini, & Brasel, 2011; Johansen, Wahl, Eilerten, & Weisaeth, 2007; Powers et al., 2014; Santos, Russo, Aisenberg, & Uehara, 2008; Stephens et al., 2010). In addition, researchers have argued that certain factors may influence specific PTSD symptom trajectories. Osenbach et al. (2014) identified four PTSD trajectories, these trajectories include, resilience, recovery, relapse/remitting, and chronic PTSD. In addition, they suggested that ethnocultural minority status, depressive symptoms, and life stressors increased the risk for developing PTSD. They also concluded that initial endorsement of high PTSD symptom severity significantly predicted chronic or recovery PTSD trajectories. In other words, participants that initially endorsed high PTSD symptoms, continued to endorse more severe symptoms later. On the contrary, participants that displayed resiliency or relapsing/remitting trajectories, endorsed less symptoms and continued to endorse less symptoms over time. Thus suggesting that initial endorsement of high PTSD symptoms is predictive of more severe PTSD trajectories.

Orcutt, Erickson, and Wolfe (2004) also concluded that initial high levels PTSD symptoms was predictive of chronic PTSD. The researchers assessed Gulf War veterans at five days, two years, and six years after trauma exposure and found that veterans that endorsed lower symptoms initially, continued to report lesser symptoms later on. On the contrary, they found that veterans that endorsed high symptoms at time 1 (e.g., day 5) continued to report high symptoms at year six. Indicating that initial PTSD symptom severity is predictive of future

PTSD symptom severity. Although there are several strengths to this study, one limitation is the participants in the sample. Since the sample consisted of veterans it may not be generalizable to the acutely injured population.

deRoon-Cassini and colleagues (2010) were also interested in PTSD and depression trajectories following a traumatic event. They identified four symptom trajectories, such as, chronic distress, delayed distress, recovered, and resilience. In addition, they concluded that assaultive trauma, anger, coping self-efficacy, and education was associated with impaired trajectories (e.g., delayed, chronic, and recovered). Although this study makes a significant contribution to the literature, there are some limitations. One limitation is 36% of the participants dropped out of the study. As a result, the participants that dropout could have had an impact on the results of the study.

Ramstad, Russo, and Zatzick (2004) were also interested in assessing acutely injured trauma survivors. They found that type of injury such as, intentional injury (e.g., assaults) significantly increased the risk for developing PTSD. The researchers suggested that intentionally injured patients were eight times more likely to have experienced a previous trauma. In addition, they concluded that single, unemployed, non-White, uninsured, men were more likely to experience assaultive traumas. They also noted that these men were likely to use alcohol and drugs, and have a high school education. The authors argued that in this population, trauma exposure appears to be a chronic reoccurring condition. A limitation to this study is the researchers assessed participants immediately after trauma exposure. As a result, maturation may have occurred, which might have impacted the internal validity of the study.

Other researchers have assessed how coping can influence psychological distress following a traumatic event. Victorson, Farmer, Burnett, Ouwlette, and Barocas (2005) were

interested in assessing coping strategies in acutely injured participants. Using the Trauma Symptom Checklist-40 and the Brief Coping Orientations to Problems Experienced, they assessed 68 patients at a level I trauma center and concluded that behavioral disengagement, emotional venting, and self-blame were associated with increased risk of acute traumatic stress. Although the study was a preliminary analysis, the sample size (e.g., 68) may have been too small to achieve statistical power. In addition, due to the methods, causation cannot be determined.

### **Significance of the Study**

Due to inconsistent findings in the literature, the results of this study will clarify the relationship between GRC and PTSD symptoms. As a result, this study will provide more information about the role in which GRC influences PTSD symptoms. One reason it is important to clarify this relationship is because currently the literature is mixed on how gender roles influences PTSD (Garcia, Finley, Lorber, & Jakupcak, 2011; Jakupcak, Blais, Grossbard, Garcia, & Okiishi, 2013; Jakupcak, Osborne, Michael, Cook, & McFall, 2006; McDermott, Tull, Soenke, & Jakupcak, 2010). As a result, the results of this study will clarify the relationship between these variables and provided valuable information to both PTSD literature and GRC literature.

Another significance to this study is that it will also assist in treatment for acutely injured trauma survivors. For example, men are more likely to experience a traumatic event, however they are less likely to seek treatment (Kessler et al., 1995; Vogel, Wester, & Larson, 2007). Understanding the relationship between GRC and PTSD symptoms will help assist practitioners in providing culturally appropriate treatment to injured trauma survivors. In addition, understanding the relationship between GRC, PTSD, and emotion dysregulation will also assist



in the focus of treatment for these individuals. Finally, this study will contribute significantly to the literature since there have been no studies assessing how the GRC influences PTSD symptoms in acutely injured survivors. As a result, this will be the first study assessing these variables in this population.

### **Professional Relevance**

Multiculturalism is a central component to counseling psychology. In counseling psychology, understanding an individual's identity, social context, and the intersectionality between these variables, are key factors in providing culturally competent services (APA, 2017). One part of multiculturalism is gender identity and gender role attitudes (Chao, 2012). This study addresses that central theme through understanding gender roles and how society influences these roles. In the acutely injured trauma population, male gender identity is associated with higher rates of intentional trauma (Ramstad, Russo, & Zatzick, 2004). As a result, these individuals are at a higher risk for developing PTSD.

The advantage to understanding the GRC in this population is to identify and understand how these rigid gender roles can influence psychopathology. In addition, the results of this study will provide valuable information to practitioners working with male identified acutely injured trauma survivors. For example, understanding the GRC will increase providers' awareness on how gender roles and attitudes can influence mental health and assist in providing more culturally competent services to this population. By attending to these different identities providers can individualize treatment and adapt early interventions to these individuals. Overall, this study emphasizes multiculturalism through gender identity and socialization of gender roles.

## Chapter 3

### Methods

#### Problem

Previous literature suggests inconsistent findings on the relationship between the male gender role and PTSD symptoms (Garcia, Finley, Lorber, & Jakupcak, 2011; Jakupcak, Blais, Grossbard, Garcia, & Okiishi, 2014; Jakupcak, Osborne, Michael, Cook, & McFall, 2006; McDermott, Tull, Soenke, Jakupcak, & Gratz, 2010). In the civilian population, researchers have found a significant relationship between the male gender role and PTSD symptom severity (McDermott, Tull, Soenke, Jakupcak, & Gratz, 2010). On the contrary, researchers have also found a non-significant relationship between masculine ideology and PTSD. It is possible that the literature is mixed due to assessing for masculine ideologies rather than the gender role conflict. In addition, researchers have assessed male attitudes on PTSD rather than the behavioral consequences of these attitudes. It is possible that the GRC on PTSD solely depends on the level of emotion regulation strategy; we call this moderation.

#### Moderation.

Moderation might be present if an interaction between the independent (GRCS-SF) and the moderating variable (ERQ) that better predicts the outcome variable (PCL-5) than their individual effects. Frazier, Tix, and Barron (2004) argue that inconsistent findings over multiple studies, between a predictor (e.g., masculine gender ideologies) and an outcome (e.g., PTSD), suggests the possibility of a moderating relationship. Previous research has supported this inconsistent relationship, thus suggesting a moderating relationship between the GRC and PTSD symptom severity (Garcia, Finley, Lorber, & Jakupcak, 2011; Jakupcak, Osborne, Michael, Cook, & McFall, 2006; Jakupcak, Blais, Grossbard, Garcia, & Okiishi, 2014; McDermott, Tull,

Soenke, Jakupcak, & Gratz, 2010). In the case of this study, inclusion of emotion regulation (ERQ) will impact the strength of the relationship between any of the four subscales of GRCS-SF and PTSD symptom severity (PCL-5).

Moderation can occur in three types of interaction patterns. These patterns include, enhancing interactions, buffering interactions, and antagonistic interactions (Frazier, Tix, & Barron, 2004). Enhancing interactions occur when both the moderator (e.g., ERQ) and the predictor (e.g., GRCS-SF) influence the outcome variable (e.g., PCL-5) in the same direction, thus enhancing or strengthening the relationship. Buffering interactions occur when the moderating variable (e.g., ERQ) weakens the relationship between the predictor (e.g., GRCS-SF) and the outcome (e.g., PCL-5). Finally, an antagonistic interaction occurs when the moderating variable (e.g., ERQ) weakens the effect between the predictor (e.g., GRCS-SF) and the outcome variable (e.g., PCL-5) despite the positive association between the predictor (e.g., GRCS-SF), moderator (e.g., ERQ) and outcome variable (e.g., PCL-5).

## **Purpose**

The purpose of this study was to examine the relationship between the GRC, emotion regulation, and PTSD symptom severity in acutely injured trauma survivors. This study first aimed to determine the relationship between the GRC (GRCS-SF) and PTSD symptom severity (PCL-5) in male trauma survivors. In addition, this study aimed to determine if emotion regulation (ERQ) moderates the relationship between the GRC (GRCS-SF) and PTSD symptom severity (PCL-5) in male trauma survivors. It was hypothesized that each of the four subscales of the GRCS-SF (Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; and Conflicts Between Work and Family Relations) would be positively correlated with PTSD symptom severity scores (PCL-5). It was also hypothesized

that there will be a significant interaction between each of the four independent subscales of the GRCS-SF (Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; and Conflicts Between Work and Family Relations) and each of the two independent subscales of the ERQ (Cognitive Reappraisal and Expressive Suppression) that will significantly predict PTSD symptom severity (PCL-5) over the main effects, thus supporting a moderating relationship between these variables.

**Aim 1** Determine the relationship between each of the four independent subscales of the GRCS-SF (e.g., Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; and Conflicts Between Work and Family Relations) and PTSD symptom severity (PCL-5) in male trauma survivors.

- **(Q1):** Is there a significant relationship between each of the four independent subscales of the GRCS-SF and PCL-5 in male trauma survivors?
- **(Prediction 1):** It was predicted that each of the four subscales of the GRCS-SF will be (individually) positively correlated with the PCL-5.
- **Rationale:** Previous literature suggests a positive association between masculine gender norms and PTSD symptom severity (McDermott, Tull, Soenke, & Jakupcak, 2010; Jakupcak, Blais, Grossbard, Garcia, & Okiishi, 2013). In addition, McDermott, Tull, Soenke, and Jakupcak (2010) found a significant relationship between masculine gender role and PTSD symptom severity in the civilian population. On the contrary, researchers have also concluded that masculine gender role is associated with PTSD symptom clusters and not overall symptom severity (Garcia, Finley, Lorber, & Jakupcak, 2011; Jakupcak, Osborne, Michael, Cook, & McFall, 2006). One potential explanation for these inconsistent findings is that the construct under investigation is masculine gender

ideologies rather than behavioral manifestation of these ideologies (Garcia, Finley, Lorber, & Jakupcak, 2011; Jakupcak, Osborne, Michael, Cook, & McFall, 2006). As a result, it is beneficial to clarify the relationship between these two constructs.

**Aim 2** Determine if emotion regulation moderates the individual relationship between each of the four subscales of the GRCS-SF (Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; and Conflicts Between Work and Family Relations) and PTSD symptom severity in male trauma survivors.

- **(Q2)**: Does emotion regulation (ERQ) moderate the association between each of the four independent subscales of the GRCS-SF and PCL-5 in male trauma survivors?
- **(Moderation Models)**: Each of the GRCS-SF subscales (Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; and Conflicts Between Work and Family Relations) were analyzed individually, along with each of the ERQ subscales (Cognitive Reappraisal; Expressive Suppression). As a result, eight moderation models were tested for this study.
- **(Prediction 2)**: It was hypothesized that the cognitive reappraisal subscale of the ERQ will predict PTSD symptom severity (PCL-5) via a significant buffering interaction with each of the four subscales (Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; and Conflicts Between Work and Family Relations Success, Power, and Competition) of the GRCS-SF, while controlling for the main effects. (Please see figure 1, 3, 5, & 7, p. 80, 82, 84, 86).
- **(Prediction 3)**: It was hypothesized that the expressive suppression subscale of the ERQ will predict PTSD symptom severity (PCL-5) via a significant enhancing interaction with each of the four subscales (Success, Power, and Competition; Restricted Emotionality;

Restricted Affectionate Behavior Between Men; and Conflicts Between Work and Family Relations Success, Power, and Competition) of the GRCS-SF, while controlling for the main effects. (Please see figures 2, 4, 6, & 8, p. 81, 83, 85, 87).

- **Rationale:** Previous literature suggests an inconsistent relationship between masculine gender norms and PTSD (McDermott, Tull, Soenke, & Jakupcak, 2010; Jakupcak, Blais, Grossbard, Garcia, & Okiishi, 2013). One potential explanation for these inconsistent findings is that emotion regulation strategy may alter the relationship between the GRC and PTSD symptom severity. Several studies have concluded that expressive suppression and dysregulation increases the risk in developing of PTSD (Moore, Zoellner, & Mollenholt, 2008; Goldsmith, Chesney, Heath, Barlow, 2013; Ehring & Ehlers, 2013). In addition, masculine ideologies have been associated with PTSD and psychological distress (McDermott, Tull, Soenke, & Jakupcak, 2010; Jakupcak, Blais, Grossbard, Garcia, & Okiishi, 2013; Pederson & Vogel, 2007; Vogel, Wester, & Larson, 2007; Vogel, Wester, Hammer, & Downing-Matibag, 2014; Fragoso & Kashubeck, 2000; Blazina & Watkins, 1996). It may in fact be the case that the relationship between GRC and PTSD depends on level of emotion regulation behaviors, such as expressive suppression and cognitive reappraisal, suggesting a moderating relationship.

Previous research suggests that type of emotion regulation strategy may impact the relationship between PTSD symptoms. In addition, emotion dysregulation is hypothesized to alter the strength between the GRC and PTSD symptom severity thus supporting a moderation model. According to the GRC theory, men that subscribe to high levels of masculine ideologies, are more likely to utilize expressive suppression, which results in psychological distress (O'Neil, 1982). Based on the GRC theory men are

exposed to masculine ideologies at a young age, which in turn impact their type of emotion regulation (O'Neil, 1982). The theory supports the notion that ideologies precede emotion regulation strategies, thus supporting the model of GRC as the predictor, emotion dysregulation as the moderator, and PTSD symptoms severity as the outcome variable.

### **Research Design**

The study used a cross-sectional survey design method. A Cross Sectional Survey design is a one-time observational method that utilizes survey methods to gather information. In the case of this research study, participants were assessed at one-time point, using the Masculine Gender Role Conflict Scale-Short Form (GRCS-SF), the Emotion Regulation Questionnaire (ERQ), and the PTSD Checklist for DSM-5 (PCL-5). The independent variables are the four independent sub-scales of the GRCS-SF (Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; and Conflicts Between Work and Family Relation). The subscales were analyzed independently, rather than a total score, since the GRC theory suggests that there are four independent domains of gender role conflict (O'Neil, 1982). In this study, ERQ is the moderating variable, and the PCL-5 is the dependent variable.

### **Participants**

A sample of 92, cisgender, male identified, participants were recruited from a large Midwest level 1 trauma center, follow a traumatic injury. Of the 92 participants recruited for the study, 2 participants did not complete the questionnaires; resulting in a total of 90 participants. Of the 90 participants, 88 participants were recruited while they were admitted to the hospital. The other 2 participants were recruited via phone call after they discharged from the emergency department. Within the sample, 60% identified as White, 30% identified as Black or African-

American, 6% identified as more than one race, 2% identified as Native American or Alaskan Native, 1% identified as Hispanic, and 1% identified as Asian. The mean age of the sample was 44.88 years old ( $SD = 15.104$ ). Regarding ethnicity, 6% of the participants identified as Hispanic or Latinx. The majority of participants were injured due to motor vehicle crashes (32%), followed by falls (17%), motorcycle crashes (14%), gunshot wounds (12%), stab wounds (9%), pedestrian struck by vehicle (7%), other injuries (6%), and mechanical injuries (3%). Length of hospital stay ranged from 1 day to 21 days with the average length of stay being 6 days.

Participants were eligible for the study if they were treated at Froedtert Hospital following a traumatic injury. A traumatic injury was operationalized as criteria A for posttraumatic stress disorder (PTSD). The DSM-5 defines criteria A as witnessing, experiencing, or learning about an event that resulted in exposure to death, serious injury, or sexual violence (American Psychological Association, 2013). Participants were then assessed based on inclusion and exclusion criteria.

Participants were considered for the study if they were 1) treated at Froedtert Hospital following a traumatic injury, 2) the traumatic injury met criteria A for PTSD, 3) their Glasgow Coma Scale (GCS) was greater than or equal to 13, 4) were English speaking, and 5) were at least 18 years of age or older. Participants were excluded from the study if they 1) were younger than 18 years of age, 2) the injury resulted in a GCS score of 12 or below, indicating moderate to severe traumatic brain injury (TBI), 3) the injury was self-inflicted, 4) had a history of psychosis, 5) were non-English speaking, 6) had a substance use disorder, 7) had a cognitive impairment (e.g., intellectual disability, dementia, etc.), or 8) were in police custody.

## **Procedure**



Due to the majority of the study activities taking place at the Medical College of Wisconsin (MCW), the University of Wisconsin-Milwaukee deferred institutional review board (IRB) approval to MCW. The study procedures were approved by the MCW IRB and data was collected between October 2018 and August 2019. Participants were recruited between 0-30 days post-trauma exposure. Although it is typical to experience PTSD symptoms immediately after trauma exposure, researchers have argued that Acute Stress Disorder (ASD) does not accurately predict PTSD in trauma survivors, thus supporting assessing PTSD symptoms rather than ASD (Fuglsang, Moergeli, & Schnyder, 2004). In addition, researchers have concluded that initial endorsement of high PTSD symptoms after trauma exposure is predictive of chronic PTSD (Orcutt, Erickson, & Wolfe, 2004; Osenbach et al., 2014).

Participants were first screened based on the trauma census and/or a chart review. The trauma census is a list of trauma patients that have been admitted to the trauma service. After reviewing the trauma census, a medical chart review was done to determine if potential participants met the study's inclusion and exclusion criteria. After determining eligibility, convenience sampling was used to recruit potential participants.

Participants were approached in person or recruited over the phone. Participants that were hospitalized as a result of their injuries were approached in person. On the other hand, participants that were discharged from the emergency department were recruited by phone. Once approached, participants were provided with a brief description of the study. Participants that expressed interest in the study were then provided with the potential risks and benefits of the study. After reviewing the risks and benefits, and answering any questions the potential participants had about the study, verbal consent was obtained (please see Appendix E). Once all inclusion and exclusion criteria were met, and consent was obtained, participants were then

surveyed using the GRCS-SF scale, PCL-5, and ERQ. Counterbalancing of the surveys with the Latin Squares method was used to prevent order effects and improve internal validity.

Participants that declined to participate in the study were thanked for their time, provided with mental health resources (if interested), and standard hospital protocol continued. Standard hospital protocol consisted of nurses and doctors determining the patients level of care. If the nurses or doctors recommend a psychological intervention, a consult was placed to the psychology department.

