Academic Performance of College Student Servicemembers and Veterans: The Influence of Emotion Regulation, Self-Efficacy, and PTSD Symptom Severity

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RESEARCH

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ABSTRACT

Despite increases in fiscal and human resources dedicated to support college student service-members and veterans (CSSV), retention rates remain low with a little over half of this population completing a postsecondary degree. This low retention rate is often attributed to emotional and psychological difficulties associated with transitioning from the stress of military and combat-related environments to civilian life. The current study investigated potential factors related to the academic performance of 412 CSSV. Investigators examined structural models to test hypothesized relationships of independent variables consisting of emotion regulation strategies; college self-efficacy (CSE); regulatory emotional self-efficacy (RESE); and PTSD symptom severity as predictors for self-reported cumulative grade point average (GPA). Consistent with the study hypotheses, path analyses of three structural models demonstrated the influence emotion regulation strategies have on academic outcomes and PTSD symptom severity. Additional mediation models demonstrated cognitive reappraisal, college self-efficacy and regulatory emotional self-efficacy as having direct paths significantly predicting GPA and PTSD severity. Structural models did not produce significant mediation between emotion regulation strategies and GPA. However, both college self-efficacy and regulatory emotional self-efficacy partially mediated cognitive reappraisal and PTSD symptom severity. Implications and specific recommendations for promoting and maximizing the academic success of CSSV are discussed.

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Ninety-six percent of higher education institutions in the United States enroll military servicemembers and veterans. In 2009, there were nearly 500,000 college student veterans; however, by 2013 this number had risen to over 1,000,000 (Queen & Lewis, 2014). In part, this population increase can be attributed to a substantial increase in education benefits to military servicemembers and veterans. In fact, there was a 95% increase in the number of beneficiaries in the Post-9/11 Veterans Education Assistance Program since the new education benefit became effective in 2009 (Veterans Benefits Administration, 2015), with 893,725 College student servicemembers and Veterans (CSSV) receiving veterans' educational benefits in 2018 (US Department of Veteran Affairs, 2019). Subsequently, colleges and universities across the nation have directed efforts to expand and strengthen support services for college student veterans (McBain et al., 2012). Approximately 75% of academic institutions have specific staff and/or office dedicated to meeting the needs of student veterans and military students (Student Affairs Administrators in Higher Education, 2013).

However, despite the increase in fiscal and human resources dedicated to supporting CSSV, retention rates have remained low with approximately 50% of college student veterans completing a degree (Cate, 2017). This low retention rate is often attributed to the difficulties associated with transitioning from military to civilian life (Lighthall, 2012). For instance, unlike traditional college student populations, student veterans tend to be older and have families to support, while juggling work and school-related responsibilities. Although they may have more resemblance to a non-traditional student population, student veterans are more likely to struggle with severe physical disabilities and mental health issues associated with their military service (Parker et al., 2019). Moreover, almost 60% of veterans returning from Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) reported exposure to combat (Rudd et al., 2011). Of these veterans, 34.6% reported severe anxiety, 23.7% reported severe depression, and 45.6% reported significant symptoms of posttraumatic stress disorder (PTSD). Thus, college student veterans may have similar struggles as compared to traditional and other nontraditional students, while simultaneously navigating a unique set of challenges and circumstances associated with military service and deployment. Yet, there is limited research providing guidance to college and university leadership on the factors associated with college student success among CSSV (Student Affairs Administrators in Higher Education, 2013).

Much of the prior research associated with student veterans has focused on the role mental health problems have on college success. PTSD, a frequently cited mental health issue among servicemembers and veterans, is negatively associated with college retention (Nyaronga & Toma, 2015) and academic performance (Barry et al., 2012; Bryan et al., 2014; Nyaronga & Toma, 2015; Rudd et al., 2011). For example, elevated levels of PTSD symptomatology have been shown to be negatively associated with academic retention for student servicemembers and veterans transitioning from the first year to the second year of college with variables being partially mediated by effort regulation and grade point average (GPA; Boyraz et al., 2016; Romero et al., 2015). PTSD symptom severity has also been found to be negatively associated with GPA and educational self-efficacy (Barry et al., 2012).

In addition to PTSD, current research literature indicates self-efficacy, cognitive appraisal, and expression suppression are possibly influencing the academic success and retention of college student veterans (Blankson et al., 2017; Ivcevic & Brackett, 2014). For example, a recent study found undergraduate students presenting with PTSD symptoms are less likely to use cognitive reappraisal when faced with challenging life situations and are more likely to exhibit greater emotion dysregulation (Hannen & Orcutt, 2020). Additionally, researchers conducted a study of college students' adaptive function of emotion regulation. Students who demonstrated an ability to regulate their emotions and generate positive affect also maintained their academic engagement over a 4-year period and retained higher cumulative GPAs in comparison to those students generating negative affect (Barker et al., 2016). However, despite the greater breadth of studies focused on emotion regulation and self-efficacy, the current literature associated with these two factors within a population of CSSV is limited and presents a gap in the literature.

EMOTION REGULATION

Given the role PTSD plays in the academic success and retention of CSSV, evidence demonstrates that emotion regulation, an ability in which an individual exerts control and influence over their own emotion, is a contributing factor to the etiology and continuity of PTSD symptoms among college students (O'Bryan et al., 2015; Pickett et al., 2016; Tull, et al., 2007). Although there is an extensive amount of research on the utilitarian value of emotion regulation strategies associated with decreasing negative affect such as PTSD (Sippel et al., 2016), there is currently a limited amount of research regarding emotion regulation as a means of enhancing academic learning, maintaining academic engagement, and supporting positive academic outcomes among adult learners diagnosed with PTSD (Strain & D'Mello, 2015; Ellsworth & Scherer, 2003; Shepard & Wild, 2014.

SELF-EFFICACY

Another factor that may impact the academic success and retention of CSSV is self-efficacy. Self-efficacy reflects one's confidence in their ability to execute behaviors that produce specific performance attainments (Bandura, 1988, 1997). The self-efficacy of CSSV has the potential to affect their academic functioning when confronted with various stressful academic encounters based upon the quality of past military and/or combat related experiences (Caprara et al., 2008). CSSV who have experienced the psychosocial aftermath of traumatic experiences associated with military combat may be particularly susceptible to the effects that battlefield trauma might have on perceived coping self-efficacy (Benight & Bandura, 2004; Cieslak et al., 2008; MacEachron & Gustavsson, 2012). Self-efficacy is a fundamental factor associated with social-cognitive theory, which asserts that individuals hold specific beliefs about their ability to execute behaviors in order to accomplish desired goals (Bandura & National Institute of Health, 1986).

COLLEGE SELF-EFFICACY

Accordingly, college self-efficacy is the belief an individual has in their ability to successfully engage in behaviors related to functioning in academic college environments (Gore et al., 2006). Research has demonstrated that college self-efficacy predicts academic progress as a significant mediating variable (Garriot et al., 2015). Included are affective processes that influence academic outcomes among college students and play a vital role in relationship to college self-efficacy. According to Chemers and colleagues (2001), self-efficacy had mediating effects upon cognitive, motivational, and affective processes, which were included in their conceptualization of *academic self-efficacy* as a factor related to academic performance. According to their conceptualization, affective processes are thought to be impacted by self-efficacy through the influence that emotions have upon attention and construal of environmental demands, the choice of actions directing behavior, and the capability to regulate negative emotions. Chemers et al. (2001) presented factor loadings within their hypothesized model in which a significant and substantial direct effect of academic self-efficacy on academic performance was reported ($\beta = .34$, $p < .001$) among first-year college students ($N = 255$). Furthermore, Hsieh et al. (2007) reported a significant correlation between perceived academic efficacy and GPA ($r = .36$, $p < .01$) indicating a perceived academic efficacy significantly predicted GPA ($\beta = .36$, $p < .001$) among undergraduate college students ($N = 112$). The combined research described above begins to demonstrate a predictable pattern in which the relationship between academic self-efficacy and academic outcomes are strongly correlated and consistently predict academic progress.