Participants that requested mental health resources were provided with a list of community resources. Further, if they requested mental health services while admitted to the hospital the nurse was notified and a psychology consult was placed. All participants that requested mental health resources and psychology consults received these services regardless of their participation in the study. To ensure participants and others were safe, a risk assessment was conducted if participants expressed suicidal ideations and/or homicidal ideations, plan, and/or intent. No participants endorsed suicidal ideations and/or homicidal ideations, plan, and/or intent. In addition, no participants reported abuse of a child or vulnerable adult; however, if they had, confidentiality would have been broken and a report would have been made.

One risk to the study was that questionnaires might have been upsetting or distressing. When distress did arise, the administrator asked the participant if they wished to continue with the study. This occurred for several participants and 2 participants declined to continue with the study (neither completed a full questionnaire). As a result, they were dropped from the analysis. For the participants that were still interested in continuing, the administrator adapted the administration procedure by slowing down the questionnaires and/or taking breaks. To ensure the participants' safety and minimize risk, the investigator de-identified all the participants'

personal information. The data was kept on a password protected computer and study documents were locked in a cabinet at MCW.

## **Measures**

### **Demographics.**

*Demographic Information Form (Appendix A)* was used to gather each participant's age, name, city of birth, gender at birth, gender identity, racial/ethnic identity, history of psychiatric diagnoses, date of trauma, extent of injuries, and length of stay.

### **Posttraumatic stress measures.**

*PTSD Checklist for DSM-5 (PCL-5; Appendix B)*. The PCL-5 (Weathers, Litz, et al., 2013) is a brief 20-item self-report measure that assesses PTSD symptom severity. The PCL-5 was developed to reflect the diagnostic criteria in the DSM-5 (Weathers, Litz, et al., 2013). The purpose of the assessment is to provide an accurate portrayal of symptoms that reflect a diagnosis of PTSD. In addition, the questionnaire is a brief screening tool that allows clinicians to quickly assess for PTSD in comparison to other assessments (e.g., CAPS-5) that require significantly more time.

Questions are categorized based on DSM-5 criteria (e.g., cluster B, cluster C, cluster D, and cluster E). Cluster B symptoms include re-experiencing the trauma through, intrusive thoughts, nightmares, flashbacks, emotional reactions to reminders of the trauma, and/or physiological reactions to reminders of the trauma. Cluster C symptoms include avoiding reminders of the trauma by avoiding thoughts and feelings related to the trauma and/or avoiding things that remind them of the trauma. Cluster D symptoms focus on changes in cognitions as a result of the traumatic event. These changes may include, inability to remember specific parts of the trauma, negative beliefs about the world and/or self, blaming oneself or others, negative

affect, anhedonia, isolation, and inability to experience positive emotions. Criteria E symptoms focus on trauma related arousal that may manifest as, irritability or aggression, risky behaviors, hypervigilance, increased startle response, concentration difficulties, and sleep disturbances (American Psychological Association, 2013).

Symptoms are evaluated using a Likert scale ranging from not at all (0) to extremely (4). Higher scores indicate greater PTSD symptom severity. A score of 33 or higher suggests that PTSD is likely present. Sample item includes “In the past month, how much were you bothered by: Repeated, disturbing, and unwanted memories of the stressful experience?”. Psychometric evaluation of the PCL-5 demonstrates high internal consistency ( $\alpha = .94$ ) good test-retest reliability ( $r = .82$ ), strong convergent validity ( $r_s = .74$  to  $.85$ ) and strong discriminate validity ( $r_s = .31$  to  $.60$ ) (Blevins, Weathers, Davis, Witte, & Domino, 2015; Westen & Rosenthal, 2003). Within this sample, internal consistency was high with a Cronbach’s alpha of .934.

### **Emotion regulation measures.**

*Emotion Regulation Questionnaire (ERQ)* is a 10-item questionnaire used to assess emotional regulation methods (Gross & John, 2003). The ERQ was developed from the Process Model of Emotion Regulation. The Process Model of Emotion Regulation suggests that there is a specific timeline to regulating emotions (Gross, 2001). It is theorized that emotions are first regulated through an evaluation of emotional cues. After evaluating these cues, an experimental, behavioral, or physiological response is triggered. These responses are then modulated through emotion regulation techniques (e.g., cognitive reappraisal or expressive suppression) which then in turns influences the behavioral response.

According to the Process Model of Emotion Regulation there are two main types of emotion regulation; these methods include cognitive reappraisal and expressive suppression.

Cognitive reappraisal is defined as changing one's cognitions in response to emotionally provoking stimuli, which in turn alters one's emotional reaction. For example, an individual may fail an exam and see themselves as a failure which provokes the emotion anger and embarrassment. However, after reappraising the situation, the individual changes their thoughts from a "I'm a failure" to "I just need to study harder for the next exam" which provokes the emotion motivation. Expressive suppression is defined as inhibiting emotional-expressive behavior. For example, an individual has a great poker hand and keeps a poker face throughout the game.

Items are rated using a Likert scale that range from strongly disagree (1) to strongly agree (7). High scores on the expressive suppression subscales indicate higher use of expressive suppression as an emotion regulation strategy. On the contrary, high scores on the cognitive reappraisal subscale indicates higher use of cognitive reappraisal as an emotion regulation strategy. A sample item is "I control my emotions by not expressing them". Psychometric evaluation demonstrated good reliability for both cognitive reappraisal ( $r=.79$ ) and emotional suppression ( $r=.73$ ) and respectable test-retest reliability ( $r=.69$ ) (Gross & John, 2003). Within the sample, Cronbach's alpha for cognitive reappraisal subscale was .80 and .660 for expression suppression subscale.

### **Gender role measures.**

Gender Role Conflict was assessed using the *Masculine Gender Role Conflict Scale-Short Form (GRCS-SF)* (Wester, Vogel, O'Neil, & Danforth, 2012). The GRCS-SF was developed from the Gender Role Conflict Theory (GRC). The GRC theory suggests Western society shapes rigid gender roles for men (O'Neil, 1982). It is hypothesized that men receive messages that they need to be strong, powerful, and aggressive. As a result, when a man behaves

in a matter that conflicts with these roles, it results in psychological distress. These rigid gender expectations can have an impact on interpersonal relationships, occupational functioning, and academics.

The GRCS-SF is a 16-item, highest loading items, of the original Gender Role Conflict Scale. Items are rated from strongly disagree (1) to strongly agree (6). The scale analyzes four main masculine domains. These domains include, Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; and Conflicts Between Work and Family Relations. Success, Power, and Competition (SPC) assess achievement through competition. Restricted Emotionality (RE) examines the degree in which an individual avoids expressing their emotions in fear of being perceived as weak or vulnerable. The Restricted Affectionate Behavior Between Men (RABBM) subscale assesses difficulties expressing care and affection between men. The last subscale, Conflicts Between Work and Family Relations (CBWFR), assess the degree in which an individual experiences difficulties balancing work, family, and school relations.

Psychometric evaluation indicates good reliability, RE and CBWFR had a coefficient alpha of .77, RABBM had a coefficient alpha of .78, and SPC had a coefficient alpha of .80 (Wester, Vogel, O'Neil, & Danforth, 2012). Correlations between the original Gender Role Conflict Scale (GRCS) and GRCS-SF indicate strong internal validity (RE =.94, RAB = .93, CBWFR=.96 and SPC=.90). Within the sample, Cronbach's alpha for the four subscales was .714 for CBWFR, .710 for SPC, .730 for RABBM, and .720 for RE.

## **Chapter 4**

### **Results**

Previous literature suggests an inconsistent relationship between masculine gender roles and PTSD symptoms (Garcia, Finley, Lorber, & Jakupcak, 2011; Jakupcak, Blais, Grossbard, Garcia, & Okiishi, 2014; Jakupcak, Osborne, Michael, Cook, & McFall, 2006; McDermott, Tull, Soenke, Jakupcak, & Gratz, 2010). The purpose of this investigation was to clarify this relationship, while also determining if emotion regulation moderates this relationship.

#### **Statistical Analyses**

Descriptive analysis was done to determine the demographic characteristics of the sample. In addition, bivariate (Pearson) correlation was used to determine the relationship between each of the four independent subscales of the GRCS-SF and PTSD symptom severity (PCL-5). Since the four subscales are independent factors, each subscale was assessed independently to determine if there is a significant relationship between the GRCS-SF and PTSD symptom severity (PCL-5) (O'Neil, 1982; Wester, Vogel, O'Neil, & Danforth, 2012). Correlation analysis was used over multiple regression since the question under investigation was to clarify the relationship between two variables at a time, rather than multiple independent variables.

Prior to conducting the bivariate (Pearson) correlation the assumptions of the analysis were evaluated. Assumptions of a bivariate (Pearson) correlation include normality of variables, no significant outliers, homoscedasticity, and a linear relationship between the variables. Normality and outliers were evaluated using descriptive statistics, a histogram, and a box and whisker plot. The results indicated that the dependent variable (e.g., PCL) violated both normality and no significant outliers. Based on the histogram plot and the descriptive statistics, it

was determined that the dependent variable was positively skewed (1.249, SE = .254) indicating that the majority of the participants endorsed low levels of PTSD symptom severity. Due to the limited number of outliers (e.g., 3 cases), these participants were dropped from the analysis and the assumptions were then retested. After retesting for normality and outliers, these assumptions were still violated and a log transformation was done (on the original data set) to correct for non-normality and outliers. After a log transformation was done on the dependent variable (e.g., PCL-5) and after using the same analyses as described above all the assumptions were met (e.g., normality, no significant outliers, homoscedasticity, and linear relationship). Descriptive statistics revealed that the independent variable RABBM violated the outlier assumption (e.g., 4 cases). As a result, the Pearson correlation analysis was run with the RABBM outliers and without the RABBM outliers. There were no significant differences in the results when including the outliers in the analysis. As a result, the outliers were included in the final analysis.

Multiple regression was used to determine if emotion regulation moderates the relationship between the GRC and PTSD symptom severity in acutely injured trauma survivors. Multiple regression was the preferred method over an ANOVA analysis because the variables (e.g., predictor and moderators) are on a continuous rather than categorical scale. If the predictor (GRCS-SF) or the moderator (ERQ) were categorical variables (e.g., gender) an ANOVA analysis could be done (Frazier, Tix, & Barron, 2004). Finally, multiple regression was used over structural equation modeling (SEM) due to the small sample size (90 participants).

Prior to conducting the analyses, the assumptions were tested. Multiple regression assumes that the data is normally distributed, there is a linear relationship between the dependent and the independent variables, the independent variables are not highly correlated with each other (e.g., multicollinearity), and the variances of the independent variables are the same across



the regression line (e.g., Homoscedasticity). Normality was evaluated using descriptive statistics and a histogram. The results indicated that the dependent variable (e.g., PCL) violated normality and a log transformation was used to correct for this violation. Multicollinearity was assessed using the variance inflation factor (VIF). Variables are considered highly correlated with one another if VIF value is 10 or greater (Kutner, Nachtsheim, & Neter, 2004). Within each of the eight models the VIF values ranged from 1.002 to 1.311, indicating that this assumption was met. Finally, each of the eight models residuals and values were plotted on a scatterplot to determine linearity and homoscedasticity. Based on the scatterplots these assumptions were also met. Once all assumptions were checked, the data was analyzed using a multiple regression analysis.

### **Hypotheses Testing**

**Hypothesis one.** The first aim of the study was to determine the relationship between each of the four independent subscales of the GRCS-SF (e.g., Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; and Conflicts Between Work and Family Relations) and PTSD symptom severity (PCL-5) in male trauma survivors. It was hypothesized that each of the four subscales (Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; and Conflicts Between Work and Family Relations) would be significantly positively associated with the PCL-5. Using SPSS, Four Pearson correlation analyses were done to determine the relationship between each of the four independent subscales of the GRCS-SF and PCL-5. The results of the Pearson correlation analyses indicated a significant positive correlation between the subscale CBWFR and PCL-5,  $r(88) = .344, p = .001$ , indicating that when work and family conflict increased so did PTSD symptom severity. The results also found a significant positive correlation between the subscale

RE and PCL-5,  $r(88) = .216$ ,  $p = .040$ , indicating that when emotional restriction increased so did PTSD symptom severity. There was an insignificant correlation between the subscale SPC and PCL-5,  $r(88) = .197$ ,  $p = .063$ . In addition, there was not a significant correlation between the subscale RABBM and PCL-5,  $r(88) = -.057$ ,  $p = .594$ .

**Hypothesis two.** The second aim of the study was to determine if emotion regulation moderates the relationship between each of the four subscales of the GRCS-SF and PTSD symptom severity in male trauma survivors. It was hypothesized that the cognitive reappraisal subscale would predict PTSD symptom severity (PCL-5) via a significant buffering interaction with each of the four subscales. Four multiple regression analyses were done using SPSS to determine if cognitive reappraisal buffered the relationship between each of the four independent subscales of the GRCS-SF (SPC, RE, RABBM, CBWFR) and the PCL-5. The results (see Table 1) of the analyses determined that there were no significant interactions between SPC, RE, RABBM, CBWFR and cognitive reappraisal on the PCL-5, indicating that cognitive reappraisal did not moderate the relationship between each of the four subscales (SPC, RE, RABBM, CBWFR) and the PCL-5.

Effect sizes were calculated using  $R^2$ . The effect size for the model CBWFR and cognitive reappraisal on PTSD symptom severity was  $f^2 = .170$ , suggesting a medium effect. The effect size for the model SPC and cognitive reappraisal on PTSD symptom severity was  $f^2 = .096$ , suggesting a small effect. The effect size for the model RABBM and cognitive reappraisal on PTSD symptom was  $f^2 = .062$ , suggesting a small effect. Finally, the effect size for RE and cognitive reappraisal on PTSD symptom was  $f^2 = .108$ , suggesting a small effect.

Although there were no significant interactions between the four independent subscales (CBWFR, SPC, RABBM, RE) and cognitive reappraisal on the PCL-5, each of the four models

were plotted on four separate scatterplots to determine the direction of the relationships (see figures 9, 10, 11, and 12). The scatterplot of the interaction model between CBWFR and cognitive reappraisal on the PCL-5 illustrates that the relationship between CBWFR and the PCL-5 may change depending on the level of cognitive reappraisal utilized (see figure 9). Specially, the positive effect of CBWFR and PCL-5 weakens with higher levels of cognitive reappraisal. The scatterplot of the interaction model between SPC and cognitive reappraisal on the PCL-5 illustrates that the relationship between SPC and the PCL-5 may change depending on the level of cognitive reappraisal utilized (see figure 10). Specially, the positive effect of SPC and PCL-5 weakens with higher levels of cognitive reappraisal and strengthens with lower levels of cognitive reappraisal. Further, the negative association between SPC and PCL-5 strengthens with moderate levels of cognitive reappraisal. The scatterplot of the interaction model between RABBM and cognitive reappraisal on the PCL-5 illustrates that the relationship between CBWFR and the PCL-5 does not vary depending on the level of cognitive reappraisal utilized (see figure 11). The scatterplot of the interaction model between RE and cognitive reappraisal on the PCL-5 illustrates that the relationship between RE and the PCL-5 may vary depending on the level of cognitive reappraisal utilized (see figure 12). Specially, the positive effect of RE and PCL-5 weakens with higher levels of cognitive reappraisal.

Table 1

*Unstandardized Multiple Linear Regression: GRC and Cognitive Reappraisal on PTSD severity*

Model	Variable	B	Std. Error	t	p
1	(Constant)	-.119	.537	-.222	.825
	Cognitive Reappraisal	.028	.018	1.566	.121
	CBWFR	.067	.041	1.634	.106
	Cognitive Reappraisal x CBWFR	-.001	.001	-.991	.324
2	(Constant)	-.041	.575	-.071	.943
	Cognitive Reappraisal	.030	.018	1.665	.100
	SPC	.058	.046	1.253	.214
	Cognitive Reappraisal x SPC	-.001	.001	-.936	.352
3	(Constant)	.214	.490	.437	.663
	Cognitive Reappraisal	.021	.016	1.294	.199
	RE	.032	.035	.918	.361
	Cognitive Reappraisal x RE	.000	.001	-.349	.728
4	(Constant)	.991	.482	2.058	.043
	Cognitive Reappraisal	.006	.015	.376	.708
	RABBM	-.031	.036	-.874	.384
	Cognitive Reappraisal x RABBM	.001	.001	.743	.459

Note. GRC = Gender Role Conflict Subscale; Cognitive Reappraisal = Subscale of Emotion Regulation; PTSD Severity = PCL-5.

Significant at the .05 level.

**Hypothesis three.** The second aim of the study was to determine if emotion regulation moderates the individual relationship between each of the four subscales of the GRCS-SF and PTSD symptom severity in male trauma survivors. It was hypothesized that the expressive suppression subscale of the ERQ will predict PTSD symptom severity (PCL-5) via a significant enhancing interaction with each of the four subscales. Four multiple regression analyses were done to determine if expressive suppression enhanced the relationship between the subscales SPC, RE, RABBM, CBWFR and the PCL-5. The results (see Table 2) of the analyses determined that there were no significant interactions between expressive suppression and each of the independent subscales (SPC, RE, RABBM, CBWFR) of the GRCS-SF on the PCL-5, suggesting that expressive suppression does not moderate the relationship between SPC, RE, RABBM, CBWFR and the PCL-5.

Effect sizes were calculated using  $R^2$ . The effect size for the model CBWFR and expressive suppression on PTSD symptom severity was  $f^2 = .166$ , suggesting a medium effect. The effect size for the model SPC and expressive suppression on PTSD symptom severity was  $f^2 = .083$ , suggesting a small effect. The effect size for the model RABBM and expressive suppression on PTSD symptom was  $f^2 = .086$ , suggesting a small effect. Finally, the effect size for RE and expressive suppression on PTSD symptom was  $f^2 = .091$ , suggesting a small effect.

Although there were no significant interactions between the four independent subscales (CBWFR, SPC, RABBM, RE) and expressive suppression on the PCL-5, each of the four models were plotted on four separate scatterplots to determine the direction of the relationships (see figures 13, 14, 15, and 16). The scatterplot of the interaction model between CBWFR and expressive suppression on the PCL-5 illustrates that the relationship between CBWFR and the PCL-5 does not change depending on the level of expressive suppression utilized (see figure 13). The scatterplot of the interaction model between SPC and expressive suppression on the PCL-5 illustrates that the relationship between SPC and the PCL-5 may change depending on the level of expressive suppression utilized (see figure 14). Specially, the positive effect of SPC and PCL-5 weakens with higher levels of expressive suppression. The scatterplot of the interaction model between RABBM and expressive suppression on the PCL-5 illustrates that the relationship between RABBM and the PCL-5 may change depending on the level of expressive suppression utilized (see figure 15). Specially, the positive effect of RABBM and PCL-5 weakens with higher levels of expressive suppression and strengthens with lower levels of expressive suppression. Further, the negative association between RABBM and PCL-5 strengthens with moderate levels of expressive suppression. The scatterplot of the interaction model between RE and expressive suppression on the PCL-5 illustrates that the relationship between RE and the

PCL-5 may change depending on the level of expressive suppression utilized (see figure 16). Specially, the positive effect of RE and PCL-5 strengthens with lower levels of expressive suppression, however the positive effect of RE and PCL-5 does not vary with moderate to high levels of expressive suppression.