REGULATORY EMOTIONAL SELF-EFFICACY

Gross (2014) conceptualized *emotion regulation flexibility* as an adaptive ability to execute and apply emotion regulation strategies on a deliberate and automatic continuum in response to meeting congruent contextual demands in the environment. Emotion regulation flexibility shares a striking similarity to regulatory emotional self-efficacy (Caprara et al., 2008). The essential difference is regulatory emotional self-efficacy is a perceived capability rather than a developed skill, ability, or quality of initiating, avoiding, inhibiting, maintaining, or modulating internal aspects related to negative or positive emotion. The distinction is between being one who is effectively able to manage emotional experiences versus one who feels and has a belief in being competent to do so. Thus, regulatory emotional self-efficacy is defined as the perceived capability to self-regulate physiological and/or cognitive processes so as to accomplish individual behavioral and cognitive adjustments, which eventually lead to accomplishing internal or external goals. In other words, it is one's core belief associated with the capability of managing negative emotion and expressing positive emotion (Alessandri et al., 2014; Caprara et al. 2008; Lightsey et al., 2013).

The literature above does not emphasize the contribution and influence affective processes related to self-efficacy and PTSD symptom severity have upon academic outcomes for CSSV. Rather the literature concentrates on explicating the cognitive and motivational processes associated with self-efficacy and academic outcomes in lieu of emotional affective processes among civilians. Thus, a structural model demonstrating the significant correlations between emotion regulation, specific forms of self-efficacy, and PTSD symptom severity as predictors of academic outcome among CSSV is absent from the literature-base.

RESEARCH QUESTIONS

Our hypotheses attempt to explicate the potential relationships among variables predicting college GPA in a sample of CSSV in the following ways. First, PTSD symptom severity, college self-efficacy, and/or regulatory emotional self-efficacy will mediate emotion regulation and college

GPA in a sample of CSSV. Second, regulatory emotional self-efficacy will have a direct effect on self-perceived college self-efficacy and PTSD symptom severity. Third, PTSD symptom severity and college self-efficacy will have a direct effect on college student GPA. Given the variables described above, conceptual path models containing these variables will be included in this study for comparative purposes when predicting academic outcomes among CSSV. This study builds upon previous research and hypothesizes linear path models explicating the relationships between emotion regulation strategies, emotional self-efficacy, PTSD symptom severity, and self-reported college GPA in a sample of CSSV.

The primary aim of this study is to determine the strength of the predictive relationships between emotion regulation, college self-efficacy, regulatory emotional self-efficacy, PTSD symptom severity, and self-reported college GPA in a population of CSSV. Investigators will answer questions specific to predicting the academic success based on participants preferred use of emotion regulation strategies: cognitive reappraisal and expression suppression, their perceived college self-efficacy and regulatory emotional self-efficacy, and the severity of their posttraumatic stress. These questions included:

1. To what degree does the data support the proposed models of correlates in predicting academic performance as measured by self-reported cumulative GPA?
2. What is the strength of the relationship between PTSD symptom severity and college student cumulative GPA?
3. What is the strength of the relationship between regulatory emotional self-efficacy and PTSD symptom severity and regulatory emotional self-efficacy and college self-efficacy?
4. What is the strength of the relationship between college self-efficacy and college student cumulative GPA?
5. What is the strength of the relationship between emotion regulation strategies and regulatory emotional self-efficacy and college self-efficacy?

METHOD

The current study included three hypothesized linear path models. The first of which included the following observed variables: two emotion regulation strategies (cognitive reappraisal and expression suppression), PTSD symptom severity, regulatory emotional self-efficacy, college self-efficacy, and academic outcome cumulative GPA (see ***Figure 1*** below).

Additionally, the current study presented two alternative linear path models. The alternative path models were presented for comparative purposes and further explicated the combined influence from regulatory emotional self-efficacy and college self-efficacy in the context of the path model described above. The two alternative path models emphasized two forms of self-efficacy as observed predictor variables. Each additional and alternative linear path model included a single form of self-efficacy. This emphasized their influence on model fit indices and highlighted their combined effect when college self-efficacy and regulatory emotional self-efficacy were included in a linear path model to predict academic performance. First, regulatory emotional self-efficacy was removed as an observed predictor variable to form an alternate linear path model. In the absence of regulatory emotional self-efficacy, the alternative linear path model underscored college self-efficacy as an observed predictor variable (see ***Figure 2*** below). Secondly, regulatory emotional self-efficacy was reintroduced as a means to replacing college self-efficacy as an observed predictor variable. This second alternative linear path model designated regulatory emotional self-efficacy as the only form of self-efficacy to operate in the final path model (see ***Figure 3*** below).

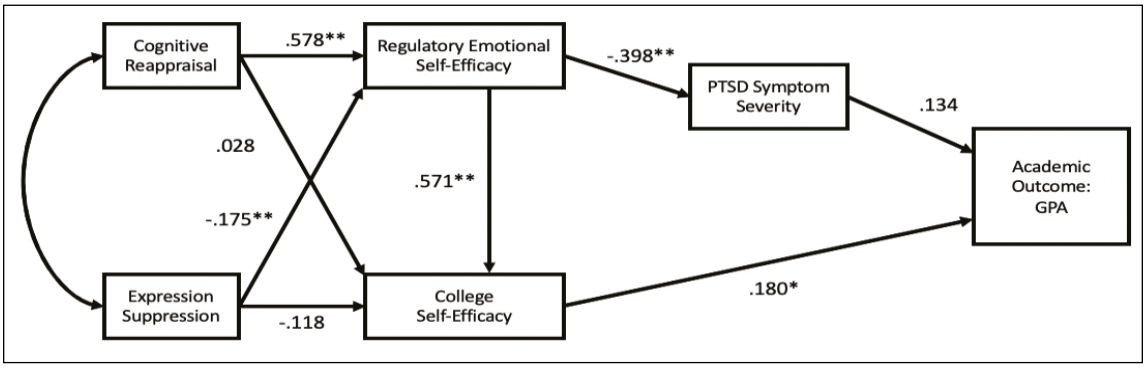

Figure 1 Original Path Model.

Note: Correlates include emotion regulation strategies, regulatory emotional and college self-efficacy, PTSD symptom severity, and cumulative GPA. * $p < .05$, ** $p < .01$.

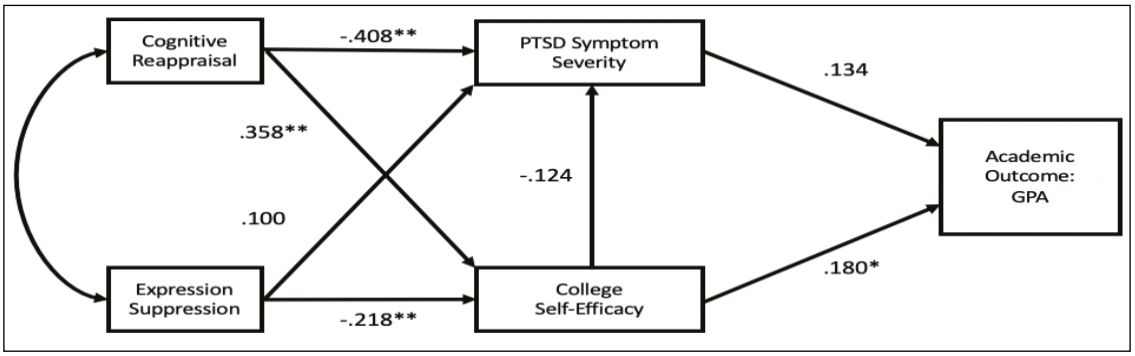

Figure 2 College Self-Efficacy (CSE) Path Model.

Note: Correlates include emotion regulation strategies, PTSD symptom severity, regulatory emotional self-efficacy, and cumulative GPA. * $p < .05$, ** $p < .01$.

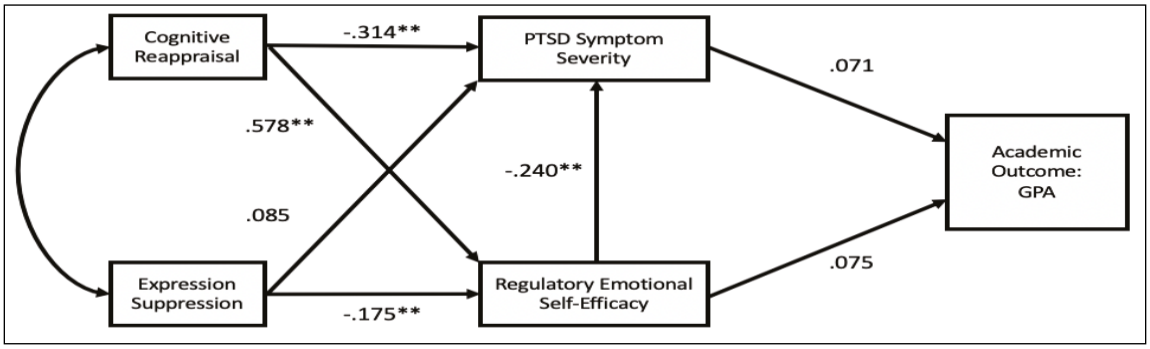

Figure 3 Regulatory Emotional Self-Efficacy (RESE) Path Model.

Note: Correlates include emotion regulation strategies, PTSD symptom severity, college self-efficacy, and cumulative GPA. * $p < .05$, ** $p < .01$.

The comparisons between fit indices related to these three linear path models demonstrated the value of self-efficacy in predicting PTSD symptom severity and academic outcomes among a nationwide sample of CSSV.

PARTICIPANTS

The sample of undergraduate and graduate CSSV ($N = 412$) were recruited from colleges and universities across the US and had completed a semester of college within the last 8 months. Study participants were represented by male (76%) and female (24%) students with the 89.5% of the participants age ranging from 20 to 39 years of age. Racial identities within the sample were broadly represented and consisted of 88% Caucasian, 8% African American, 2% American Indian, 0.5% Asian, and 2% Other, while 45% of the sample identified as Hispanic, Spanish, and/or Latino origin. Study participants represented each military branch with 52% Army and 22% Air Force being the two largest branches, followed by 11.2% Navy, 7.5% Marine Corps, and 8.2% consisting of Coast Guard, National Guard, and Reserves combined.

PROCEDURES

Participants were recruited in cooperation with various veteran support center administrators and academic administrators at colleges and universities throughout the United States. An introduction email was sent to enrolled CSSV at all participating institutions. Participation in the study was voluntary and consisted of study participants completing an online web-based survey.

The present study utilized nonexperimental survey research methods to gather data in which path analyses across three structural models were considered to confirm the relationship between emotion regulation strategies, regulatory emotional self-efficacy, college self-efficacy, PTSD symptom severity, and college GPA. A power analysis was conducted to determine the minimum sample size needed to detect an anticipated effect size ($d = .15$) with five predictors using conventional level of statistical power ($1 - \beta = .80$) and a 95% confidence interval ($p < .05$). The power analysis was conducted using an a priori sample size for multiple regression, which yielded an estimated minimum sample size equal to 91 participants in order to detect an anticipated medium effect size ($d = .15$).

MEASURES

The current study was comprised of four self-report measures to assess each participant's use of expression suppression and cognitive reappraisal as methods for emotion regulation. Additionally, the beliefs and confidence associated with regulatory emotional self-efficacy and

college self-efficacy were assessed along with a measurement of each participant's PTSD symptom severity. Finally, college student GPA was gathered by requesting participants to self-report their cumulative college GPA.

Emotion Regulation

The Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) is a 10-item self-report questionnaire that captures two emotion regulation strategies: *cognitive reappraisal* as measured by six items, and *expression suppression* as measured by four items. The psychometric properties of the ERQ are based on two normative samples of undergraduate college students and provide evidence to support the reliability and validity for the scale. The ERQ has demonstrated internal consistency with alphas ranging from .75–.82 for the reappraisal subscale and .68–.76 for the suppression subscale (Gross & John, 2003). The test-retest reliability across 3 months was also reported (r = .69) for the ERQ subscales using four samples of undergraduate students (N = 1,483). In the current study, the internal consistency for each subscale was measured and both were found to be commensurate with the reliability reported by Gross and John (2003); cognitive reappraisal (α = .73) and expression suppression (α = .60).

Regulatory Emotional Self-Efficacy

The Regulatory Emotional Self-Efficacy Scale (RESES) measured the perceived self-efficacy beliefs associated with managing negative (NEG) and expressing positive (POS) affect. The RESES is a 12-item self-report questionnaire, which assesses self-efficacy in regard to emotional regulation and, more specifically, the perceived self-efficacy in managing negative affect in response to adversities or challenging events, as well as the capacity to express or manage positive emotions such as joy, enthusiasm, and pride (Caprara et al., 2008; Eisenberg et al., 2001). Previous psychometric studies using exploratory factor analyses established two separate scales; self-efficacy beliefs in regard to regulating negative emotions (NEG) and self-efficacy beliefs in regard to expressing positive emotions (POS; Caprara & Gerbino, 2001). The model emerged from a US sample and demonstrated adequate fit (n = 1,401) with fit indices (χ^2 = 263.3, p = .143, CFI = .95; Caprara et al., 2008). The construct validity for the three factors contributing to the structure of the RESES include *despondency-distress*, *anger-irritation*, and *positive affect*. All three factors were negatively and significantly (p < .01) correlated with the indices of maladjustment, which were respectively reported as *negative affect* (r = –.35, –.37, –.12); *shyness* (r = –.40, –.26, –.30); *irritability* (r = –.29, –.53, –.14); *aggression* (r = –.14, –.31, –.12); and finally *anxiety/depression* (r = –.44, –.34, –.25; Caprara et al., 2008). A study conducted by Gunzwenhauer et al. (2013), reported the reliability for same three factors: POS (α = .69), DES (α = .63) and ANG (α = .63).

College Self-Efficacy

College self-efficacy was measured using the College Self-Efficacy Inventory (CSEI; Solberg et al., 1993), which is a 20-item inventory consisting of three subscales (*Course Efficacy*, *Social Efficacy*, and *Roommate Efficacy*) measuring an individual's perceived self-efficacy related to three important aspects of students' college experience: academic coursework, college social environment, and living with roommates. The predictive models being researched under the current study do not include items measuring college students' roommate self-efficacy. Student military veterans are more likely than not to live within a family unit, as the population consists of older, married veterans with children as compared to more traditional college students (Borsari, et al., 2017).

The CSEI was initially validated with a sample of 164 Mexican American and Latino American college students responding to a survey questionnaire consisting of 20 self-efficacy items considered to be representative of the college experience. Measurements of college self-efficacy using the CSEI are derived from individuals responding to each item using a 10-point Likert scale in which respondents would respond within a range from 1 (*not at all confident*) to a 10 (*extremely confident*; Solberg et al., 1993). The reliability for the CSEI was established for this current study with internal consistency coefficient estimates for the entire instrument (α = .91) and those associated with the two subscales relevant to this study: course self-efficacy (α = .85) and social self-efficacy (α = .83). Concurrent and predictive validity of the CSEI was confirmed through its relationship with measures of college performance and persistence (Gore et al., 2006). Finally, Gore et al. (2006) reported the internal consistency with coefficient estimates for the CSEI total score (α = .92) and subscales: course efficacy (α = .88) and social efficacy (α = .86).