Table 2  
*Unstandardized Multiple Linear Regression: GRC and Expressive Suppression on PTSD severity*

Model	Variable	B	Std. Error	t	p
1	(Constant)	.349	.324	1.077	.284
	Expressive Suppression	.026	.023	1.135	.259
	CBWFR	.036	.024	1.536	.128
	Expressive Suppression x CBWFR	-.001	.002	-.403	.668
2	(Constant)	.604	.355	1.703	.092
	Expressive Suppression	.022	.024	.902	.370
	SPC	.015	.029	.509	.612
	Expressive Suppression x SPC	.000	.002	-.060	.952
3	(Constant)	.388	.306	1.266	.209
	Expressive Suppression	.040	.022	1.834	.070
	RE	.036	.025	1.428	.157
	Expressive Suppression x RE	-.002	.002	-1.127	.263
4	(Constant)	.891	.342	2.603	.011
	Expressive Suppression	.025	.022	1.153	.252
	RABBM	-.018	.030	-.618	.538
	Expressive Suppression x RABBM	.000	.002	.139	.890

Note. GRC = Gender Role Conflict Subscale; Expressive Suppression = Subscale of Emotion Regulation; PTSD Severity = PCL-5. Significant at the p .05 level.

### Post-hoc Analyses

Since there were no significant interactions, follow up analyses were done to determine if there were any significant main effects. Eight post-hoc analyses were done on each of the eight interaction models. Due to the large number of post-hoc analyses, a Bonferroni correction was done to reduce Type I error. After controlling for the interaction within the model, there were no significant main effects. Suggesting that the GRCS-SF subscales and Emotion Regulation subscales do not significant predict of PTSD symptom severity.

## **Chapter 5**

### **Discussion**

Exposure to a traumatic event can have a negative impact on an individual's health and overall quality of life. Within the acute care setting, approximately 10% of individuals will be diagnosed with PTSD (O'Donnell, Creamer, Pattison, & Atkin, 2004). This prevalence rate is three times higher than the general population. Several risk factors such as severity of injury, interpersonal trauma, and hospitalization increase the risk for developing PTSD (Kessler et al., 1995; Powers et al., 2014; Ramstad, Russo, & Zatzick, 2004). Within the traumatic injury population, men are more likely to experience a traumatic event and they are more likely to be hospitalized as a result of their injuries (Kessler et al., 1995; Powers et al., 2014; Ramstad, Russo, & Zatzick, 2004). This is concerning since hospitalization and severity of injury further increase the risk of developing PTSD. Complicating this, men are socialized to restrict and suppress their emotions, and are less likely to seek help (Blazina and Watkins, 1996; Kessler et al., 1995; O'Neil, 1982; Wester, Fowell Christianson, Vogel, & Wei, 2007). Emotional restriction and suppression, and lack of help seeking can exacerbate symptoms and lead to chronic PTSD (Roemer, Litz, Orsillo, & Wagner, 2001).

Recognizing the importance of masculine gender roles and mental health, researchers have begun to study the relationship between masculine ideology and PTSD symptoms. Previous literature is mixed on the relationship between masculine ideology and PTSD (Garcia, Finley, Lorber, & Jakupcak, 2011; Jakupcak, Osborne, Michael, Cook, & McFall, 2006). One reason for these inconsistent findings is that researchers have studied masculine ideology rather than the distress that occurs as a result of these unattainable gender roles. Another potential explanation for these inconsistent findings is that type of emotion regulation strategy may alter

the relationship between the GRC and PTSD symptom severity. Supporting this hypothesis is that expressive suppression and emotional dysregulation has been linked to the development of PTSD (Moore, Zoellner, & Mollenholt, 2008; Goldsmith, Chesney, Heath, Barlow, 2013; Ehring & Ehlers, 2013). Further, cognitive reappraisal has been linked to optimism, well-being, and the ability to repair bad moods (Gross & Oliver, 2003; Richards & Gross, 1999), thus suggesting that cognitive reappraisal may be protective after exposure to a traumatic event.

The purpose of this study was to clarify the relationship between the GRCS-SF (e.g., Success, Power, and Competition; Restricted Emotionality; Restricted Affectionate Behavior Between Men; and Conflicts Between Work and Family Relations) and PTSD symptom severity (PCL-5) in acutely injured male trauma survivors and determine if emotion regulation moderates this relationship. Due to inconsistencies in the literature, the first aim of the study was to clarify the relationship between masculine gender roles and PTSD symptom severity. It was hypothesized that each of the four subscales of the GRCS-SF would be significantly positively associated with PTSD symptom severity. As predicted, the subscales Conflicts Between Work and Family Relations and Restricted Emotionality were significantly positively associated with PTSD symptom severity. Indicating that men who experience conflict from prioritizing work over family/leisure were likely to endorse higher levels of PTSD symptom severity. In addition, men who restrict their emotions were also likely to report higher levels of PTSD symptom severity. These findings are consistent with previous literature, suggesting that men who experience conflict from these masculine gender roles are more likely to report higher levels of depression, stress, and PTSD symptoms (Blazina & Watkins, 1996; Frago & Kashubeck, 2000; Good & Mintz, 1990; Hoyt, 2009; Jakupcak, Blais, Grossbard, Garcia, & Okiishi, 2013; McDermott, Tull, Soenke, & Jakupcak, 2010).



Surprisingly, there was no significant relationship between the subscales Success, Power, and Competition and Restricted Affectionate Behavior Between Men and PTSD severity. Suggesting that conflict within these domains might not influence PTSD symptom severity. On the contrary, researchers are suggested that adherence to these values might actually be protective within the avoidance symptom cluster of PTSD (Garcia, Finley, Lorber, & Jakupcak, 2011).

The second aim of the study was to determine if emotion regulation strategy (e.g., expressive suppression, cognitive reappraisal) moderated the relationship between the GRCS-SF and PTSD symptom severity. It was hypothesized that expressive suppression would enhance the relationship between each of the four subscales of the GRCS-SF and PTSD symptom severity. Unexpectedly, there were no significant interactions between each of the four subscales of the GRCS-SF and expressive suppression, indicating that expressive suppression does not moderate the relationship between GRCS-SF and PTSD symptom severity.

It was also hypothesized that cognitive reappraisal would buffer the relationship between each of the four subscales of the GRCS-SF and PTSD symptom severity. Surprisingly, cognitive reappraisal did not significantly interact with any of the four subscales of the GRCS-SF, suggesting that cognitive reappraisal does not moderate the relationship between GRCS-SF and PTSD symptom severity.

### **Interpretations**

The results of this study indicate a significant positive association between the subscales Conflicts Between Work and Family Relations and Restricted Emotionality of the GRCS-SF and the PCL-5. Suggesting that men that experience conflict from these masculine gender norms are more likely to endorse higher levels of PTSD symptom severity. Regarding the positive

association between Conflicts Between Work and Family Relations subscale and PCL-5, it is likely that men that endorse stress related to prioritizing work over personal values are more likely to report higher levels of PTSD symptom severity. As a result, it is possible that stress and dissatisfaction with the conflict between personal values and gender expectations could increase the risk of developing PTSD. Previous research has suggested that chronic stress and prior traumatic experiences can significantly increase the risk in developing PTSD (Brownlow, Zitnik, McLean, & Gehrman, 2018). As a result, men who are exposed to chronic stressors may be at an increased risk for PTSD. Further, these gender expectations may facilitate avoidance by encouraging men to invest more time and energy in work, which in turn could exacerbate their PTSD symptoms and psychological distress. On the contrary, it is possible that the significant association between Conflicts Between Work and Family Relations and PCL-5 is a result of measuring similar constructs. For example, both the PCL-5 and Conflicts Between Work and Family Relations are both measuring psychological distress and stress.

In regards to the significant positive association between Restricted Emotionality and the PCL-5, men that restrict their emotions are more likely to report higher levels of PTSD symptom severity. Suggesting that men who restrict their emotions are possibly at a higher risk for PTSD symptom severity. It is possible that men who adhere to these gender expectations are more likely to restrict their emotions following a trauma, thus exacerbating PTSD symptoms. This emotional restriction could be conceptualized as emotional avoidance. Which previous literature has suggested that avoidance is a key symptom in maintenance of PTSD (Badour, Blonigen, Boden, Feldner, & Bonn-Miller, 2012). These interpretations are consistent with current treatments for PTSD (Foa & Kozak, 1986; Resick & Schnicke, 1992). Current PTSD treatment focus on the emotional processing of the trauma, since it is typical for trauma survivors to avoid

emotions and thoughts related to the traumatic event. As a result, it is possible that these socialized gender roles encourage men to restrict their emotions, which could possibly put them at risk following a traumatic event.

Although there were significant positive associations between Conflicts Between Work and Family Relations and Restricted Emotionality and the PCL-5 there were no significant associations between the other two subscales of the GRCS-SF (Success, Power, and Competition, and Restricted Affectionate Behavior Between Men) and the PCL-5. These results were surprising, since previous research has demonstrated that these subscales are associated with psychological distress (Blazina & Watkins, 1998; Good & Mintz, 1990). It is possible that in the context of trauma Success, Power, and Competition, and Restricted Affectionate Behavior Between Men do not influence psychological distress. Another possibility is that these beliefs may impact symptoms later on and since they were assessed immediately after trauma. In other words, it is possible that they these beliefs may influence PTSD symptoms at a later time. Another hypothesis for these insignificant results it that type of trauma may influence different subscales. For example, within the sample the majority of individuals were survivors of motor vehicle crashes. However, there were no survivors of sexual assault in the sample. It a possible that men who experience interpersonal trauma (e.g., sexual assault, physical assault) would report higher levels of disempowerment and possibility higher levels of Restricted Affectionate Behavior Between Men. Another explanation for these insignificant results is that the sample was taken from a large urban hospital. As a result, the sample may hold more progressive views than the general population. On the contrary, participants might have held these beliefs, however were concerned about judgement from endorsing these beliefs. Further, the sample was mixed in terms of age. It is possible age effects contributed to these insignificant findings.

The second aim of the study was to determine if emotion regulation strategy (e.g., expressive suppression, cognitive reappraisal) enhanced or buffered the relationship between the GRCS-SF and the PCL-5. Surprisingly, there were no significant interactions between the moderating variable (e.g., expressive suppression, cognitive reappraisal) and the independent variable (e.g., four independent subscales of the GRCS-SF) suggesting that emotion regulation strategy does not moderate the relationship between gender role conflict and PTSD symptom severity. One explanation for these insignificant findings is that participants may utilize both types of emotion regulation strategy rather than solely one type. Another possibility is participants might have been confused on the emotion regulation questionnaire. For example, when completing the questionnaire participants were often asked clarifying questions about the ERQ. Clarification was provided on multiple questions, however participants appeared to struggle understanding the concept of emotion regulation. It is possible that the results of this study might have differed if another emotion regulation questionnaire was used.

Another unexpected finding was that none of the four subscales of the GRCS-SF (e.g., Success, Power, and Competition, Restricted Emotionality, Restricted Affectionate Behavior Between Men, Conflicts Between Work and Family Relations) significantly predicted PTSD symptom severity. Unfortunately, these findings are consistent with other researchers assessing masculine ideology and PTSD symptom severity (Garcia, Finley, Lorber, & Jakupcak, 2011; Jakupcak, Osborne, Michael, Cook, & McFall, 2006). Although these findings are consistent with other studies, it is possible that the GRCS-SF subscales are not predictive of overall PTSD symptoms but specific clusters. For example, Garcia, Finley, Lorber, and Jakupcak (2011) found that masculine ideology was not predictive of overall PTSD symptom severity but specific PTSD symptom clusters. These results suggest that certain masculine traits may be protective against

specific PTSD clusters, however may exacerbate others. Within this study, it would be important to determine if these insignificant findings are related to the subscales being protective against certain PTSD clusters.

Surprisingly, expressive suppression and cognitive reappraisal did not predict PTSD symptom severity. These results are inconsistent with previous literature (Moore, Zoellner, & Mollenholt, 2008; Goldsmith, Chesney, Heath, Barlow, 2013; Ehling & Ehlers, 2013) concluding that expressive suppression and dysregulation are risk factors in the development of PTSD. One reason for these inconsistent findings is that emotion regulation may have been measured too early after trauma exposure. Another reason for these inconsistent findings is the type of measurement used to assess PTSD. Previous studies have assessed trauma using a lifetime trauma exposure checklist or the Posttraumatic Diagnostic Scale (PDS). Although a checklist is an effective way to determine if an individual meets criterion A for PTSD, it does not assess PTSD or symptom severity. Further, the Posttraumatic Diagnostic Scale (PDS) was based on the DSM-IV diagnosis of PTSD and not the current DSM-5 diagnosis. These differences could have impacted the results of this study and previous findings. Finally, it is possible that within the traumatic injury population, emotion regulation does not significantly predict PTSD symptom severity.

Although the GRCS-SF and emotion regulation were not significant predictors of PTSD symptom severity and emotion regulation did not moderate this relationship, it is important to note that there was a significant relationship between Conflicts Between Work and Family Relations and Restricted Emotionality and the PCL-5. It is possible that Conflicts Between Work and Family Relations and Restricted Emotionality are not predictive of PTSD symptoms, however they relate to severity of symptoms. For example, it is possible that these subscales may

moderate or mediate the relationship between previous predictors (e.g., interpersonal trauma, severity of injury, etc.) and PTSD symptom severity. Another possibility is that men that adhere to these socialized gender roles may manifest PTSD differently. On the contrary, these masculine gender roles may be a protective factor in the development of PTSD. Another possibility is the type of trauma may relate to endorsement of PTSD symptoms. For example, within the acutely injured population, motor vehicle crashes are the most common mechanism of injury. It is possible that men may not perceive this event as traumatic and may not report specific symptom clusters of PTSD. Finally, the study may not have had enough power to determine if emotion regulation moderated this relationship.

### **Limitations**

One major limitation to this study was the insufficient power to detect an interaction effect. The sample size (e.g., 90) was small which likely impacted the ability to detect an interaction. The reason lack of power likely impacted the results is because although there were no significant interactions within any of the eight models, when plotted on a scatterplot the plots demonstrated potential interaction effects.

Another limitation of the study was the administrator's gender identity. Within the study the administrator identified as a woman. Although administration effects were minimized by having the same administrator, participants in the study may have responded differently to the questionnaires due to the administrator's gender identity. For example, when administering the GRCS-SF participants in the study were often concerned about how the administrator was perceiving them. An example of this is when the administrator was administering items on the Restricted Affectionate Behavior Between Men scale. Participants often stated "I don't like men" and "I have gay friends" when answering these type of questions. Further, one participant

dropped out of the study while administrating the GRCS-SF. Although the administrator attempted to respond neutrally in these situations, fear of judgement or wanting to be perceived favorably could have impacted how the participants responded to these questions.

Although having the same administrator is a strength, however it is also a limitation within this study. One reason this is a limitation is because the administrator was also the recruiter and the primary investigator for the study. Since this study was for the administrator's dissertation, the administrator conducted all the study's procedures. For example, the administrator developed the study's protocol, screened potential participants, recruited participants, analyzed the data, and interpreted the results. As a result, the administrator's bias could have had an impact on the results. Although the primary investigator attempted to minimize this by attending a weekly research meeting and checking in with committee members, it is still important to note that a selection bias could have occurred during the initial screening process. On the contrary, this is also a strength since the administrator was aware of the purpose of the study and was able to clarify participants' questions related to the study and questionnaires.

Another potential limitation of the study was the type of questionnaires administered and social desirability. For example, when approaching potential participants, the administrator would introduce herself and note what department she was from (e.g., Trauma Psychology Research). Several potential participants were concerned about content of the survey (e.g., mental health) and stigma associated with mental health. Although the administrator clarified the purpose of the study and answered the potential participants' questions, participants often did not want to participate in the study due to the sensitive nature of the questions (e.g., GRCS-SF and

PCL-5) and/or fear related to mental health stigma. These fears and lack of compensation might have created a nonresponse bias in the study.

Participants motivation to complete the questionnaires is another limitation of this study. Participants were not compensated for their time, which could have impacted the results and contributed to the nonresponse bias. For example, lack of compensation could have impacted the type of participants that agreed to participate in the study. Although this is unlikely, since most individuals approached for the study did not ask about compensation, it is still important to note that this might have impacted the type of participants that consented to participate in the study. Further, the assessments took 15 minutes to complete and participants may have lost motivation during the administration of the assessments. Although counterbalancing was done to reduce these effects, it may still have a small impact on the study.

Timing of the assessments was another limitation of the study. The participants were approached within 1 to 30 days post trauma exposure. As a result, this may have impacted the results of the study. One reason this may have impacted the results is participants may have been acutely distressed and more focused on how the trauma impacted their physical health rather than their mental health. Further, participants may not have experienced some PTSD symptoms (e.g., avoidance of places and things, loss of interest in activities) while they were still in the hospital. Further, the PCL-5 is an excellent measure of PTSD symptom severity, however it would be beneficial to administer the assessment at multiple time points rather than at just one. In addition, adding an additional diagnostic assessment (e.g., Clinician-Administered PTSD Scale for DSM-5) would have also been beneficial.

Finally, medications may have influenced on the results of the study. For example, most participants were assessed while they were admitted to the hospital. During this time,



participants may have received medications that could have influenced the severity of their symptoms. Previous research has suggested that certain medications may influence severity and development of PTSD symptoms (Sijbrandij, Kleiboer, Bisson, Barbui, & Cuijpers, 2015). As a result, participants taking these medications may have initially reported minimal PTSD symptoms, however later may endorse high symptom severity due to them no longer being on these medications.

### **Design limitations.**

One limitation to this type of design method is nonresponse bias. Nonresponse bias occurs when not all members of the sample participate in the survey. Nonresponse bias is a limitation to this cross-sectional approach since not everyone in the sample participated in the survey. Sampling method is another concern, since the participants in this study were not randomly selected. Another limitation was the inability to determine causal relationships between the independent and dependent variables. Although causation cannot be determined, the purpose of this study was to understand and clarify the relationship between the independent and dependent variables. Further, since this study is a pilot study more research will need to further understand how these variables relate to one another. Maturation was another concern for this study, since participants experienced an injury as a result of their admittance to the hospital. As a result, their recovery might have influenced their responses to the questionnaires. Finally, the last limitation to this approach was assessing participants at only one-time point. Since participants were only measured at one-time point rather than several time points this decreases the internal validity of the study.

### **Strengths**

Although there were several limitations to the study there were also numerous strengths. One strength of the study was consistency. For example, the administrator of the assessments was the same throughout the study. Having the same administrator eliminated administration differences since the assessments were administered the same way to each participant. In addition, when participants requested clarification from the administrator, the administrator responded the same way to each participant, which reduced variability. Further, having the same recruiter for the study ensured that participants were recruited the same way each time and that Criterion A of the inclusion criteria was consistent.

Another strength to this study is that it is the first study assessing gender roles in the acutely injured population. Previous research has assessed these beliefs and behaviors in college students and Veterans (Blazina and Watkins, 1996; Garcia, Finley, Lorber, & Jakupcak, 2011; Jakupcak, Osborne, Michael, Cook, & McFall, 2006; Kessler et al., 1995; O'Neil, 1982; Wester, Fowell Christianson, Vogel, & Wei, 2007); however, to date there have not been any studies that have assessed these beliefs in the acutely injured population. One reason this is a strength is that trauma exposure is significantly higher in the acutely injured population than the general population (O'Donnell, Creamer, Pattison, & Atkin, 2004). As a result, this pilot data may assist with the treatment of male trauma survivors following a traumatic injury. For example, understanding that stress and emotional restriction may contribute to the severity of PTSD symptoms early interventionists may incorporate this information into treatment. Early interventionists may implement stress management techniques and emotional processing interventions following a traumatic event. Another important consideration is that these results demonstrate that most individuals are resilient following a traumatic event. Resiliency is an important consideration since most studies assess problematic factors rather than growth factors

(Barlow & Hetzel-Riggin, 2017). Although further research will need to be done to determine growth factors it is important to note that most participants endorsed minimal PTSD symptoms.