Posttraumatic Stress Disorder

The symptom severity of posttraumatic stress disorder (PTSD) was measured using the Posttraumatic Stress Disorder Checklist for *Diagnostic and Statistical Manual of Mental Disorders Fifth Edition* (PCL-5; Weathers et al., 2013), which is a commonly used self-report measure for assessing PTSD symptomatology and severity (Bovin et al., 2016). The PLC-5 consists of 20-items corresponding with PTSD symptomatology as outlined in the *Diagnostic and Statistical Manual of Mental Disorders Fifth Edition* (DSM-5). Blevins et al. (2015) evaluated the reliability of PCL-5 scores in an independent sample (N = 278) of trauma exposed undergraduate college students at a large public university in southeastern United States. PCL-5 scores demonstrated

high internal consistency (α = .94) and were comparable to other measures of PTSD symptomatology. A reliability analysis for this current study produced an estimated coefficient (α = .95) to demonstrate the instrument's internal consistency.

Grade Point Average

College student grade point average (GPA) is frequently studied in the context of research related to academic success. However, obtaining academic records representative of individual college students is challenging. As an alternative to reviewing academic records, self-reported GPAs are often requested from research participants. Given that self-reported GPA is being relied upon for research purposes, it is relevant to underscore that there is variability in self-reported GPAs and that they are likely moderated by actual levels of academic performance. In other words, college students who demonstrate a strong academic ability tend to self-report their GPA with greater accuracy as compared to those individuals represented by a population of college students demonstrating lower academic performance (Kuncel et al., 2005).

DATA ANALYSIS

This research study reports descriptive statistics and correlations for all major study variables (see ***Tables 1*** and ***2*** below). Additionally, a series of one-way analyses of variance (ANOVA) were conducted to determine if there are significant mean differences in PTSD severity and college GPA by gender. Finally, variables were examined using a manifest path analysis to test the hypothesized relationships of the independent variables (emotion regulation, regulatory emotional self-efficacy, college self-efficacy, and PTSD severity) and the dependent variable (college GPA). All participant responses were included in this analysis and any missing data was accounted for by using full information maximum likelihood (FIML) as a default method of estimation.

The original path model illustrates the correlates between the observed variables being examined in this study (see ***Figure 1***). Several statistical tests and their indices were used to determine the adequacy of the proposed model's fit to the data. The Pearson chi-square statistic (χ^2) was used to determine the goodness of model fit. A chi-square coefficient close to 0 with $p > 0.05$ indicates a goodness of fit with little difference between expected and observed covariance matrices. The Comparative Fit Index (CFI) was an additional statistical test used in which the performance of a proposed model is compared to the performance on a baseline or null model that assumes zero correlation between all observed variables (Hu & Bentler, 1999). The CFI ranges from 0 to 1 with larger values indicating an overall improved model fit; however, an acceptable model fit is indicated by a CFI equal to 0.90 or greater (Kline, 1998). The Root Mean Square Error of Approximation (RMSEA) was a final statistical test used to determine the proposed model fit and is related to the amount of residual in a model. RMSEA values range from 0 to 1 with RMSEA values less than or equal to 0.05 being considered a close approximate fit, while RMSEA values greater than 0.05 to 0.08 are an acceptable fit. Any RMSEA value beyond 0.10 indicates an overall poor fitting model (Kenny, 1979).

DEMOGRAPHIC VARIABLE	*n*	%
GENDER		
Male	315	76.5
Female	97	23.5
RACE/ETHNICITY		
Caucasian/White	364	88.3
Hispanic/Latino/Spanish	186	45.1
African American/Black	32	7.8
American Indian or Native American	10	2.4
Asian	2	0.5
Native Hawaiian/Pacific Islander	1	0.2
Other	6	1.5
AGE		
20 – 29	211	51.2
30 – 39	158	38.3
40 – 49	40	9.7
50 – 59	1	0.2
60 – 69	2	0.5
MILITARY BRANCH		
Army	212	51.5
Air Force	89	21.6
Navy	46	11.2
Marine Corps	31	7.5
National Guard	15	3.6
Coast Guard	10	2.4
Reserve	9	2.2
SELF-REPORTED CUMULATIVE GPA		
3.70 – 4.00	112	27.2
2.70 – 3.69	176	42.7
1.70 – 2.69	7	1.7
1.69 and below	3	0.7

Table 1 Frequencies and Percentages for Sample Demographic Variables.

CORRELATIONS, MEANS, AND STANDARD DEVIATIONS						
VARIABLE	**1**	**2**	**3**	**4**	**5**	**6**
1. GPA	–					
2. PCL	–.04	–				
3. CSEI	.10	–.21**	–			
4. RESES	.04	–.39**	.55**	–		
5. CR	.15*	–.35**	.17**	.51**	–	
6. ES	.02	.01	–.15**	.07	.33**	–
M	3.48	34.96	50.25	35.75	26.27	16.61
SD	0.43	15.81	10.72	8.24	6.33	4.36

Table 2 Correlations and Multiple Regressions.

Note: GPA= Cumulative Grade Point Average, PCL = PTSD Check-List, CSEI = College Self-Efficacy Inventory, RESES = Regulatory Self-Efficacy Scale, CR = Cognitive Reappraisal, ES = Expression Suppression. * $p < .05$; ** $p < .01$.

RESULTS

The purpose of this study was to investigate and compare three structural mediation models (See ***Figures 1–3***) predicting academic performance among servicemembers and veterans enrolled in college. This study hypothesized that self-efficacy and PTSD symptom severity would influence the relationship between emotion regulation and college GPA in the following three ways. First, college and/or regulatory emotional self-efficacy and PTSD symptom severity will influence the relationship between emotion regulation and college GPA. Second, regulatory emotional self-efficacy will have a direct effect on self-perceived college self-efficacy and PTSD symptom severity. Third, PTSD symptom severity and college self-efficacy will have a direct effect on college student GPA. Thus, regulatory emotional self-efficacy, college self-efficacy, and PTSD severity will serve as mediating variables between emotion regulation and college GPA for a sample of college student servicemembers and veterans.

CORRELATIONAL ANALYSES

A correlational analysis of composite scores was conducted to understand the basic relationships between measurements of emotion regulation strategies (cognitive reappraisal and expression suppression), regulatory emotional self-efficacy and college self-efficacy, PTSD symptom severity, and participants' self-reported cumulative GPA. A correlational analysis (see ***Table 2***) indicated that cognitive reappraisal was significantly and positively correlated with college self-efficacy ($r = .17$, $p < .01$) in addition to regulatory emotional self-efficacy ($r = .51$, $p < .01$). Further, cognitive reappraisal was also significantly and positively correlated with GPA ($r = .15$, $p < .01$) and significantly and negatively correlated with PTSD symptom severity ($r = –.35$, $p < .01$). In other words, cognitive reappraisal coincides with regulatory emotion self-efficacy and college self-efficacy, such that both are strengthened with gains being made in GPA and PTSD symptom severity being attenuated. In contrast, expression suppression was significantly and negatively correlated with college self-efficacy ($r = –.15$, $p < .01$). Furthermore, a correlational analysis demonstrated that PTSD symptom severity measurements were minimally correlated with expression suppression ($r = .07$) and GPA ($r = –.042$). However, PTSD symptom severity was significantly and negatively correlated with college self-efficacy ($r = –.21$, $p < .01$) and regulatory emotional self-efficacy ($r = –.39$, $p < .01$). Together these findings suggest that expression suppression and GPA may not necessarily correspond with PTSD symptom severity. However, the results suggest both college self-efficacy and regulatory emotional self-efficacy tend to weaken with a greater degree of symptom severity associated with PTSD.