### **Design strengths.**

A cross-sectional approach is useful when addressing research questions that seek to understand the relationship between the independent and dependent variables. Since the aim of the study was to determine the relationship between these variables, this type of approach is a strength. Another strength design is the participants in the study. Since our sample is our target population, this type of research method demonstrates high external validity. Convenience and time is an additional benefit to this design. Participants were assessed quickly, which reduced the burden to participate in this study. In addition, using brief questionnaires reduced the risk to participating in this study. Finally, since this population experiences high dropout rate this one-time survey method is beneficial in gathering information about this population.

### **Future Directions**

As predicted, there was a significant positive association between the subscales Restricted Emotionality and Conflicts Between Work and Family Relations and the PCL-5. Although these hypotheses were supported, the subscales Success, Power, and Competition and Restricted Affectionate Behavior Between Men did not demonstrate a significant relationship. Previous research has suggested that masculine gender roles may be protective against certain symptom clusters of PTSD (Garcia, Finley, Lorber, & Jakupcak, 2011). As a result, follow up analyses and further research would be beneficial to determine if there is a significant relationship between the subscales of the GRCS-SF and the different symptom clusters of PTSD. It is possible that men that adhere to these gender roles experience minimal overall PTSD symptoms, however experience an elevation in certain symptom cluster. As a result, these

masculine behaviors and beliefs may be protective against specific symptom clusters, however may exacerbate others. Further research is recommended to determine the relationship between gender roles and PTSD symptom clusters.

In addition, the study only assessed PTSD symptom severity. It would be beneficial for future researchers to assess depressive and somatic symptoms as well as PTSD symptom severity. Previous research has demonstrated that males that adhere to these gender roles are at an increased risk for depression (Good & Mintz, 1990). It is possible that masculine gender roles may be protective against PTSD symptoms, however men may experience more depressive symptoms following a traumatic event. In addition, it would be beneficial to assess somatic complaints as well as depressive symptoms, since men may manifest their symptoms in a physiological manner.

Another recommendation is using a different emotion regulation questionnaire. Although studies have demonstrated the validity of the ERQ (Brady, Kneebone, & Bailey, 2019; Gross & John, 2003) participants within this population appeared to have difficulty understanding the questionnaire. As a result, another emotion regulation questionnaire would be beneficial to determine if emotion regulation relates to masculine gender roles. Further, adding the Clinician Administered PTSD Scale for the DSM-5 (CAPS-5) would also be beneficial in determining if participants meet diagnostic criteria for PTSD. Although the purpose of the study was to determine a relationship between gender roles and PTSD symptom severity, understanding if participants meet diagnostic criteria would also be helpful. One reason it would be helpful is although an individual may endorse severe symptoms of PTSD on the PCL-5, the PCL-5 does not diagnosis them with PTSD (Weathers, Litz, et al., 2013). As a result, adding the CAPS-5 to a

study would provide additional information regarding the relationship between masculine gender roles and PTSD diagnosis.

In addition to measures, it would be beneficial to assess participants at multiple time points. The current study measured participants at one-time point (e.g., 1-30 days post trauma exposure). Although this approach is effective in gathering pilot data, reducing response bias, and dropout rates, a cross-sectional approach is not effective in concluding causal relationships. As a result, it would be beneficial to assess participants at multiple time points rather than at one time point. Although this is may be a trade off since dropout rates and response bias may increase it would allow for causal interpretations. Further, a longitudinal approach would allow researchers to determine if these relationships change over time.

Finally, the results of the study suggest that the majority of participants were resilient following a traumatic event. As a result, future researchers may find it beneficial to screen participants who are at high risk for developing PTSD prior to enrollment in the study. Since the majority of individuals that experience a trauma are resilient (Kessler et al., 1995), screening participants who are at risk may allow for more robust findings and assist with treatment recommendations within this population.

## **Conclusion**

The purpose of this study was to clarify the relationship between the GRCS-SF and the PCL-5 and determine if emotion regulation moderates this relationship. Previous research has demonstrated an inconsistent relationship between masculine gender roles and PTSD (Garcia, Finley, Lorber, & Jakupcak, 2011; Jakupcak, Osborne, Michael, Cook, & McFall, 2006). Further, researchers have suggested that emotional dysregulation exacerbates PTSD symptoms (Roemer, Litz, Orsillo, & Wagner, 2001). Results of the current study suggest that men that

restrict their emotional expression and men that experience distress related to conflict between work or school and personal values, endorse higher levels of PTSD symptoms. Although there was a significant relationship between these subscales, emotion regulation did not moderate the relationship between GRCS-SF and PCL-5. Further research is recommended to determine if these insignificant findings are a result of resiliency factors.

## References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author
- American Psychiatric Association. (2017). Multicultural guidelines: An ecological approach to context, identity, and intersectionality. Retrieved from <http://www.apa.org/about/policy/multicultural-guidelines.pdf>
- American College of Surgeons (2014). Resources for optimal care of the injured patient. Retrieved from <https://www.facs.org/quality%20programs/trauma/vrc/resources>
- Badour, C.L., Blonigen, D.M., Boden, M.T., Feldner, M.T., & Bonn-Miller, M.O. (2012). A longitudinal test of the bi-directional relations between avoidance coping and PTSD severity during and after PTSD treatment. *Behaviour Research and Therapy*, *50*(10), 610-616. <http://dx.doi.org/10.1016/j.brat.2012.06.006>
- Batten, S.V., Aslan, M., Maciejewski, P.K., & Mazure, C.M. (2004). Childhood maltreatment as a risk factor for adult cardiovascular disease and depression. *The Journal of Clinical Psychiatry*, *65*(2), 249-254.
- Barlow, M.R. & Hetzel-Riggin, M.D. (2017). Predicting posttraumatic growth in survivors of interpersonal trauma: Gender role adherence is more important than gender. *Psychology of Men and Masculinity*, *19*(3), 446-456. <https://psycnet.apa.org/doi/10.1037/men0000128>
- Barrett, L.F., Mesquita, B., Ochsner, K.N., & Gross, J.J. (2007). The experience of emotion. *Annual Review of Psychology*, *58*, 1-31.
- Berke, D. S., Reidy, D. E., Miller, J. D., & Zeichner, A. (2017). Take it like a man: Gender-

- threatened men's experience of gender role discrepancy, emotion activation, and pain tolerance. *Psychology of Men & Masculinity*, 18(1), 62-69.
- Blevins, C.A., Weathers, F.W., Davis, M.T., Witte, T.K., & Domino, J.L. (2015). The posttraumatic stress disorder checklist for DSM-5 (PCL-5): Development and initial psychometric evaluation. *Journal of Traumatic Stress*, 28, 489-498.
- Blazina, C., & Watkins, E.C. (1996). Masculine gender role conflict: Effects on college men's psychological well-being, chemical substance usage, and attitudes towards help-seeking. *Journal of Counseling Psychology*, 43, 461-465.
- Bonnie, R. J., Fulco, C. E., & Liverman, C. T. (1999). *Reducing the burden of injury: Advancing prevention and treatment*. Washington, DC: National Academy Press
- Boscarino, J.A. (2004). Posttraumatic stress disorder and physical illness: Results from clinical and epidemiologic studies. *Annals of the New York Academy Of Sciences*, 1032(1), 141-153.
- Brady, B., Kneebone, I. I., & Bailey, P. E. (2019). Validation of the emotion regulation questionnaire in older community-dwelling adults. *British Journal of Clinical Psychology*, 58(1), 110–122. <https://doi-org.ezproxy.lib.uwm.edu/10.1111/bjc.12203>
- Breslau, N., Lucia, V.C., & Davis, G.C. (2004). Partial PTSD versus full PTSD: An empirical examination of associated impairment. *Psychological Medicine*, 34, 1205-1214.
- Briere, J.N., & Scott, C. (2015). *Principles of Trauma Therapy: A guide to symptoms, evaluation, and treatment* (2<sup>nd</sup> ed). CA: Sage Publications.
- Brownlow, J. A., Zitnik, G. A., McLean, C. P., & Gehrman, P. R. (2018). The influence of



- deployment stress and life stress on post-traumatic stress disorder (PTSD) diagnosis among military personnel. *Journal of Psychiatric Research*, *103*, 26–32. <https://doi-org.ezproxy.lib.uwm.edu/10.1016/j.jpsychires.2018.05.005>
- Butler, E.A., Egloff, B., Wilhelm, F.H., Smith, N.C., & Gross, J.J. (2003). The social consequences of emotion regulation. *Emotion*, *3*, 48-67.
- Chao, R.C.L. (2012). Racial/ethnic identity, gender-role attitudes, and multicultural counseling competence: The role of multicultural counseling training. *Journal of Counseling and Development*, *90*, 35-44.
- Chiu, K. B., deRoon-Cassini, T. A., & Brasel, K. J. (2011). Factors identifying risk for psychological distress in the civilian trauma population. *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine*, *18*(11), 1156–1160. <http://doi.org/10.1111/j.1553-2712.2011.01206.x>
- deRoon-Cassini, T.A., Mancini, A.D., Rush, M.D., & Bonanno, G.A. (2010). Psychopathology and resilience following traumatic injury: A latent growth mixture model analysis. *Rehabilitation Psychology*, *55*, 1-11. doi: 10.1037/a0018601
- Eftekhari, A., Zoellner, L. A., & Vigil, S. A. (2009). Patterns of emotion regulation and psychopathology. *Anxiety, Stress, and Coping*, *22*(5), 571–586. <http://doi.org/10.1080/10615800802179860>
- Ehring, T., & Ehlers, A. (2014). Does rumination mediate the relationship between emotion regulation ability and posttraumatic stress disorder? *European Journal of Psychotraumatology*, *5*. doi: 10.3402/ejpt.v5.23547
- Fragoso, J. M., & Kashubeck, S. (2000). Machismo, gender role conflict, and mental health in Mexican American men. *Psychology of Men & Masculinity*, *1*(2), 87-97.

- Frazier, P.A., Tix, A.P., & Barron, K.E. (2004). Testing moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology, 51*, 115-134.
- Foa, E. B., & Kozak, M. J. (1986). Emotional processing of fear: exposure to corrective information. *Psychological Bulletin, 99*, 20e35. <http://dx.doi.org/10.1037/0033-2909.99.1.20>.
- Froedtert and the Medical College of Wisconsin (2017). *Adult level 1 trauma center annual report*. Retrieved from <https://www.froedtert.com/upload/docs/services/trauma/trauma-annual-report.pdf>
- Fuglsang, A.K., Moergeli, H., & Schnyder, U. (2004) Does acute stress disorder predict post-traumatic stress disorder in traffic accident victims? Analysis of a self-report inventory. *Nordic Journal of Psychiatry, 58*, 223-229. doi:10.1080/08039480410006278
- Garcia, H. A., Finley, E. P., Lorber, W., & Jakupcak, M. (2011). A preliminary study of the association between traditional masculine behavioral norms and PTSD symptoms in Iraq and Afghanistan veterans. *Psychology of Men & Masculinity, 12*(1), 55-63
- Goldsmith, R.E., Chesney, S.A., Heath, N.M., & Barlow, M.R. (2013). Emotion regulation difficulties mediate associations between betrayal trauma and symptoms of posttraumatic stress, depression, and anxiety. *Journal of Traumatic Stress, 26*, 376-384. doi: 10.1002/jts.21819
- Good, G. E., & Mintz, L. M. (1990). Gender role conflict and depression in college men: Evidence for compounded risk. *Journal of Counseling and Development, 69*, 17-21.
- Gross, J. J. (2001). Emotion regulation in adulthood: Timing is everything. *Current Directions in Psychological Science, 10*, 214–219
- Good, G.E., & Wood, P.K. (1995). Male gender role conflict, depression, and help seeking: Do

- college men face double jeopardy? *Journal of Counseling and Development*, 71, 70-75.
- Gross, J.J., & John, O.P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85, 348-362.
- Haga, M.S., Kraft, P., & Corby, E.K. (2009). Emotion regulation: Antecedents and well-being outcomes of cognitive reappraisal and expressive suppression in cross-cultural samples. *Journal of Happiness Studies*, 10, 271-291. doi: 10.1007/s10902-007-9080-3
- Hoyt, M.A. (2009). Gender role conflict and emotional approach coping in men with cancer. *Journal of Psychology and Health*, 24, 981-996. doi: 10.1080/08870440802311330
- Jakupcak, M., Blais, R. K., Grossbard, J., Garcia, H., & Okiishi, J. (2013). "Toughness" in association with mental health symptoms among Iraq and Afghanistan war veterans seeking veterans affairs health care. *Psychology of Men and Masculinity*, 15(1), 100-104. doi: 10.1037/a0031508.
- Jakupcak, M., Osborne, T. L., Michael, S., Cook, J. W., & McFall, M. (2006). Implications of masculine gender role stress in male veterans with posttraumatic stress disorder. *Psychology of Men and Masculinity*, 7(4), 203-211. doi: 10.1037/1524-9220.7.4.203
- Johansen, V.A., Wahl, A.K., Eilertsen, D.E., & Weisaeth, L. (2007) Prevalence and predictors of post-traumatic stress disorder (PTSD) in physically injured victims of non-domestic violence: A longitudinal study. *Social Psychiatry and Psychiatric Epidemiology*, 42, 583-953.
- Kessler, R.C., Sonnega, A., Bromet, E., Hughes, M., and Nelson, C.B. (1995). Posttraumatic

- stress disorder in the national comorbidity survey. *Archives of General Psychiatry*, 52, 1048-1060.
- Koole, S.L. (2009). The psychology of emotion regulation: An integrative review. *Cognition and Emotion*, 23 (1), 4-41.
- Korcuska, J.S., & Thombs, D.L. (2003). Gender role conflict and sex-specific drinking norms: Relationship to alcohol use in undergraduate women and men. *Journal of College Student Development*, 44 (2), 204-216.
- Kutner, M. H., Nachtsheim, C., & Neter, J. (2004). Applied linear regression models. McGraw-Hill/Irwin.
- Levant, R. F. (2001). The crisis of boyhood. In G. R. Brooks & G. E. Good (Eds.), *The new handbook of GENDER ROLE CONFLICT AND PSYCHOLOGICAL DISTRESS* 223 psychotherapy and counseling with men: A comprehensive guide to settings, problems, and treatment approaches (Vol. 1, (pp. 2355–2368). San Francisco, CA: Jossey-Bass.
- Magovcevic, M., & Addis, M.E. (2005). Linking gender-role conflict to nonnormative and self-stigmatizing perceptions of alcohol abuse and depression. *Psychology of Men and Masculinity*, 6 (2), 127-136.
- McDermott, M. J., Tull, M. T., Soenke, M., Jakupcak, M., & Gratz, K. L. (2010). Masculine gender role stress and posttraumatic stress disorder symptom severity among inpatient male crack/cocaine users. *Psychology of Men & Masculinity*, 11(3), 225-232.
- Meyer, T., Smeets, T., Giesbrecht, T., & Merckelbach, H. (2012). The efficiency of reappraisal and expressive suppression in regulating everyday affective experiences. *Psychiatry Research*, 200(2-3), 964-969. doi: 10.1016/j.psychres. 2012.05.034
- Moore, T. M., & Stuart, G. L. (2004). Effects of masculine gender role stress on men's cognitive,

affective, physiological, and aggressive responses to intimate conflict situations.

*Psychology of Men & Masculinity*, 5, 132-142.

Moore, S. A., Zoellner, L.A., & Mollenholt, N. (2008) Are expressive suppression and cognitive reappraisal associated with stress-related symptoms? *Behavior Research and Therapy* 46, 993-1000.

Nguyen, C.M., Lui, W.M., Hernandez, J.O., & Stinson, R. (2012). Problem-solving appraisal, gender role conflict, help-seeking behavior, and psychological distress among men who are homeless. *Psychology of Men & Masculinity*, 13, 270-282.

O'Donnell, M.L., Creamer, M., & Pattison, P. (2004). Posttraumatic stress disorder and depression following trauma: Understanding comorbidity. *The American Journal of Psychiatry*, 161, 1390-1396.

O'Neil, J. M. (1982). Gender role conflict and strain in men's lives: Implications for psychiatrists, psychologists, and other human service providers. In K. Solomon & N. B. Levy (Eds.), *Men in transition* (pp. 5-40). New York: Plenum Press

Orcutt, H. K., Erickson, D. J., & Wolfe, J. (2004). The course of PTSD symptoms among Gulf War veterans: A growth mixture modeling approach. *Journal of Traumatic Stress*, 17(3), 195-202. doi:10.1023/B:JOTS.0000029262.42865.c2

Osenbach, J.E., Lewis, C., Rosenfeld, B., Russo, J., Ingraham, L.M., Peterson, R., ...Zatzick, D.F. (2014). Exploring the longitudinal trajectories of posttraumatic stress disorder in injured trauma survivors. *Psychiatry*, 77, 386-397.

Pederson, E. L., & Vogel, D. L. (2007). Male gender role conflict and willingness to seek counseling: Testing a mediation model on college-aged men. *Journal of Counseling Psychology*, 54(4), 373-384.

- Powers, M.B., Warren, A.M., Rosenfield, D., Roden-Foreman, K., Bennett, M., Reynolds, M.C., ...Smits, J.A.J. (2014). Predictors of PTSD symptoms in adults admitted to level I trauma center: A prospective analysis. *Journal of Anxiety Disorders*, 28, 301-309.
- Ramchand, R., Marshall, G. N., Schell, T. L., & Jaycox, L. H. (2008). Posttraumatic distress and physical functioning: A longitudinal study of injured survivors of community violence. *Journal of Consulting and Clinical Psychology*, 76(4), 668–676.
- Ramstad, S.M., Russo, J., & Zatzick, D.F. (2004). Is it an accident? Recurrent traumatic events in level I trauma center patients compared to the general population. *Journal of Traumatic Stress*, 17 (6), 529-534.
- Ray, S.L. & Vanstone, M. (2009). The impact of PTSD on veterans' family relationships: An interpret phenomenological inquiry. *International Journal of Nursing Studies*, 46, 838-847.
- Resick, P. A., & Schnicke, M. K. (1992). Cognitive processing therapy for sexual assault victims. *Journal of Consulting and Clinical Psychology*, 60, 748e756.  
<http://dx.doi.org/10.1037/002-006X.60.5.748>.
- Richards, J.M., & Gross, J.J. (2000). Emotion regulation and memory: The cognitive costs of keeping one's cool. *Journal of Personality and Social Psychology*, 79, 410-424.
- Richards, J.M. & Gross, J.J. (2006) Personality and emotional memory: How regulating emotion impairs memory for emotional events. *Journal of Research in Personality*, 40, 631-651.  
doi:10.1016/j.jrp.2005.07.002
- Santos, M. R., Russo, J., Aisenberg, G., Uehara, E., Ghesquiere, A., & Zatzick, D. F. (2008). Ethnic/racial diversity and posttraumatic distress in the acute care medical setting. *Psychiatry: Interpersonal and Biological Processes*, 71(3), 234-245

- Schlatter, M.C. & Cameron, L.D. (2010). Emotional suppression tendencies as predictors of symptoms, mood, and coping appraisals during AC chemotherapy for breast cancer treatment. *Annals of Behavioral Medicine, 40*, 15-29.
- Sharpe, M.J., & Heppner, P.P. (1991). Gender role, gender role conflict, and psychological well-being in men. *Journal of Counseling Psychology, 38*, 323-330.
- Sijbrandij, M., Kleiboer, A., Bisson, J.I., Barbui, C., & Cuijpers, P. (2015). Pharmacological prevention of post-traumatic stress disorder and acute stress disorder: a systematic review and meta-analysis. *Lancet Psychiatry, 2*, 413-421. [http://dx.doi.org/10.1016/S2215-0366\(14\)00121-7](http://dx.doi.org/10.1016/S2215-0366(14)00121-7)
- Stephens, K.A., Stanley, S., Roy-Byrne, P., Unutzer, J., Wang, J., Rivara, F.P., ... Zatzick, D.F. (2010). Ethnoracial variations in acute PTSD symptoms among hospitalized survivors of traumatic injury. *Journal of Traumatic Stress, 23* (3), 384-392.
- Szczygiel, D., & Maruszewski, T. (2015). Why expressive suppression does not pay? Cognitive costs of negative emotion suppression: The mediating role of subjective tense-arousal. *Polish Psychology Bulletin, 46* (3), 336-349.
- Tamir, M. (2009). Why do people want to feel and why? Pleasure and the utility in emotion regulation. *Current Directions in Psychological Science, 18* (2), 101-105.
- Turner, K. L. & Brown, C. S. (2007). The centrality of gender and ethnic identities across individuals and contexts. *Social Development, 16*, 700-719.
- Verger, P., Dab, W., Lamping, D. L., Loze, J.Y., Deschaseaux-Voinet, C., Abenheim, L., & Rouillon, F. (2004). The psychological impact of terrorism: An epidemiologic study of posttraumatic stress disorder and associated factors in victims of the 1995-1996 bombings in France. *The American Journal of Psychiatry, 161*(8), 1384-1389.

- Vegter, V. (2013). Conceptualizing masculinity in female-to-male trans-identified individuals: A qualitative inquiry. *Canadian Journal of Counselling and Psychotherapy, 47*, 88-108.
- Victorson, D., Farmer, L., Burnett, K., Ouellette, A., & Barocas, J. (2005). Maladaptive Coping Strategies and Injury-Related Distress Following Traumatic Physical Injury. *Rehabilitation Psychology, 50*(4), 408-415.
- Vogel, D. L., Wester, S. R., Hammer, J. H., & Downing-Matibag, T. M. (2014). Referring men to seek help: The influence of gender role conflict and stigma. *Psychology of Men & Masculinity, 15*(1), 60-67
- Vogel, D. L., Wester, S. R., & Larson, L. M. (2007). Avoidance of counseling: Psychological factors that inhibit seeking help. *Journal of Counseling & Development, 85*, 410-422.
- Wester, S.R., Fowell Christianson, H., Vogel, D.L., & Wei, M. (2007) Gender role conflict and psychological distress: The role of social support. *Psychology of Men & Masculinity, 8*, 215-224.
- Wester, S. R., Vogel, D. L., O'Neil, J. M., & Danforth, L. (2012). Development and evaluation of the Gender Role Conflict Scale Short Form (GRCS-SF). *Psychology of Men & Masculinity, 13*, 199–210. <http://dx.doi.org/10.1037/a0025550>
- Weathers, F. W., Blake, D. D., Schnurr, P. P., Kaloupek, D. G., Marx, B. P., & Keane, T. M. (2013). *The Clinician-Administered PTSD Scale for DSM–5 (CAPS-5)*. Retrieved from [www.ptsd.va.gov](http://www.ptsd.va.gov)
- Weathers, F.W., Bovin, M.J., Lee, D.J., Sloan, D.M., Schnurr, P.P., Kaloupek, D.G., ... Marx, B.P. (2017). The clinician-administered PTSD scale for DSM-5 (CAPS-5): Development and initial psychometric evaluation in military veterans. *Psychological Assessment, 30* (3), 383-395.



Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013).

*The PTSD Checklist for DSM-5 (PCL-5)*. Retrieved from [www.ptsd.va.gov](http://www.ptsd.va.gov)

Westen, D., & Rosenthal, R. (2003). Quantifying construct validity: Two simple measures.

*Journal of Personality and Social Psychology*, *84*, 608–618. doi:10.1037/0022-

3514.84.3.608

Westphal, M., Olfson, M., Gameroff, M.J., Wickramaratne, P., Pilowsky, D.J., Neugebauer, R.,

... Neria, Y. (2011). Functional impairment in adults with past posttraumatic stress

disorder: Findings from primary care. *Depression and Anxiety*, *28*, 686-695

Figure 1. Hypothesized Success, Power, and Competition and Cognitive Reappraisal Moderation Model for Question 2

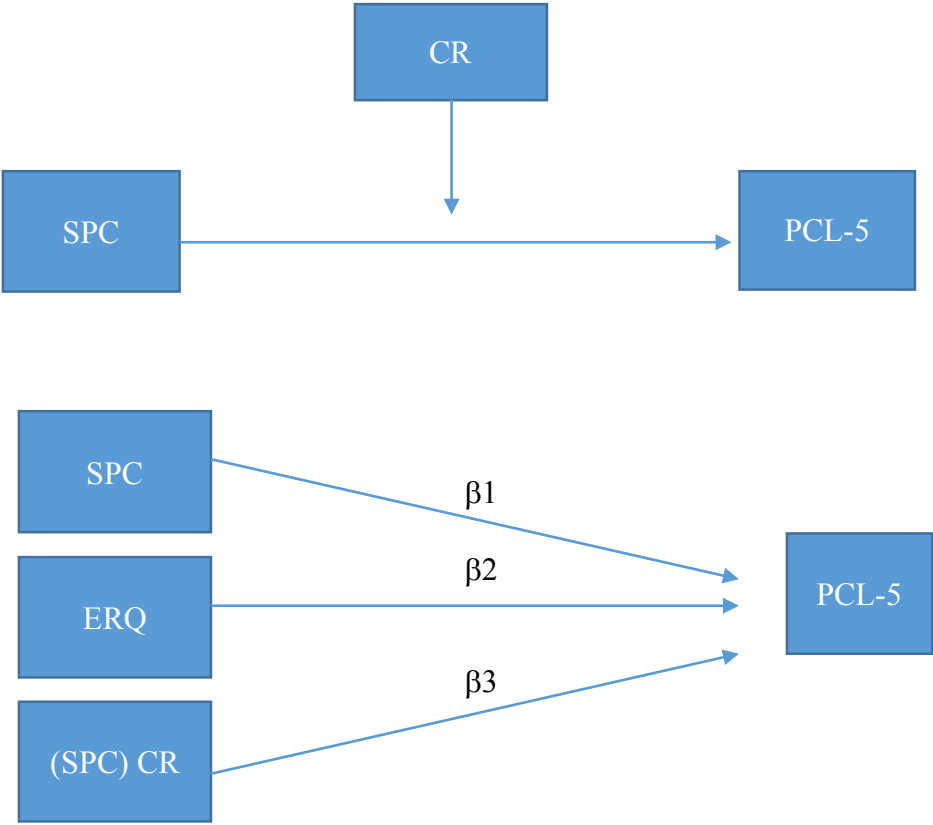


Figure 2. Hypothesized Success, Power, and Competition and Expressive Suppression Moderation Model for Question 2

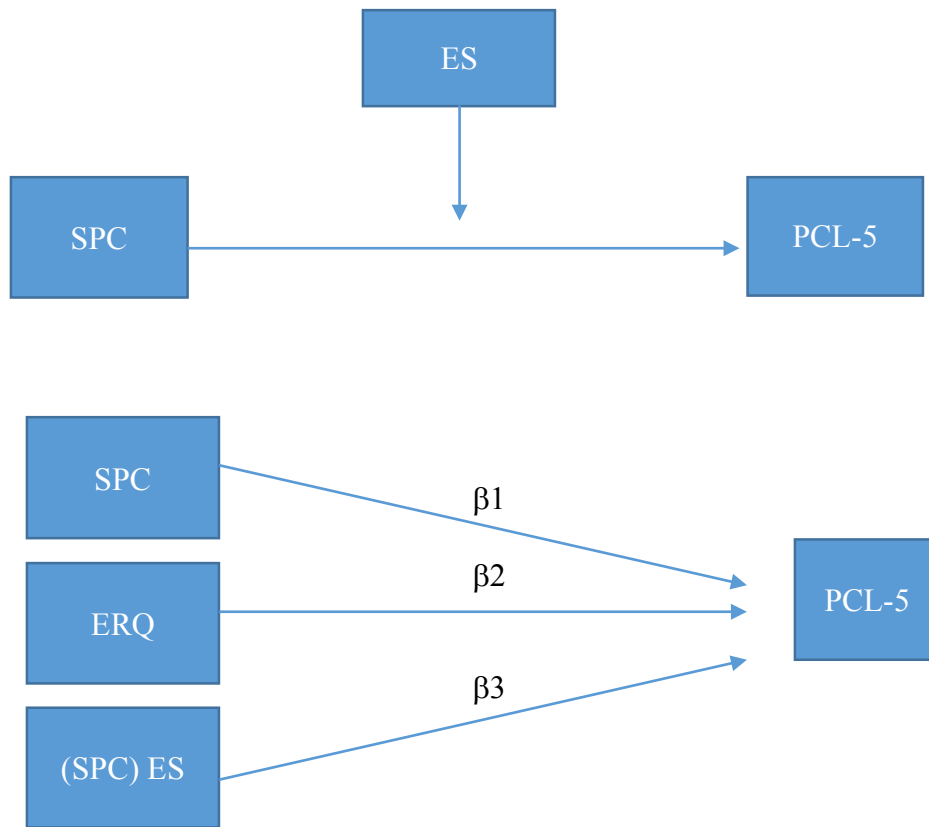


Figure 3. Hypothesized Restricted Emotionality and Cognitive Reappraisal Moderation Model for Question 2

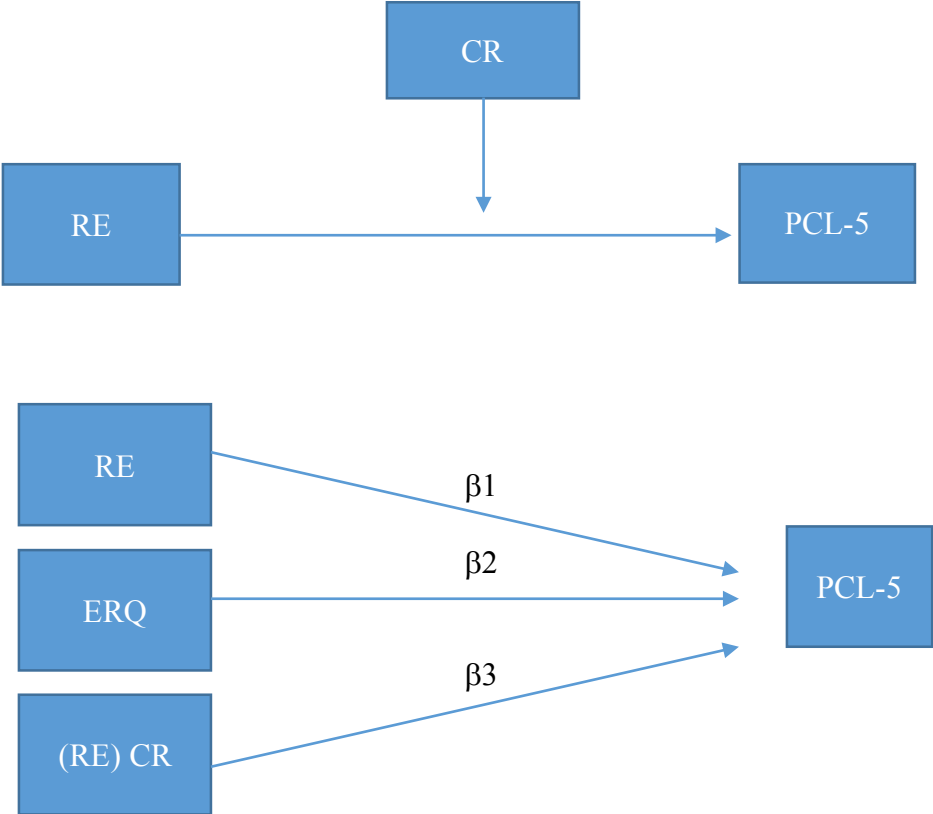


Figure 4. Hypothesized Restricted Emotionality and Expressive Suppression Moderation Model for Question 2

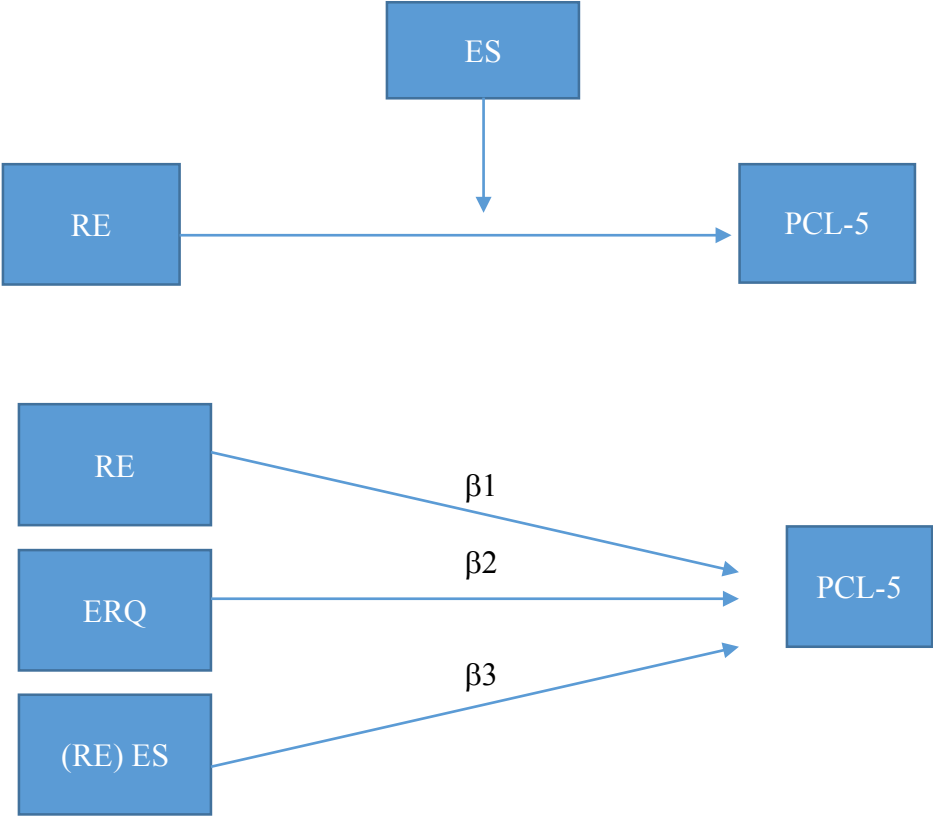


Figure 5. Hypothesized Restricted Affectionate Behavior Between Men and Cognitive Reappraisal Moderation Model for Question 2

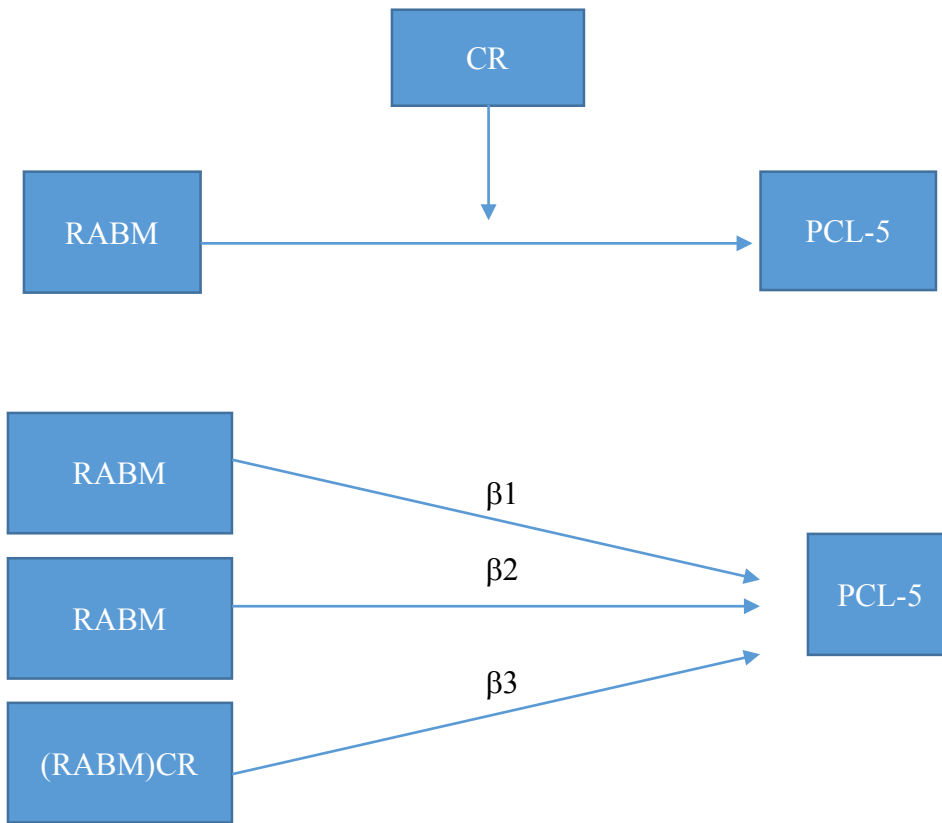


Figure 6. Hypothesized Restricted Affectionate Behavior Between Men and Expressive Suppression Moderation Model for Question 2