ANALYSIS OF VARIANCE

A one-way between subjects ANOVA was conducted to compare means for PTSD symptom severity and cumulative GPA based on gender (see ***Table 3*** below). The assumption of homogeneity was met for both PTSD severity and cumulative GPA as indicated by Levene's Test for Homogeneity of Variances [$F(1, 386) = .000$, $p = .984$] and [$F(1, 294) = 1.01$, $p = .315$] (Kenny, 1979). There was a significant effect of PTSD severity on gender for this condition [$F(1, 386) = 9.192$, $p = .003$]. However, the second ANOVA conducted to compare cumulative GPA between the same two groups did not suggest a difference between means [$F(1, 294) = .493$, $p = .483$]. Comparisons indicated that the mean score for PTSD severity associated with the female condition ($n = 94$, $M = 30.75$, $SD = 15.79$) significantly differed from that of the male condition ($n = 294$, $M = 36.37$, $SD = 5.62$). In contrast, comparisons did not reveal significant mean score differences for cumulative GPA based on gender. The mean cumulative GPA among female college student veterans and servicemembers ($n = 91$, $M = 3.51$, $SD = .44$) did not significantly differ from the mean cumulative GPA among their male counterparts ($n = 205$, $M = 3.48$, $SD = .43$). Additional analyses pertaining to mean scores of PTSD symptom severity and self-reported GPA based on military branch and/or race/ethnicity did not produce notable differences between groups.

SOURCE	*df*	*SS*	*MS*	*F*	*p*
Between Groups	1	2202.026	2201.026	8.988	.003*
Within Groups	385	94326.227	245.003		
Total	386	96528.253			
ONE-WAY ANALYSIS OF VARIANCE OF CUMULATIVE GPA BY GENDER					
SOURCE	***df***	***SS***	***MS***	***F***	***p***
Between Groups	1	.093	.093	.493	.483
Within Groups	294	55.167	.188		
Total	295	55.259			

Table 3 One-way Analysis of Variance of PTSD Symptom Severity by Gender.

Note: *$p < .05$.

STRUCTURAL PATH ANALYSES

A series of path analyses were conducted using MPLUS-7 (Muthén & Muthén, 2017) statistical package with maximum likelihood estimates using covariance matrices to estimate and infer the causal versus non-causal correlations among observed variables. The hypothesized relations among cognitive reappraisal, expression suppression, college self-efficacy, regulatory emotional self-efficacy, PTSD severity, and cumulative GPA were analyzed with a series of structural path analyses. The purpose of this analysis was to examine the hypothesized direct and indirect relationships among the observed variables and to describe the amount of explained and unexplained variance. This analysis consisted of a comparison between models that was made to test hypotheses about the path models and to examine the adequacy of fit for the just-identified models predicting academic outcome among college student servicemembers and veterans.

GOODNESS OF FIT INDICES

The comparisons for the goodness of fit indices across all three hierarchical models are presented (see ***Table 4*** below). First, all three models produced significant Pearson chi-squared (χ^2) coefficients; original model ($\chi^2 = 24.34$, $p = .05$); Regulatory Emotional Self-Efficacy (RESE) model ($\chi^2 = 11.20$, $p = .05$); and College Self-Efficacy (CSE) model ($\chi^2 = 7.33$, $p = .05$). Secondly, examination of all three target models based on the Comparative Fit Index (CFI) indicates good fit across all models (CFI = .90 – .92). More specifically, a comparison across all three models indicates that the CFI scores for RESE (CFI = .92) and CSE (CFI = .92) are slightly improved relative to the original model (CFI = .90). All three models produced RMSEA fit index scores (RMSEA = .12 – .16) beyond a desired value (RMSEA ≈ .05) to suggest a substandard model fit across all three models; however, the CSE model yielded the lowest fit index score (RMSEA = .12).

MODEL	X^2	*df*	CFI	RMSEA
Original Model	24.34*	6	.90	.13
RESE Model	11.20*	2	.92	.16
CSE Model	07.33*	2	.92	.12

Table 4 Goodness of Fit Comparison: Path Models Predicting Academic Outcomes.

Note: RESE = Regulatory Self-Efficacy, CSE = College Self-Efficacy.
*$p < .05$.

PREDICTIVE STRENGTH OF PTSD SYMPTOM SEVERITY

The three target models were tested to investigate the predictive strength of the relationship between PTSD symptom severity and college student cumulative GPA (see ***Figures 1–3***). The predictive strength of the regression coefficient for PTSD symptom severity and college student cumulative GPA are based on standardized beta weights. The results from a regression analysis across all three models suggests that PTSD symptom severity may not significantly predict college student cumulative GPA and accounts for a small amount of variance among this nationwide sample of CSSV. The standardized regression coefficients and the accounted variance for PTSD severity predicting college student cumulative GPA in the original model and the CSE model were equivalent with one another and nonsignificant (β = .13, SE = .095, $p = .16$) with a large percentage of the variance being left unexplained (1-R^2 = .96). However, the standardized regression coefficient for the RESE path model was not significant and much smaller in comparison to both the original and CSE models (β = .07, SE = .093, $p = .45$) with even less variance being accounted for in this model ($R^2 = .01$).

PREDICTIVE STRENGTH OF REGULATORY EMOTION SELF-EFFICACY

Researchers hypothesized that regulatory emotional self-efficacy would have a direct effect on PTSD symptom severity and self-perceived college self-efficacy. Indeed, in consideration to the regression coefficients for the original path model, regulatory emotional self-efficacy does have a significant direct effect on PTSD symptom severity (β = -.398, SE = .062, $p < .05$) and accounts for a small portion of variance ($R^2 = .16$). Furthermore, regulatory emotional self-efficacy has a direct effect on college self-efficacy and was also found to be a significant predictor (β = .571, SE = .062, $p < .05$) in the original model, with a moderate amount of variance being explained ($R^2 = .35$).

The statistical results associated with the original path model was compared to those associated with the RESE path model. There is a notable difference in the value of

the regression coefficients between the two models when comparing the direct effect that regulatory emotional self-efficacy has on PTSD severity. The value of the regression coefficient between PTSD severity and regulatory emotional self-efficacy decreased as a result of removing college self-efficacy from the original path model. Regulatory emotional self-efficacy has a direct effect on PTSD severity and remains a significant predictor for PTSD severity in the RESE model (see ***Figure 3***; β = –.240, SE = .076, $p < .05$). However, regulatory emotion self-efficacy significantly predicts PTSD severity with a smaller regression coefficient and explains a small portion of the variance ($R^2 = .22$).

PREDICTIVE STRENGTH OF COLLEGE SELF-EFFICACY

The hypothesized relationship college self-efficacy has to college student cumulative GPA was described as being a direct and significant predictor among a nationwide sample of CSSV. A comparison between the original path model and the CSE path model regression coefficients for college student cumulative GPA regressed onto college self-efficacy were made (see ***Figures 1–2***). The two regression coefficients from the original model and CSE model are equivalent to one another with identical values (β = .18, SE = .085, $p < .05$) and a small amount of variance explained (R^2 = .04). These two regression coefficients depict college self-efficacy as having a direct effect and significantly predicting college student cumulative GPA. For comparative purposes, it is worth noting that the RESE path model does not include college self-efficacy. Instead, regulatory emotional self-efficacy is positioned in the path model as being in direct relationship to college student cumulative GPA. Further, the direct effect that regulatory emotional self-efficacy has on college student cumulative GPA is insubstantial and the regression coefficient is nonsignificant.

PREDICTIVE STRENGTH OF EMOTION REGULATION

A path analysis of the statistical results from all three path models (see ***Figures 1–3***) demonstrate the influence emotion regulation strategies have on academic outcomes mediated by both college self-efficacy and regulatory emotional self-efficacy. Based on the standardized path coefficients, regulatory emotional self-efficacy was significantly predicted by both emotion regulation strategies in the original path model and RESE path model. The regression coefficients for each emotional regulation strategy associated with these two path models include expression suppression (β = –.175, SE = .066, $p < .05$) and cognitive reappraisal (β = .578, SE = .057, $p < .05$). Comparatively, the regressions coefficients for each emotion regulation strategy predicting regulatory emotional self-efficacy in the CSE model are reported for expression suppression (β = –.218, SE = .073, $p < .05$) and cognitive reappraisal (β = .358, SE = .07, $p < .05$). In other words, both emotion regulation strategies significantly predict regulatory emotional self-efficacy and account for an equivalent amount of variance in the original model and RESE model (R^2 = .29) with less variance explained in the CSE path model (R^2 = .12).