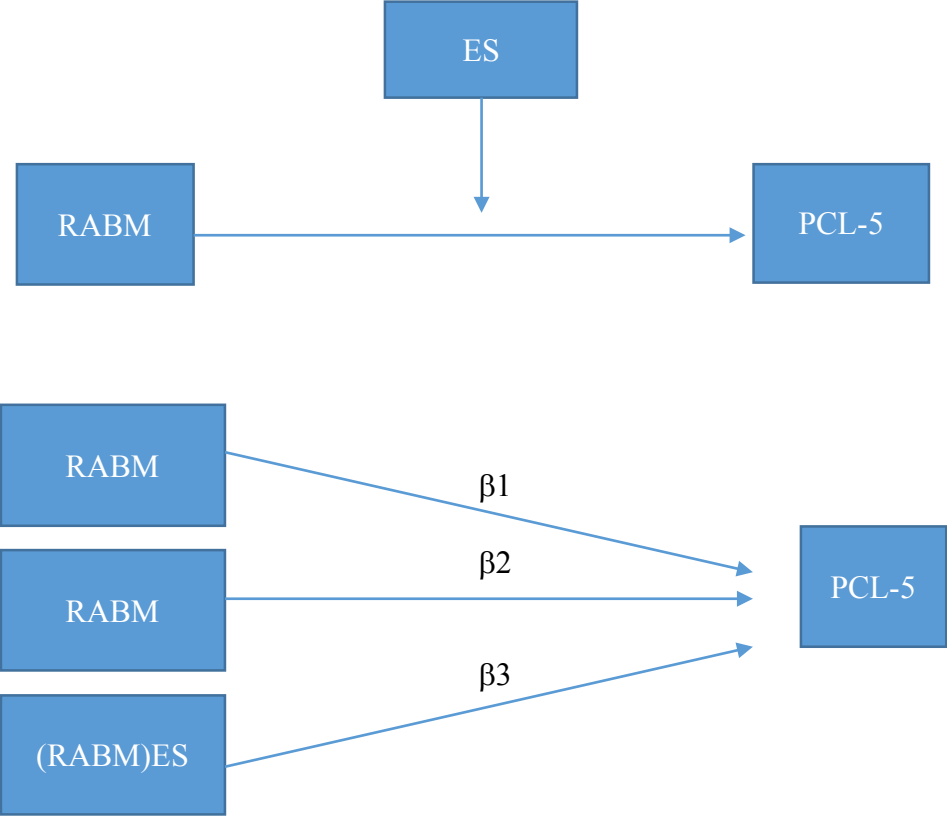


Figure 7. Hypothesized Conflicts Between Work and Family Relations and Cognitive Reappraisal Moderation Model for Question 2

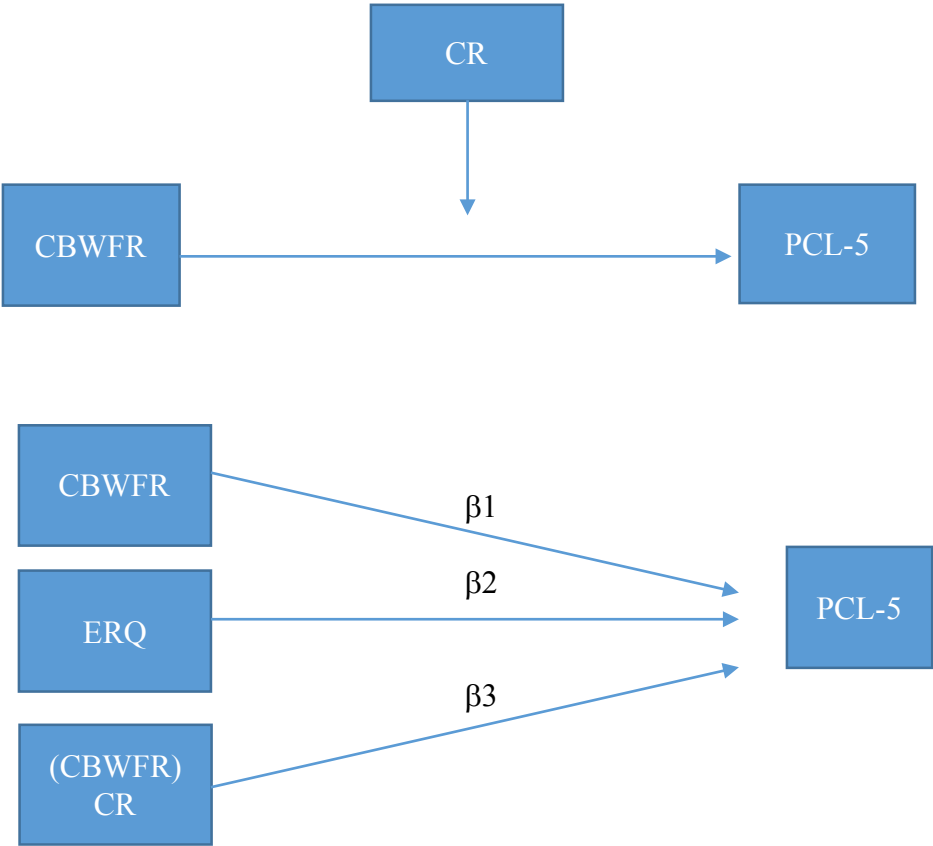




Figure 8. Hypothesized Conflicts Between Work and Family Relations and Expressive Suppression Moderation Model for Question 2

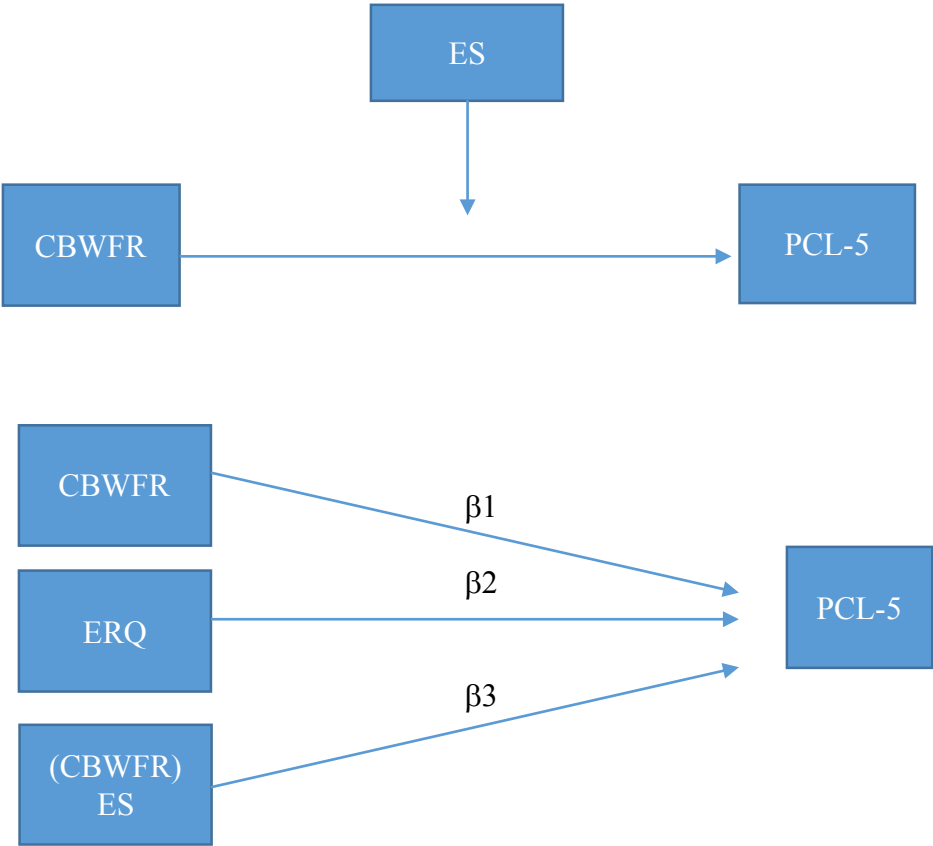


Figure 9. Cognitive Reappraisal on Conflicts Between Work and Family Relations and PTSD Symptom Severity

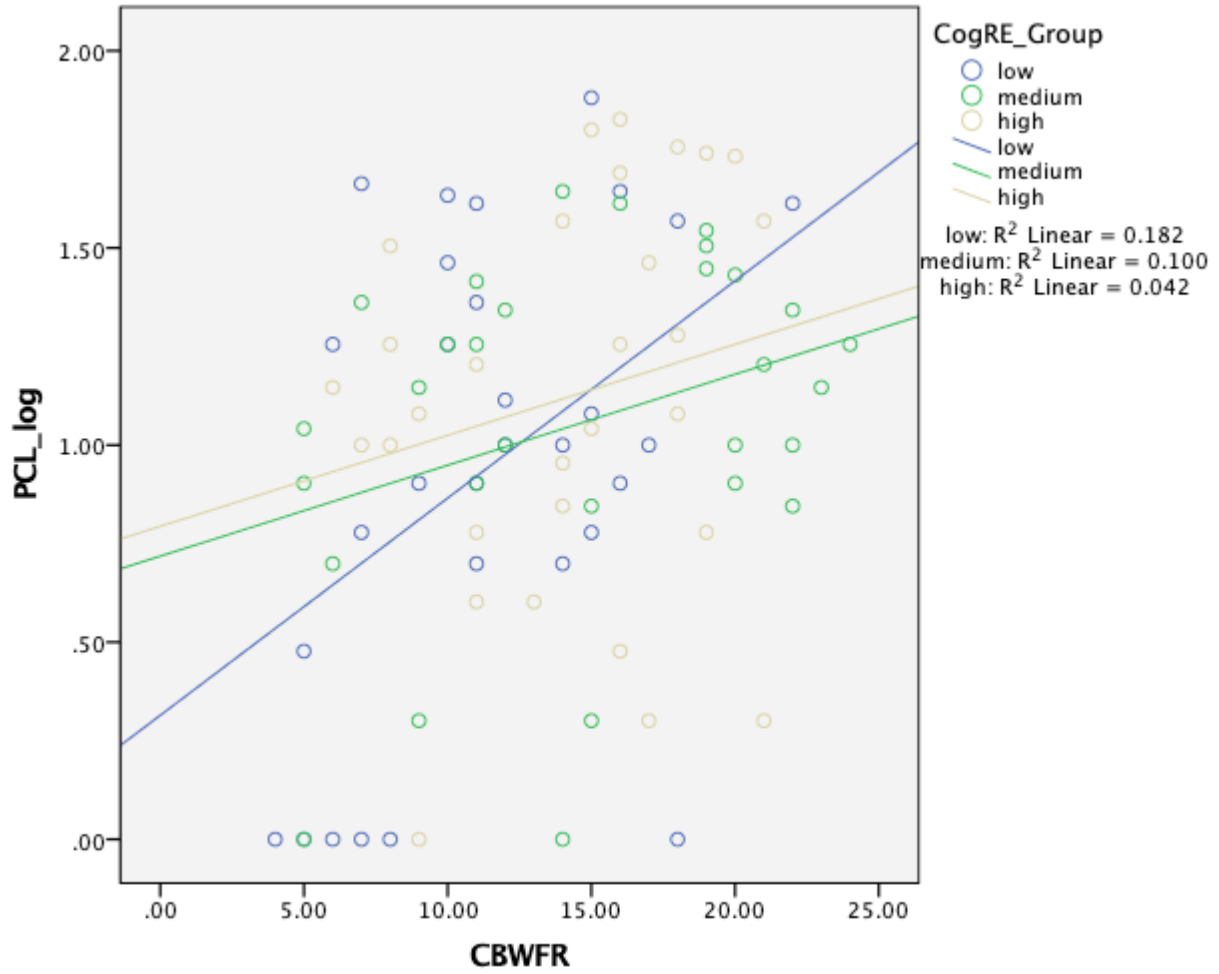


Figure 10. Cognitive Reappraisal on Success Power and Competition and PTSD Symptom Severity

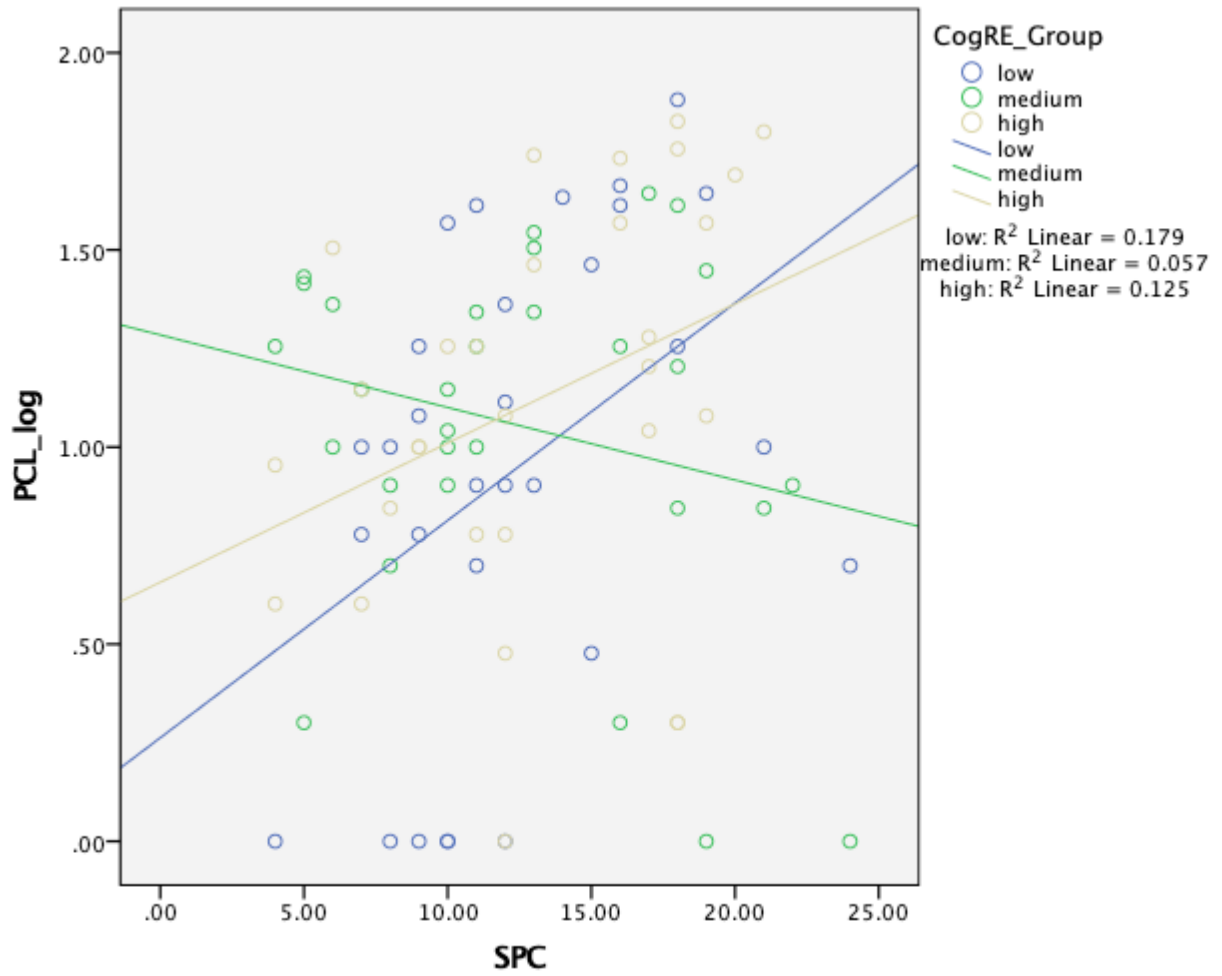


Figure 11. Cognitive Reappraisal on Restricted Affectionate Behavior Between Men and PTSD Symptom Severity

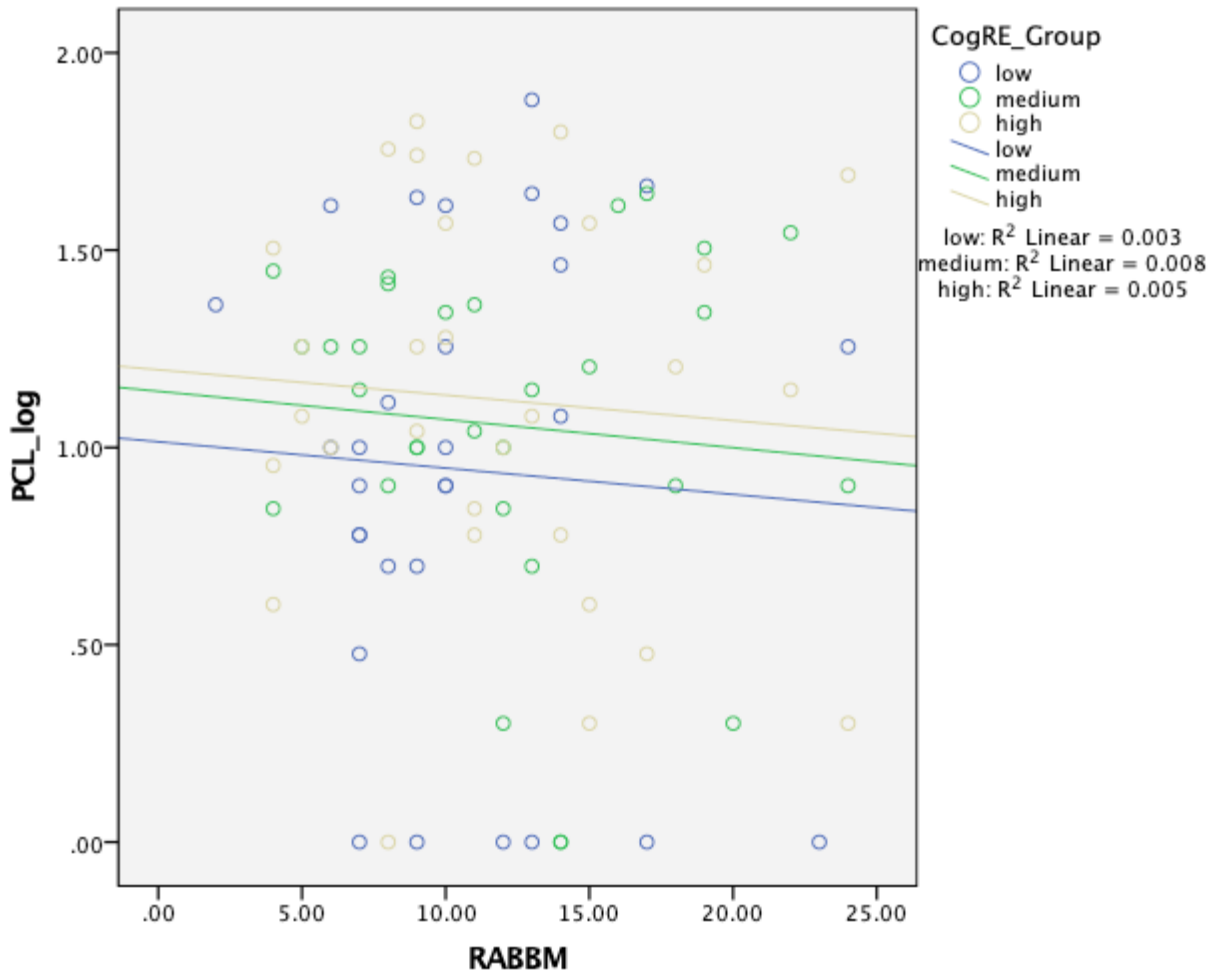


Figure 12. Cognitive Reappraisal on Restricted Emotionality and PTSD Symptom Severity