Furthermore, regulatory emotional self-efficacy was found to be a significant predictor for college self-efficacy (β = .571, SE = .062, $p < .05$) in the original path model with a moderate amount of explained variance (R^2 = .35). Additionally, PTSD severity was significantly predicted by regulatory emotional self-efficacy (β = –.398, SE = .062, $p < .05$) and accounted for a small portion of the variance in the original model (R^2 = .16). However, regarding the RESE model, regulatory emotional self-efficacy did not significantly predict academic outcomes based on cumulative GPA (β = .075, SE = .086, $p = .38$), yet significantly predicted PTSD severity (β = –.240, SE = .076, $p < .05$), with only a small portion of variance being explained (R^2 = .22). This is contrasted by the CSE path model in which college self-efficacy significantly predicts self-reported cumulative GPA (β = .180, SE = .085, $p < .05$) with very little variance being explained (R^2 = .04). Alternatively, college self-efficacy insignificantly predicted PTSD symptom severity (β = –.124, SE = .07, $p = .08$) yet comparatively accounted for a larger amount of variance (R^2 = .19). Therefore, expression suppression and cognitive reappraisal are exogenous variables plausibly mediated by regulatory emotional self-efficacy through college self-efficacy in the original path model significantly predicting self-reported cumulative GPA among CSSV (β = .18, SE = .084, $p < .05$). For the purpose of further clarification, it is relevant to point out that although cognitive appraisal and expression suppression both significantly predict regulatory emotional self-efficacy, the path analysis suggests that the two emotion regulation strategies do not significantly predict college self-efficacy in the original path model such that cognitive reappraisal (β = .028, SE = .076, $p = .71$) and expression suppression (β = –.118, SE = .065, $p = .07$) may not be considered worthy predictors of self-efficacy associated with college success.

Finally, the mediation in the original model described above does not appear to influence academic outcome through PTSD severity due to its path coefficient being a nonsignificant predictor (β = .134, SE = .095, $p = .16$) of self-reported cumulative GPA. Thus, it is plausible that regulatory emotional self-efficacy and college self-efficacy both alternatively serve as isolated mediating variables between emotion regulation and college GPA among this sample of CSSV based on the statistical results of the original path model.

MEDIATION MODELS: PTSD SYMPTOM SEVERITY AND CUMULATIVE GPA

Alternative mediation models were generated to further explore college and emotional regulation self-efficacies with two mediating variables (see ***Figures 4–9*** below): cognitive reappraisal and expression suppression predicting cumulative GPA and PTSD severity. Indeed, the direct path from cognitive reappraisal significantly predicted self-reported GPA ($\beta = 2.10$, $p < .05$) as well as both hypothesized mediator variables, college self-efficacy ($\beta = .28$, $p < .05$) and regulatory emotional self-efficacy ($\beta = .51$, $p < .05$). However, neither mediating variable significantly predicated cumulative GPA as a criterion. Therefore, the mediational model analysis presents evidence that neither college self-efficacy nor regulatory self-efficacy were significant mediating variables between cognitive reappraisal and self-reported GPA among this current sample of CSSV.

Secondly, college self-efficacy and regulatory emotional self-efficacy were positioned to mediate expression suppression and cognitive reappraisal with PTSD severity. These two mediating variables demonstrated significant regression coefficients between cognitive reappraisal and PTSD symptom severity, suggesting a mediational analysis be conducted with both forms of self-efficacy being introduced as mediating variables. The direct path between cognitive reappraisal and PTSD symptom severity was

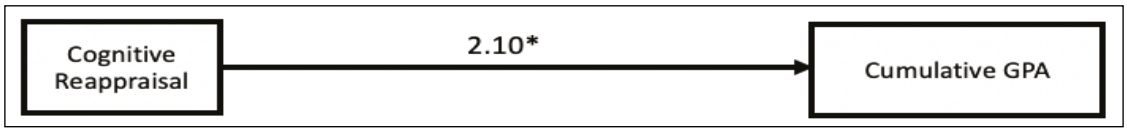

Figure 4 Direct Effect: Cumulative GPA on Cognitive Reappraisal.

The coefficient presented for the prediction of cumulative GPA is a beta weight/path regression coefficient. *Note*: * $p < .05$.

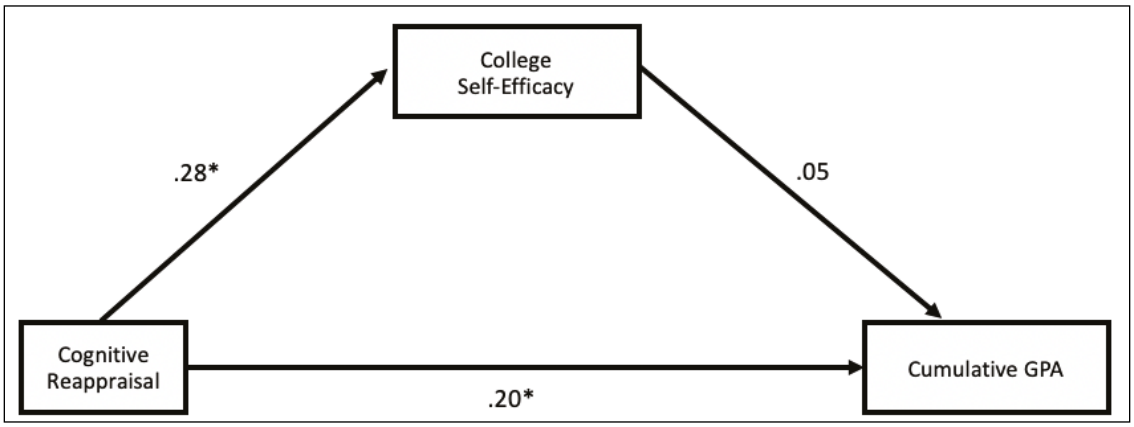

Figure 5 College Self-Efficacy Mediation Model Predicting GPA .

Note: * $p < .05$.

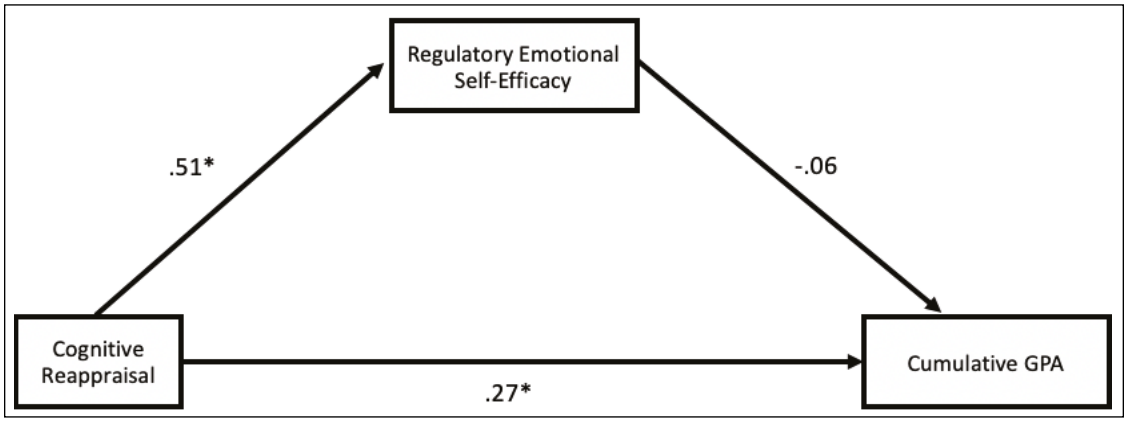

Figure 6 Regulatory Emotional Self-Efficacy Mediation Model Predicting GPA.