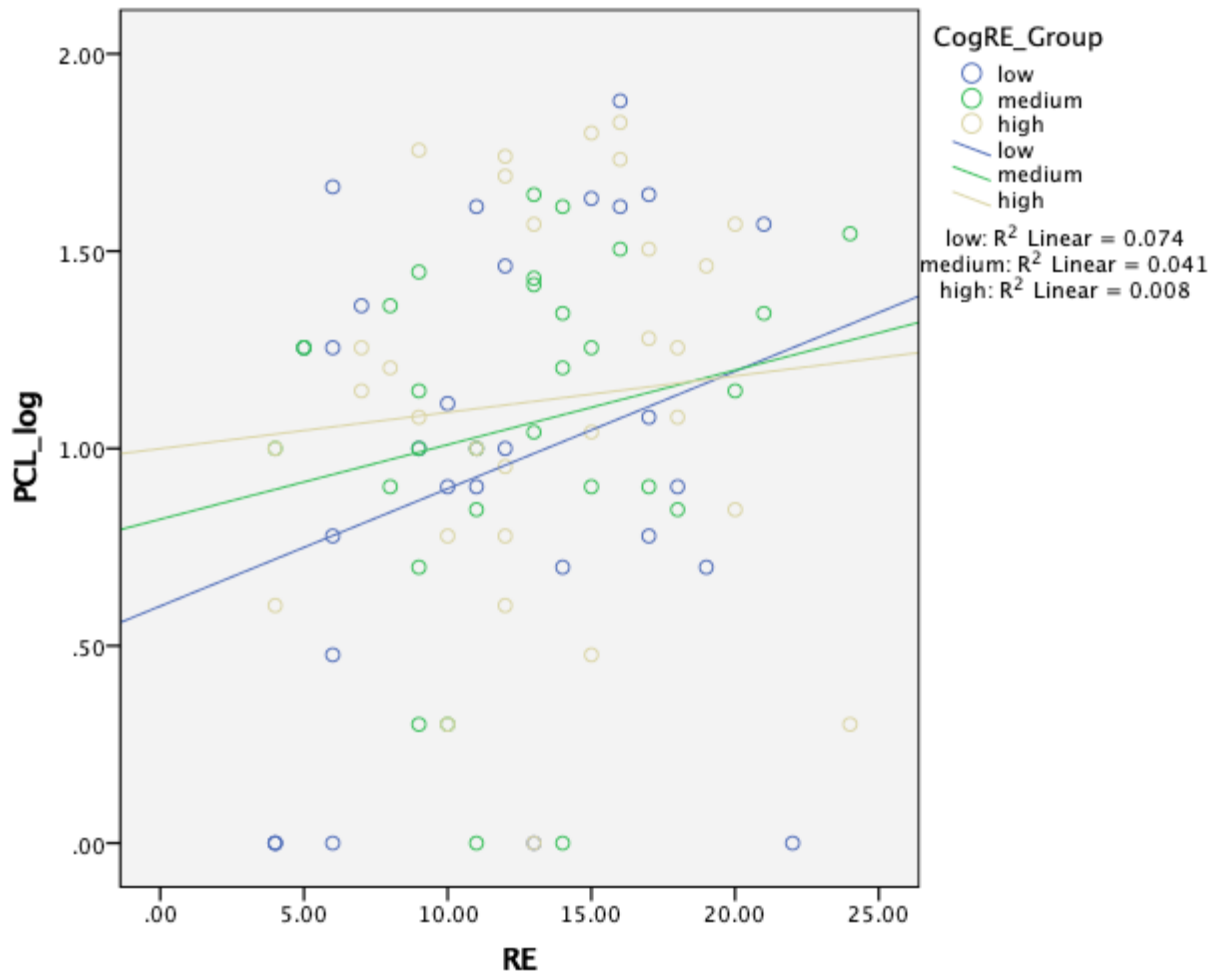


Figure 13. Expressive Suppression on Conflicts Between Work and Family Relations and PTSD Symptom Severity

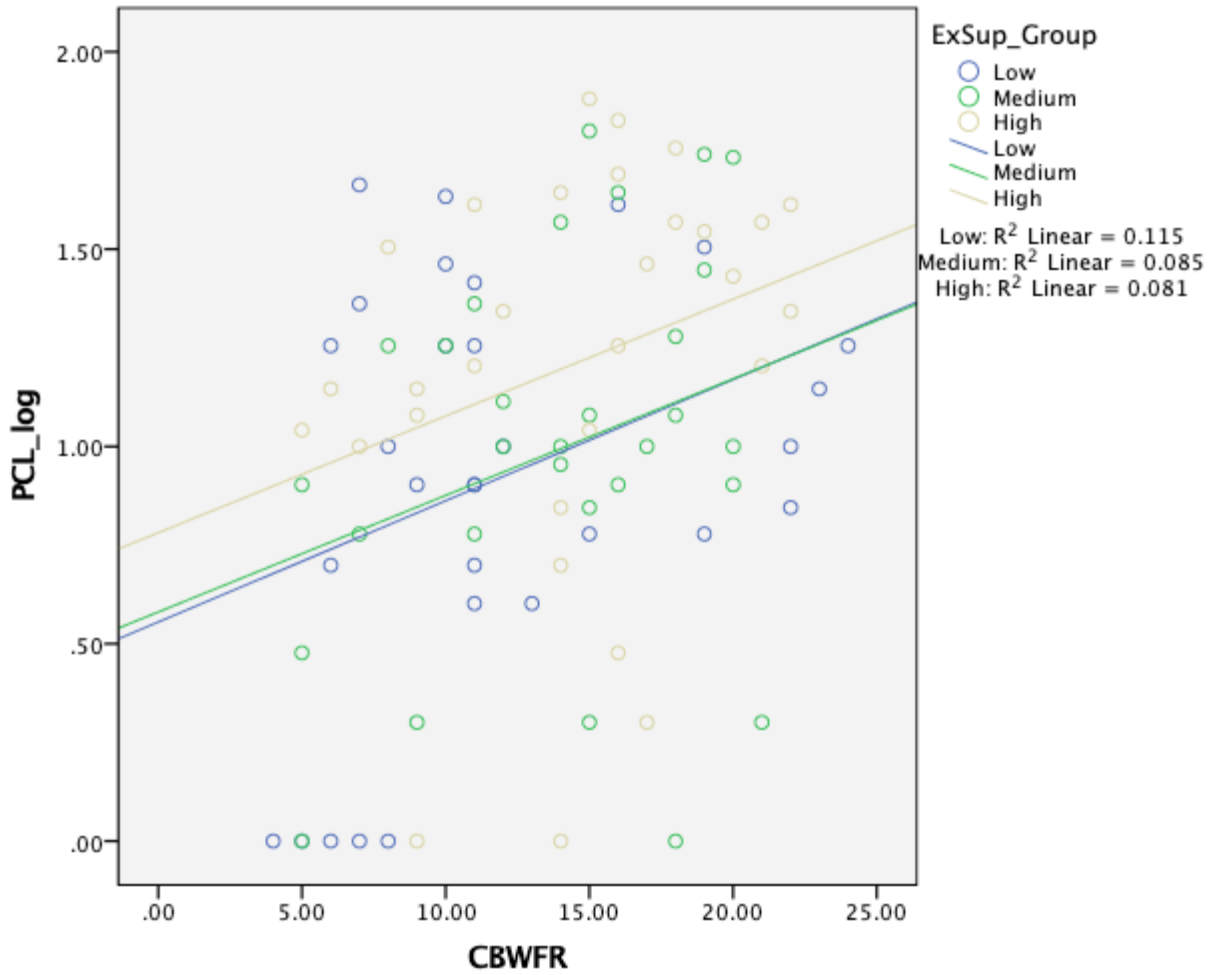


Figure 14. Expressive Suppression on Success Power and Competition and PTSD Symptom Severity

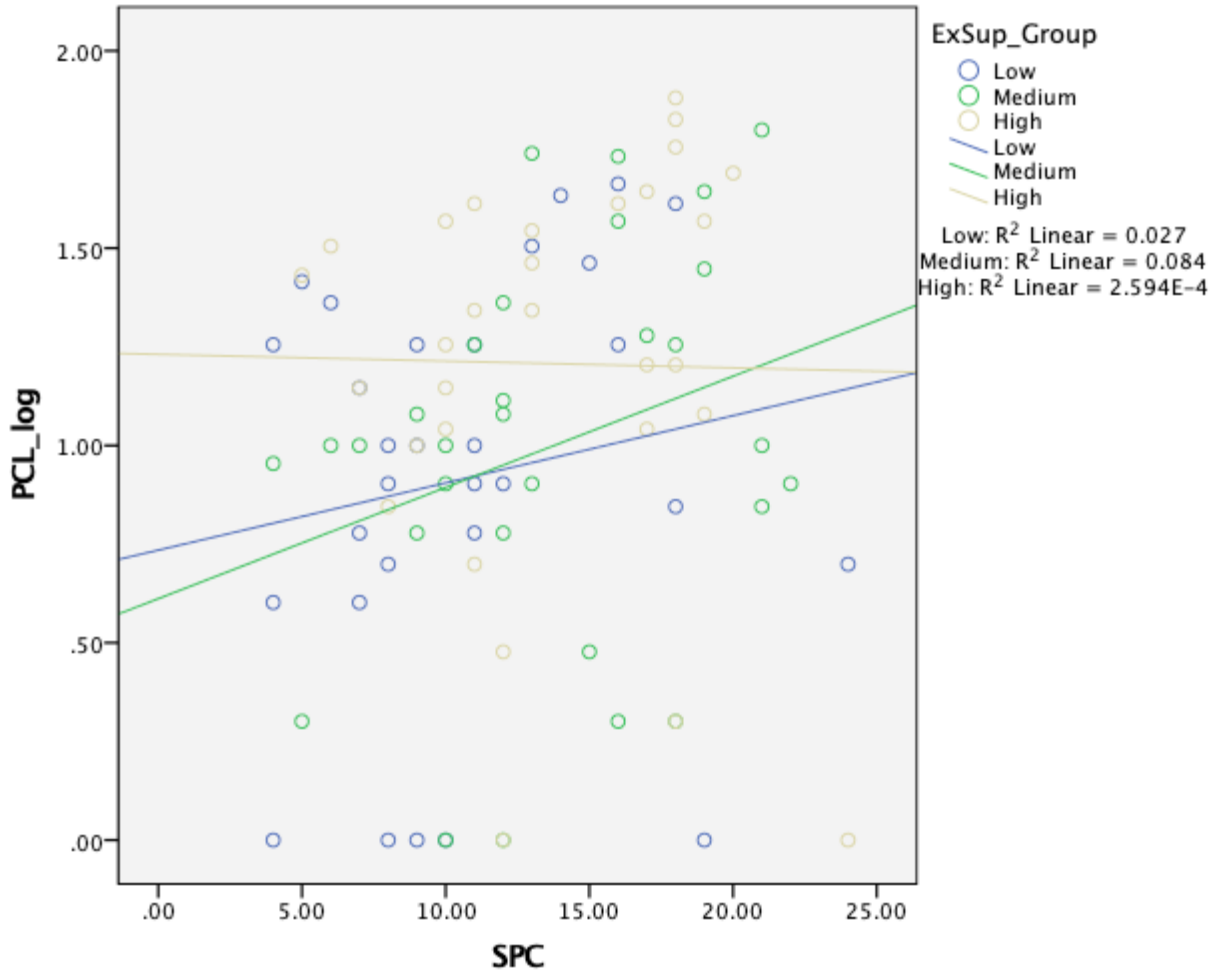


Figure 15. Expressive Suppression on Restricted Affectionate Behavior Between Men and PTSD Symptom Severity

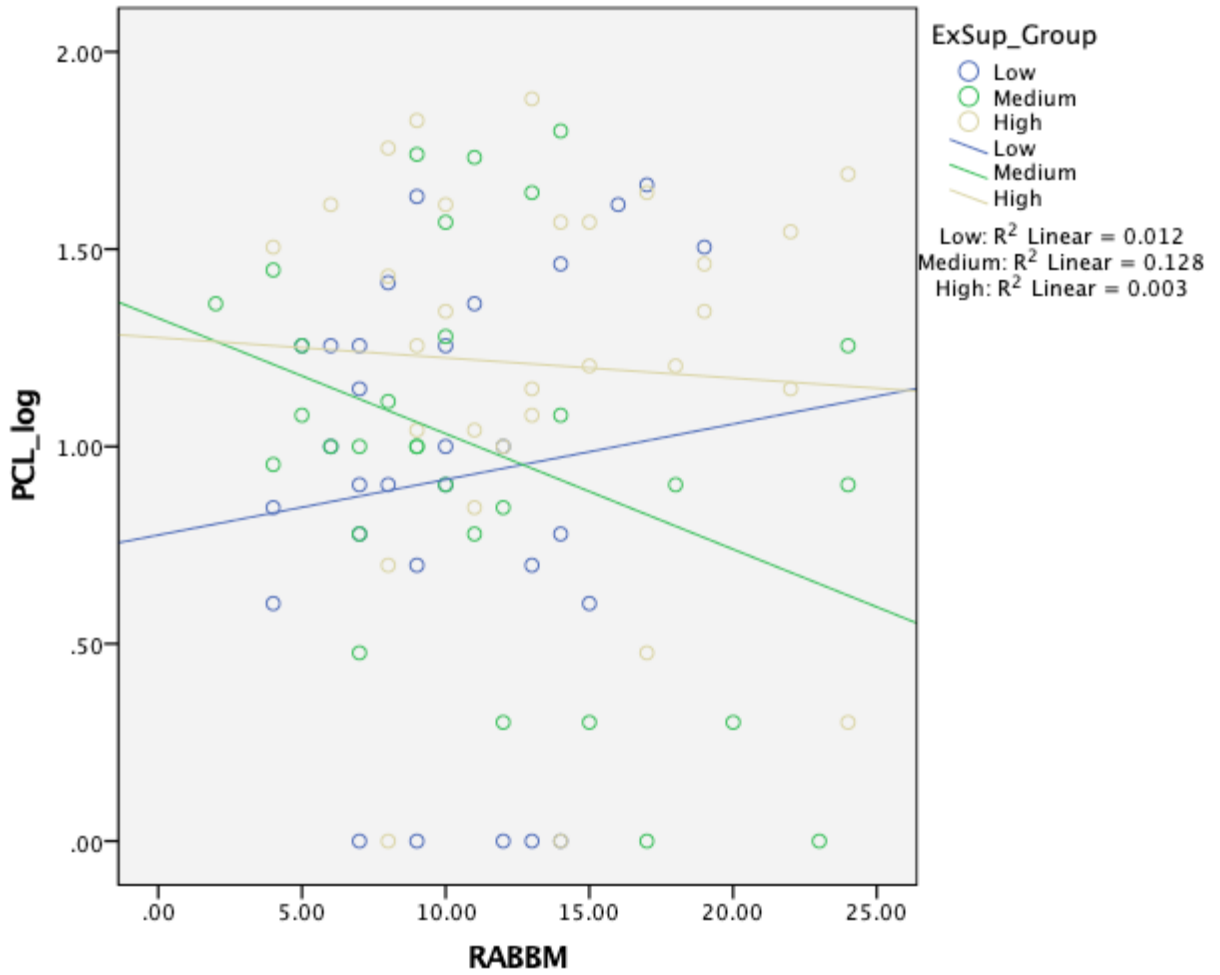
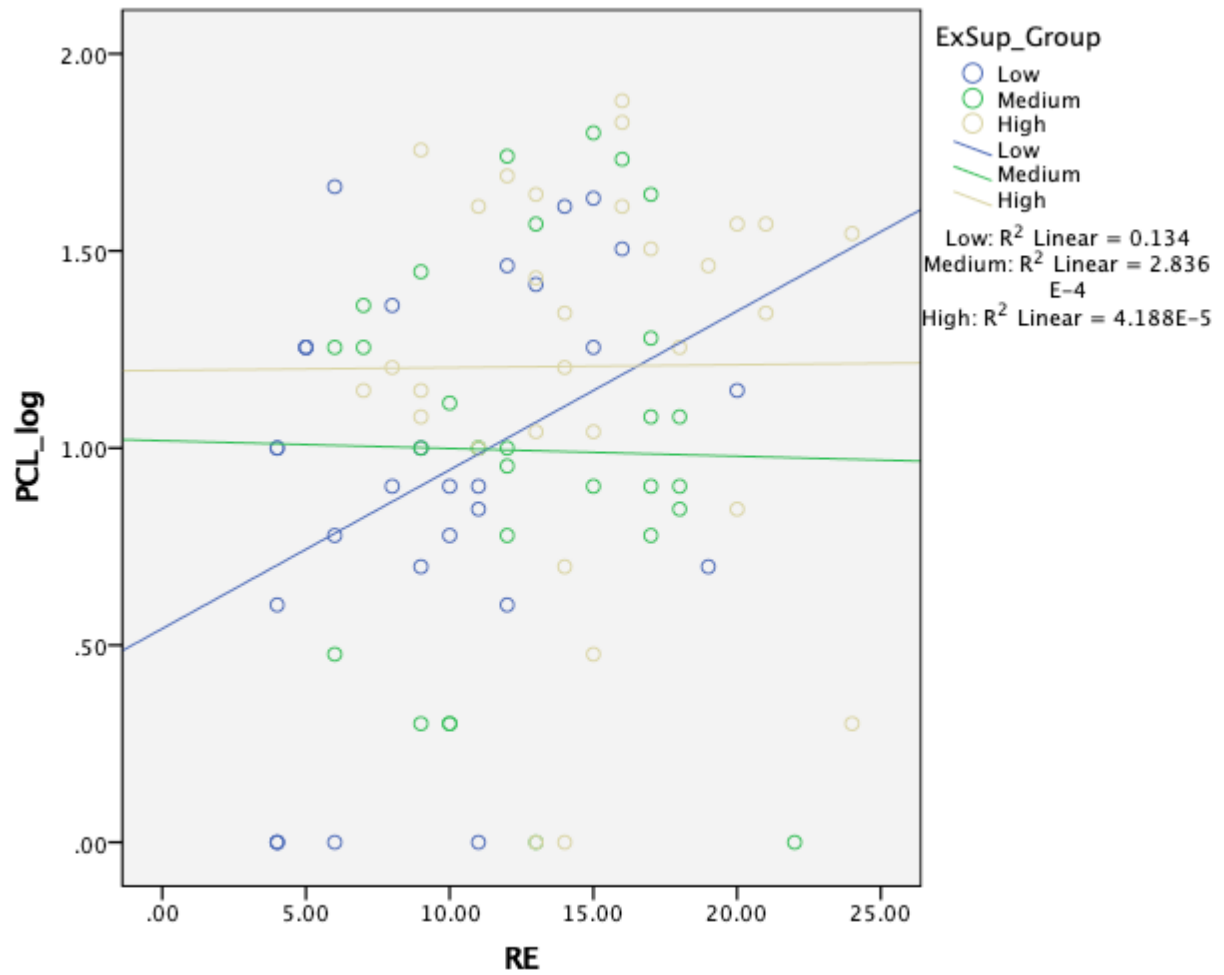




Figure 16. Expressive Suppression on Restricted Emotionality and PTSD Symptom Severity



Appendix A  
**Demographic Information**

Participant ID Number \_\_\_\_\_

Today's Date \_\_\_\_\_

**Questions for Participant**

**Gender at birth** M      F      **Current Gender Identity** M      F      Other (Please Specify) \_\_\_\_\_

DOB \_\_\_\_\_      Age \_\_\_\_\_

**Ethnicity:**      Not Hispanic or Latino      Hispanic or Latino      Unknown/Not Reported Ethnicity

**Racial Categories:**      American Indian/Alaska Native      Asian      Native Hawaiian or Other Pacific Islander  
Black or African American      White      More than one Race      Unknown or not Reported

Past Psychiatric Diagnoses      YES      NO      If yes, which diagnosis? \_\_\_\_\_  
\_\_\_\_\_

**Trauma Registry Information**

Date of trauma \_\_\_\_\_

Length of Stay      \_\_\_\_\_ Days      \_\_\_\_\_ Hours

Injuries \_\_\_\_\_  
\_\_\_\_\_

---

Appendix B  
PCL-5

<b>Instructions:</b> Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem <u>in the past month</u> . <b>In the past month, how much were you bothered by:</b>	<b>Not at all</b>	<b>A little bit</b>	<b>Moderately</b>	<b>Quite a bit</b>	<b>Extremely</b>
1. Repeated, disturbing, and unwanted memories of the stressful experience?	0	1	2	3	4
2. Repeated, disturbing dreams of the stressful experience?	0	1	2	3	4
3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?	0	1	2	3	4
4. Feeling very upset when something reminded you of the stressful experience?	0	1	2	3	4
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?	0	1	2	3	4
6. Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4
7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?	0	1	2	3	4
8. Trouble remembering important parts of the stressful experience?	0	1	2	3	4
9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	0	1	2	3	4
10. Blaming yourself or someone else for the stressful experience or what happened after it?	0	1	2	3	4
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0	1	2	3	4
12. Loss of interest in activities that you used to enjoy?	0	1	2	3	4
13. Feeling distant or cut off from other people?	0	1	2	3	4
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	0	1	2	3	4
15. Irritable behavior, angry outbursts, or acting aggressively?	0	1	2	3	4
16. Taking too many risks or doing things that could cause you harm?	0	1	2	3	4
17. Being “superalert” or watchful or on guard?	0	1	2	3	4
18. Feeling jumpy or easily startled?	0	1	2	3	4
19. Having difficulty concentrating?	0	1	2	3	4
20. Trouble falling or staying asleep?	0	1	2	3	4

Appendix C  
EMOTION REGULATION QUESTIONNAIRE (ERQ)

Instructions and Items:

We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. The questions below involve two distinct aspects of your emotional life. One is your emotional experience, or what you feel like inside. The other is your emotional expression, or how you show your emotions in the way you talk, gesture, or behave. Although some of the following questions may seem similar to one another, they differ in important ways. For each item, please answer using the following scale:

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>strongly disagree</b>			<b>neutral</b>			<b>strongly agree</b>

1. \_\_\_\_ When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.
2. \_\_\_\_ I keep my emotions to myself.
3. \_\_\_\_ When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.
4. \_\_\_\_ When I am feeling positive emotions, I am careful not to express them.
5. \_\_\_\_ When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.
6. \_\_\_\_ I control my emotions by not expressing them.
7. \_\_\_\_ When I want to feel more positive emotion, I change the way I'm thinking about the situation.
8. \_\_\_\_ I control my emotions by changing the way I think about the situation I'm in.
9. \_\_\_\_ When I am feeling negative emotions, I make sure not to express them.
10. \_\_\_\_ When I want to feel less negative emotion, I change the way I'm thinking about the situation.

Appendix D

GENDER ROLE CONFLICT SCALE SHORT FORM - (GRCS-SF)

Instructions: In the space to the left of each sentence below, write the number that most closely represents the degree that you Agree or Disagree with the statement. There is no right or wrong answer to each statement; your own reaction is what is asked for.

---

Strongly Agree 6	5	4	3	2	Strongly Disagree 1
------------------------	---	---	---	---	---------------------------

---

1. \_\_\_\_ Finding time to relax is difficult for me.
2. \_\_\_\_ Winning is a measure of my value and personal worth
3. \_\_\_\_ Affection with other men makes me tense.
4. \_\_\_\_ I like to feel superior to other people.
5. \_\_\_\_ Talking about my feelings during sexual relations is difficult for me.
6. \_\_\_\_ I have difficulty expressing my emotional needs to my partner.
7. \_\_\_\_ Men who touch other men make me uncomfortable.
8. \_\_\_\_ I have difficulty expressing my tender feelings.
9. \_\_\_\_ Hugging other men is difficult for me.
10. \_\_\_\_ My needs to work or study keep me from my family or leisure more than would like.
11. \_\_\_\_ I strive to be more successful than others.
12. \_\_\_\_ I do not like to show my emotions to other people.
13. \_\_\_\_ My work or school often disrupts other parts of my life (home, family, health leisure).
14. \_\_\_\_ Being very personal with other men makes me feel uncomfortable.
15. \_\_\_\_ Being smarter or physically stronger than other men is important to me.
16. \_\_\_\_ Overwork and stress caused by a need to achieve on the job or in school, affects/hurts my life.

## Appendix E

For potential research participants,

We're inviting you to participate in a research study. Participation is completely voluntary. If you agree to participate now, you can always change your mind later. Whether or not you join the study, your medical care will not change.

The purpose of this study is to understand how gender roles and emotions impact people's recovery after a traumatic event. Our goal is to understand how these roles and emotions relate to posttraumatic stress disorder (PTSD).

Although you will not get personal benefit from taking part in this research study, your responses may help us understand how gender roles and emotions impact the development of PTSD. In addition, your responses may help us understand how to provide better treatment to male trauma survivors.

We hope to receive completed surveys/questionnaires from about 100 people, so your answers are important to us. Of course, you have a choice about whether or not to complete the survey/questionnaire, but if you do participate, you are free to skip any questions or discontinue at any time.

The surveys/questionnaires will take about 15 minutes to complete.

Questions of a personal or sensitive nature are included in the surveys/questionnaires. Although we have tried to minimize this, some questions may make you upset or feel uncomfortable and you may choose not to answer them.

Your response to the survey will be kept confidential to the extent allowed by law. When we write about the study you will not be identified and your name will not be used in presentations or publications.

If you have questions about the study, please feel free to ask; my contact information is given below. If you have questions about your rights as a research participant or want to report any problems or complaints, you can call the Medical College of Wisconsin/Froedtert Hospital Research Subject Advocate at (414) 456-8844.

Thank you in advance for your assistance with this important project.

Sincerely,  
Terri deRoos-Cassini, PhD  
Principle Investigator  
Department of Surgery  
Division of Trauma and Acute Care Surgery  
PHONE: 414-955-1728  
E-MAIL: [abrandolino@mcw.edu](mailto:abrandolino@mcw.edu)

# Katelyn E. Heyrman, M.A.

## EDUCATION

---

- 2020**      **Ph.D. Counseling Psychology**  
University of Wisconsin-Milwaukee (*expected graduation 2020*)  
Dissertation: *Gender Role Conflict, Emotion Regulation, and PTSD Symptom Severity in Acutely Injured Trauma Survivors.*  
Supervisors: Dr. Stephen Wester & Dr. Terri deRoon-Cassini
- 2015**      **M.A. Counseling and Psychological Services**  
Saint Mary's University of Minnesota
- 2012**      **B.A. Psychology**  
University of Minnesota- Twin Cities

**8/2019-8/2020 Pre-doctoral Internship with Emphasis on Health and Trauma**  
Zablocki VA Medical Center (APA Accredited), Milwaukee, WI

## PUBLICATIONS

---

- Larsen, S.E., Geier, T., Hunt, J., **Heyrman, K.**, Schumann, N., Brandolino, A., Larson, C., & deRoon-Cassini, T. (in press). A randomized trial of modified prolonged exposure to prevent PTSD development in hospitalized traumatic injury patients.
- Geier, T., Hunt, J., Hanson, J., **Heyrman, K.**, Larsen, S., Brasel, K., deRoon-Cassini, T. (2020). Validation of abbreviated 4 and 8 item versions of the PTSD checklist 5 in a traumatically injured sample. *Journal of Traumatic Stress, 33 (3)*, 218-226. doi:10.1002/jts.22478
- Ghosh, A., Kessler, M., **Heyrman, K.**, Opelt, B., Carbonelli, M., & Fouad, N. (2019). Student veterans' transitions into higher education: Examining academic and career development. *Career Development Quarterly, 67 (4)*, 365-371. doi:10.1002/cdq.12205

## PRESENTATIONS

---

- Larsen, S.E., Post, L., Hunt, J., Maples-Keller, J., Geier, T., Price, M., **Heyrman, K.**, Timmer-Murillo, S.C., deRoon-Cassini, T., & Rothbaum, B. (2019, November). Early intervention in a traumatic injury population: How feasible and effective is the state of the art? Symposium presented at the 34<sup>th</sup> Annual International Society for Traumatic Stress Studies. Washington, D.C.
- Ghosh, A., Kessler, M., **Heyrman, K.**, Opelt, B., Carbonelli, M., & Fouad, N. (2018, August). Student Veterans' Transitions into Higher Education: Examining Academic and Career Development. Poster presented at the Annual American Psychological Association Convention. San Francisco, C.A.
- Kozlowski, M.B., Moore, J.M., Fouad, N., **Heyrman, K.E.**, & Kessler, M. J. (2017, August). Self-efficacy and outcome expectations for college students' retention. Poster presented at the Annual American Psychological Association Convention. Washington, D.C.

## **PROFESSIONAL EXPERIENCE**

---

### **Clement J. Zablocki VA Medical Center**

August 2019-Present  
Milwaukee, WI

*Psychology Intern*

- Spinal Cord Injury & Disorders Services Rotation
- Polytrauma Rotation
- Pain Management Rotation
- Substance Abuse Recovery and Residential Treatment Rotation
- Evidenced Based Practice Clinic and Trauma Rotation

### **Medical College of Wisconsin & Froedtert**

June 2018-May 2019  
Milwaukee, WI

*Clinical Health Psychology, Trauma Surgery Rotation*

*Practicum Graduate Student*

- Responsibilities included providing inpatient and outpatient consultation to patients and their families, following a traumatic injury and/or acute illness, at a Level 1 trauma center.
- Provided outpatient and inpatient psychotherapy to individuals diagnosed with PTSD, mood disorders, anxiety disorders, and adjustment disorders.
- Provided inpatient psychotherapy to individuals with acute and chronic illnesses and physical impairments.
- Developed brief interventions following acute injury or surgery.
- Provided manualized Prolonged Exposure Therapy (PE) to patients with PTSD.
- Administered the PTSD Checklist for DSM-5 (PCL-5), Generalized Anxiety Disorder 7-item (GAD-7), Beck Depression Inventory II (BDI-II).

### **Clement J. Zablocki VA Medical Center**

September 2017-May 2018  
Milwaukee, WI

*Post-Deployment Rotation*

*Practicum Graduate Student*

- Provided trauma focused therapy to Veterans' post-deployment.
- Provided manualized Cognitive Processing therapy (CPT) to Veterans with PTSD.
- Provided interpersonal therapy, cognitive behavioral therapy, and motivational interviewing to veterans.
- Co-facilitated a mindfulness-based stress reduction group therapy to Veteran's diagnosed with anxiety disorders, PTSD, depressive disorders, personality disorders, substance use disorders, and adjustment disorders.
- Co-facilitated Collaborative Assessment and Management of Suicidality (CAMS) group therapy for Veterans with chronic suicidal ideations and PTSD.
- Administered the Clinician Administered PTSD Scale for DSM-5 (CAPS-5), the PTSD Checklist for DSM-5 (PCL-5), the Working Alliance Inventory (WAI), the Patient Health Questionnaire-9 (PHQ-9), and the Moral Injury Events Scale (MIES), Generalized Anxiety Disorder 7-item (GAD-7).
- Attended a training on Adaptive Disclosure for Veterans with moral injury.

### **Aurora Sinai Medical Center**

August 2017-January 2018  
Milwaukee, WI

*Intake Counselor*

- Responsibilities included conducting intake assessments, risk assessments, and substance use assessments for patients in the emergency department.
- Determined level of care based on intake assessment, risk factors, and protective factors.
- Collaborated with psychiatrists and attending physicians to determine referrals and level of care.



- Provided services to patients diagnosed with schizophrenia, bipolar disorder, personality disorders, mood disorders, anxiety disorders, and substance use disorders.
- Provided brief crisis interventions to patients in the emergency departments.
- Completed documentation on intake assessments, treatment recommendations, and discharge plans.
- Provided services to patients on mental health commitments.

**Medical College of Wisconsin & Froedtert**

August 2016-May 2017

*Clinical Health Psychology, Psychodiagnostic & Rehabilitation Rotation  
Practicum Graduate Student*

Milwaukee, WI

- Facilitated individual psychotherapy for individuals diagnosed with PTSD, pain disorders, substance use disorders, depressive disorders, anxiety disorders, co-occurring disorders, and individuals with amputations.
- Responsibilities included administering, interpreting, and writing integrated psychological reports, along with completing intakes, treatment plans, and patient documentation.
- While under supervision, aided in providing diagnoses for clients based on the clinical interview and psychological assessments.
- Administered the Beck Depression Inventory II (BDI-II), the Minnesota Multiphasic Personality Inventory-2 Restructured Form (MMPI-2-RF), Wechsler Adult Intelligence Scale-4 (WAIS-IV), Wechsler Memory Scale- 4 (WMS-IV), Detailed Assessment of Posttraumatic Stress (DAPS), the Connors' Adult ADHD Rating Scales (CAARS), Alcohol Use Disorder Identification Test (AUDIT), the State-Trait Anxiety Inventory (STAI), the Thematic Apperception Test (TAT), and the Rotter Incomplete Sentence Blank.

**Aurora Psychiatric Hospital**

September 2015-May 2016

*Partial Hospitalization Rotation  
Practicum Graduate Student*

Wauwatosa, WI

- Facilitated and co-facilitated group cognitive behavior therapy (CBT) to children and adolescents with externalizing disorders.
- Conducted intakes and treatment recommendations for clients.
- Completed integrated reports based on the clinical interview and psychological assessments.
- Administered and interpreted psychological assessments while under supervision.
- Administered the Beck Depression Inventory for Youth (BDI-Y), Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A), Millon Adolescent Clinical Inventory (MACI), Millon Adolescent Personality Inventory (MAPI), and Conner's 3 ADHD Index.

**Highland Meadows Counseling Center**

June 2015- August 2015

*Volunteer Counseling Assistant*

Rochester, MN

- Responsibilities included developing rapport with clients and completing functional assessments.
- Completed documentation of clients' level of functioning.
- Assisted in development of dialectical behavior therapy (DBT) activities.
- Individualized mindfulness based activities for clients.

**Riverstone Psychological Services**

January 2015- May 2015

*Practicum Graduate Student*

Rochester, MN

- Completed the administration and interpretations of psychological assessments while under supervision.

- Responsibilities included completing integrated psychological reports based on the clinical interview and psychological assessments.
- While under supervision, aided in providing diagnoses for clients based on the clinical interview and psychological assessments.
- Responsibilities included facilitating and co-facilitating dialectical behavior therapy (DBT) groups, for adults and adolescents.
- Observed and co-facilitated individual dialectical behavior therapy (DBT) sessions for individuals diagnosed with borderline personality disorder and/or dual diagnoses.
- Completed patient documentation for individual and group therapy sessions.
- Administered the Minnesota Multiphasic Personality Inventory (MMPI-2), Minnesota Multiphasic Personality Inventory- 2 Restructured Form (MMPI-2-RF), and the Millon Clinical Multiaxial Inventory-III (MCMI-III).

**Rochester Center for Autism**

December 2011- December 2014

*Behavior Therapist*

Rochester, MN

- While working in collaboration with other therapists, provided Applied Behavior Analysis (ABA) therapy to children diagnosed with autism spectrum disorders.
- Implemented behavioral interventions for behavioral management and social interactions for children diagnosed with autism spectrum disorders.
- Co-facilitated group therapy for siblings of children diagnosed with autism spectrum disorders.
- Responsibilities included, implementing, individualizing, and creating treatment plans for children with autism spectrum disorders.

**Zumbro Valley Mental Health**

July 2012- September 2012

*Mental Health Rehab Worker*

Rochester, MN

- Provided services to patients with substance use disorders and dual diagnosis on a daily basis.
- Responsibilities include facilitating and organizing psychoeducation groups with an emphasis on coping skills.
- Completed patient documentation for group therapy and daily progress reports.

**ADDITIONAL RESEARCH EXPERIENCE**

**Medical College of Wisconsin & Froedtert**

September 2016-August 2019

*Graduate Research Assistant*

Milwaukee, WI

Supervisor: Dr. Christine Larson

- *Acute Neurocognitive-Affective Predictors of Chronic Post-Trauma Outcomes*
  - The purpose of this study is to identify markers that predict posttraumatic stress disorder (PTSD) and identify other poor post-trauma outcomes.
  - Responsibilities include recruiting participants for the study, screening potential participants based on inclusion and exclusion criteria, developing rapport with participants, and organizing and documenting data.
  - Administered the Peritraumatic Dissociative Experiences Questionnaire (PDEQ), Perceived Injury Severity, and Predicting PTSD Questionnaire.

**Minneapolis VA Health Care System**

June 2014-August 2015

*Volunteer Research Assistant*

Minneapolis, MN

Supervisor: Dr. Thad Strom

- *Veteran Employment Outcomes Between Transitional Work Program and Supported Employment.*

- The purpose of this study is to examine the difference between the VA's traditional vocational rehabilitation program (TWP) and supported employment in veterans diagnosed with Posttraumatic Stress Disorder (PTSD).
- Screened potential participants for eligibility based on inclusion and exclusion criteria.
- Organized and prepared materials for review.
- Attended project meetings.
- Collected articles and reviewed the literature for the principle investigator.
- Attended continuing education workshops.

## **TEACHING EXPERIENCE**

---

### **University of Wisconsin-Milwaukee**

COUNS 711 Foundations of Career Development

January 2018-May 2018

*Instructor*

Milwaukee, WI

- Responsible for teaching vocational theories and vocational choice development to master students with an emphasis on cultural considerations.
- Duties include, developing course materials, facilitating lectures and group discussions, and grading.

COUNS 775 Trauma Counseling II

August 2017- May 2018

*Instructor*

Milwaukee, WI

- Responsible for teaching master students' assessments, diagnostic criteria, cultural considerations, and therapeutic interventions for trauma related disorders.
- Developed course materials, facilitated class discussions, and graded assignments.

COUNS 774 Trauma Counseling I

August 2017-December 2017

*Instructor*

Milwaukee, WI

- Responsibilities included educating master students on trauma, trauma theories, and the psychophysiological effects of trauma exposure.
- Developed course materials, facilitated class discussions, and graded assignments.

EDPSY 110 Planning Your Major (Career)

August 2016- May 2017

*Instructor*

Milwaukee, WI

- Responsibilities included, teaching undergraduate students resume building, professional communication, and skills related to making informed decisions about careers.
- Facilitated group discussions and graded assignments.

COUNS 779 Psychopathology

January 2016- May 2016

*Instructor*

Milwaukee, WI

- Responsibilities included, teaching etiology, prevalence, cultural considerations, and descriptions of psychological disorders to graduate students.
- Developed course materials.
- Facilitated class discussions in relation to psychological disorders and diagnoses.

EDPSY 104 Pathways to Success

August 2015-December 2015

*Instructor*

Milwaukee, WI

- Responsibilities included teaching undergraduate students' skills related to academic success.
- Developed course materials and facilitated class discussions.
- Provided students with resources in relation to academic success.

## **MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

---

American Psychological Association (APA)

## **ADDITIONAL TRAINING & SKILLS**

---

- VA TMS: Clinician-Administered PTSD Scale for DSM-5 (CAPS-5) Clinical Training
- VA TMS: Military Culture Awareness
- VA TMS: Traumatic Brain Injury: Module 1, Module 2, and Module 3
- 3 years of American Sign Language
- 1 year of Deaf Culture