Note: * $p < .05$.

indeed found to be significant ($r = -1.03$, $p < .05$), therefore demonstrating a correlation between cognitive reappraisal and PTSD symptom severity (***Figure 7***). Furthermore, per the required criteria for mediation (Baron & Kenney, 1986), there are significant correlations between cognitive reappraisal and both college self-efficacy and regulatory emotional self-efficacy. The mediation models (***Figures 8*** and ***9***) both illustrate that the standardized regression coefficients between PTSD symptom severity and college self-efficacy ($\beta = -.21$, $p < .05$) as well as regulatory emotional self-efficacy ($\beta = -.51$, $p < .05$) are both statistically significant along with the standardized regression coefficients between cognitive reappraisal and PTSD symptom severity.

The mediational model analysis indicates two partial mediations between cognitive reappraisal and PTSD severity. First, cognitive reappraisal is partially mediated by college self-efficacy when predicting PTSD symptom severity. There is a small reduction in the direct path coefficient between cognitive reappraisal and PTSD symptom severity ($\beta = -.93$, $p < .05$) when college self-efficacy is introduced as a mediating variable (***Figure 8***). This reduction in the direct path between cognitive reappraisal and PTSD symptom

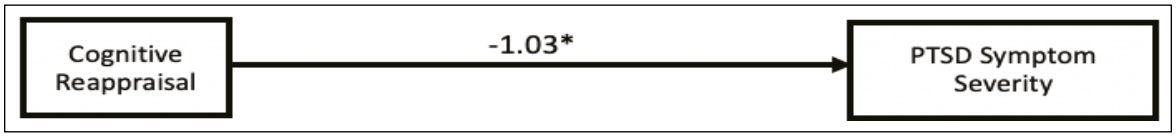

Figure 7 Direct Effect: PTSD Severity on Cognitive Reappraisal.

Note: * $p < .05$.

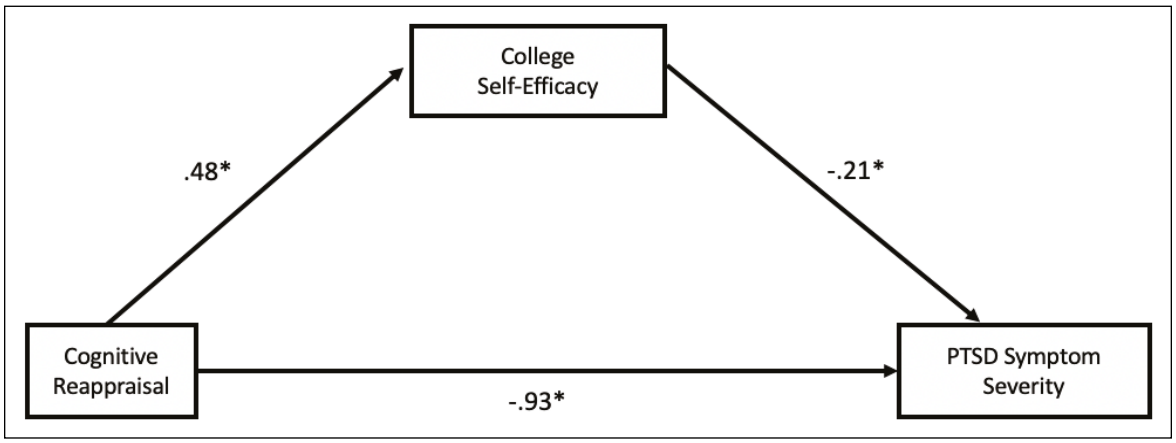

Figure 8 College Self-Efficacy Mediation Model Predicting PTSD Severity.

Note: * $p < .05$.

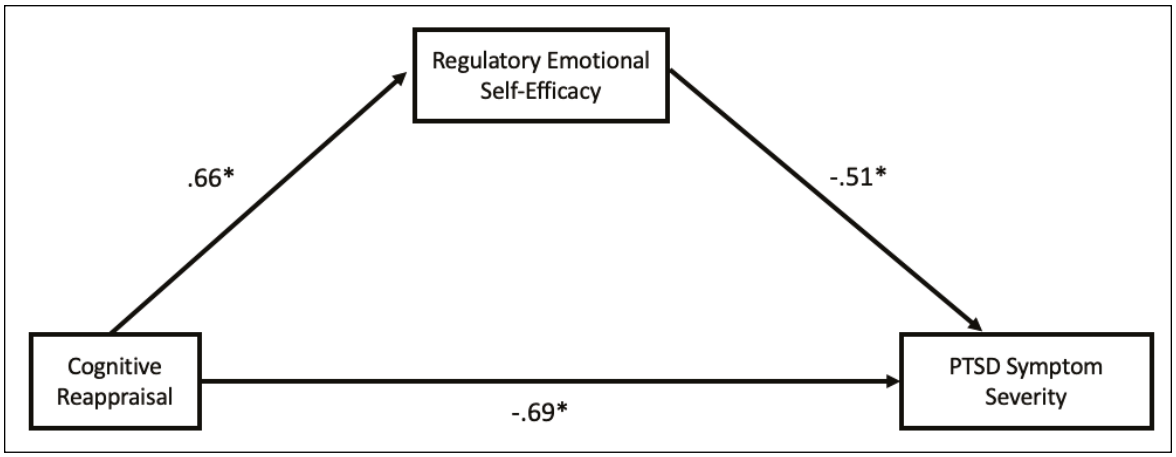

Figure 9 Regulatory Emotional Self-Efficacy Mediation Model Predicting PTSD Severity.

Note: * $p < .05$.

severity indicated a partial mediation with a small indirect effect size (d = –.10). Secondly, cognitive reappraisal is also partially mediated by regulatory emotional self-efficacy when predicting PTSD symptom severity. However, there is a larger reduction in the direct path coefficient between cognitive reappraisal and PTSD symptom severity (β = –.69, p < .05) when regulatory emotional self-efficacy is introduced as a mediating variable (***Figure 9***). This reduction in the direct path between cognitive reappraisal and PTSD symptom severity indicated a partial mediation with an indirect effect size (d = –.34). This partial mediation provides insight related to cognitive appraisal functioning as a significant predictor for PTSD symptom severity.

DISCUSSION

This is the first study to consider CSSV and their ability to regulate emotions as a factor contributing to their self-appraisal and beliefs associated with succeeding and overcoming academic challenges on a college campus. The purpose of the present study was to contribute to the limited research on factors impacting the academic success of CSSV. This study builds upon previous research and hypothesized that linear path models would explicate the relationships between two common emotion regulation strategies (cognitive appraisal and expression suppression), regulatory emotional self-efficacy, college self-efficacy, PTSD symptom severity, and self-reported cumulative college GPA in a sample of CSSV.

It was hypothesized that regulatory emotional self-efficacy along with college self-efficacy and PTSD symptom severity would influence the relationship between emotion regulation and self-reported cumulative GPA among a sample of CSSV in the following ways. First, both college self-efficacy, regulatory emotional self-efficacy, and PTSD symptom severity would mediate the relationship between emotion regulation and self-reported GPA in a sample of CSSV. Second, regulatory emotional self-efficacy would have a direct effect on self-perceived college self-efficacy and PTSD symptom severity. Third, PTSD symptom severity and college self-efficacy would have a direct effect on self-reported GPA. Thus, regulatory emotional self-efficacy, college self-efficacy, and PTSD symptom severity would serve as mediating variables between emotion regulation and college GPA among CSSV.

EMOTION REGULATION AND SELF-EFFICACY

The comparisons made between the three path models were made based upon their structural model fit indices and path coefficients. The study demonstrated the overall value of emotion regulation and self-efficacy in predicting PTSD symptom severity and academic outcomes among a nationwide sample of CSSV. Based on the results of the current path analysis, both emotion regulation strategies were found to significantly predict regulatory emotional self-efficacy. The path analysis demonstrated that cognitive reappraisal positively predicted, and expression suppression negatively predicted, regulatory emotional self-efficacy. This suggests that the confidence in the ability to regulate emotions for participants in this study is plausibly moderated and influenced by the ability to change the trajectory of an emotional response by flexibly reinterpreting the meaning of a potentially emotional eliciting situation.

The statistical results of the original model further suggest that confidence in regulating emotions plausibly moderates PTSD severity, while academic confidence related to college self-efficacy possibly moderates academic outcomes. The fact that there is a significant relationship between both unique forms of self-efficacy, such as college self-efficacy and regulatory self-efficacy and their corresponding outcomes, suggests that emotion regulation strategies are a plausible component to determining the psychological, behavioral, and academic outcomes among CSSV. The significant path coefficients in the original model suggest the relationship between two emotion regulation strategies and academic outcomes is mediated by both regulatory emotional self-efficacy and college self-efficacy. Altogether, a conclusion can be drawn to which both regulatory self-efficacy and college self-efficacy are significantly influenced by emotion regulation strategies and will plausibly influence academic outcomes among CSSV.

IMPLICATIONS

The results of this study support significant and meaningful path coefficients in the CSE and RESE structural models predicting PTSD Symptom Severity and Self-Reported GPA. Both models suggest cognitive reappraisal is a significant factor in predicting PTSD severity. This suggests both models support cognitive reappraisal as an emotion regulation strategy, which plausibly insulates CSSV from elevated levels of PTSD symptom severity. This has implications for academic professionals such as academic advisors, course instructors, and faculty members who manage meaningful interpersonal interactions with CSSV.

First, expression suppression significantly predicted both forms of self-efficacy in a negative direction, suggesting that voluntary suppression of outward emotional expressions reduces college student servicemembers' and veterans' confidence in their abilities associated with regulating emotions and successfully performing in academic settings. This particular finding supports the plausibility for CSSV to

experience disruptions to their social relationships with academic professionals and peers in the context of learning environments. It suggests college student mental health professionals may consider the benefits of extending vital support services to this unique college student population to promote alternative methods for responding to stressors and exploring a general practice of sharing and expressing emotions.

Secondly, the current evidence suggests the ability to flexibly change the trajectory of an emotional response by reinterpreting the meaning of a potentially emotional eliciting situation will perhaps mitigate or diminish the constellation of clinical symptoms associated with PTSD symptomatology. This conclusion is further supported and reinforced by the RESE path model in which regulatory emotional self-efficacy significantly predicted PTSD symptom severity in a negative direction. This suggests cognitive appraisal, along with perceived regulatory emotional self-efficacy among college servicemembers or veterans, will plausibly moderate PTSD symptom severity.

Comparatively, the CSE path model diverges from those results of the RESE path model in which college grade point average is significantly predicted by college self-efficacy. The path coefficient associated with the RESE path model predicting academic outcomes does not support regulatory emotional self-efficacy as an observed variable within the structural model to predict academic outcomes among college servicemembers and veterans. The difference between the two models suggests that college self-efficacy mediates emotion regulation strategies and academic outcome based on its significant relationship to both emotion regulation strategies and self-reported GPA.

Alternatively, there are two significant relationships that regulatory emotional self-efficacy has with college self-efficacy and PTSD severity. The first is between regulatory emotional self-efficacy and its direct effect on self-perceived college self-efficacy. More specifically, results indicate that the relationship between the two observed variables positively predicts college self-efficacy. The relationship between the two specific forms of self-efficacy allude to a general self-efficacy in which regulating emotions is a factor associated with academic confidence and performing in academic settings.

More importantly is the relationship between regulatory emotional self-efficacy and PTSD severity in all three structural models. Regulatory emotional self-efficacy has a direct and negative relationship with the severity of PTSD symptoms. The original path model as well as the RESE path model include regulatory emotional self-efficacy as a significant predictor of PTSD severity in which higher levels of regulatory self-efficacy equate to lower levels of PTSD severity. This significant relationship is further defined in the mediation models in which cognitive reappraisal is partially mediated by regulatory emotional self-efficacy. Additionally, PTSD symptom severity did not significantly predict self-reported GPA, which supports evidence in the research literature indicating college GPA is not significantly determined nor influenced by the severity of experienced PTSD symptoms among CSSV.

In summary, college self-efficacy and the confidence to perform in academic settings significantly predicted academic outcomes. The current study presented two structural path models in which college self-efficacy significantly predicted academic outcome: the original path model ($\beta = .18$, $p < .05$) as well as the CSE path model ($\beta = .18$, $p < .05$). The fact that expression suppression ($\beta = -.21$, $p < .01$) and cognitive reappraisal ($\beta = .36$, $p < .01$) significantly predicted college self-efficacy suggests that emotion regulation strategies plausibly influence college self-efficacy and predict academic outcomes among CSSV.

Additionally, the results indicate significant relationships between emotion regulation strategies and regulatory emotional self-efficacy in the expected directions: expression suppression predicts regulatory emotional self-efficacy in a negative direction ($\beta = -.18$, $p < .01$) while cognitive reappraisal is expressed in a positive direction ($\beta = .58$, $p < .01$). This is further demonstrated when comparing cognitive appraisal across two different forms of self-efficacy. These comparisons are based on coefficients in which cognitive appraisal was demonstrated to be an improved predictor of regulatory emotional self-efficacy ($\beta = .58$, $p < .01$) in comparison to college self-efficacy ($\beta = .36$, $p < .01$). Furthermore, the regression coefficient is greater for regulatory emotional self-efficacy in comparison to college self-efficacy which suggests there is a significant correlation between the use of an effective emotion regulation strategy and the self-efficacy associated with regulating emotions. Evidence from this study suggests emotion regulation strategies are related to general self-efficacy in which expression suppression is considered a significant predictor for college self-efficacy ($\beta = -.21$, $p < .01$) and regulatory emotional self-efficacy ($\beta = -.18$, $p < .01$).

LIMITATIONS

A number of limitations of the current study should be noted. First, survey respondents are subject to self-selection bias due to voluntary participation and may result in the target population not being fully represented in the study. Second, the survey respondents are plausibly

prone to social desirability and recall bias that can result in respondents overreporting favorable academic outcomes such as GPA. Although systematic biases have been proven to influence the outcome of self-reported GPA, there is a general acceptance in self-reported grades being used in research as a representation of actual grades earned in post-secondary academic settings. Therefore, self-reported GPA should be used with caution and evaluated within the context of the findings of a given research study (Kuncel et al., 2005). Lastly, inherent limitations are associated with the fit indices used in this study. For example, the significant chi-square (χ^2) coefficients reported in this study are possibly a result of the large sample size, which may unfairly reject the current models being analyzed. Further, there is difficulty in interpreting the root mean square residuals (RMSEA) due to limited consensus on what the levels represent in relationship to what is considered a good fitting model. According to researchers, RMSEA level less than .05 is considered to be ideal (Hu & Bentler, 1999) and RMSEA level of .08 is an acceptable index (Stieger, 1990).

FUTURE DIRECTIONS

Additional research is required to draw significant and more meaningful conclusions about the predictive relationships emotion regulation strategies and self-efficacy beliefs have with PTSD symptom severity and academic outcomes among CSSV. The current findings add support for the benefit of including emotion regulation strategies for the purpose of reducing PTSD symptom severity and strengthening college self-efficacy among CSSV. However, future research would benefit from examining the relationship between strategies to regulate emotions and their influence over college self-efficacy and managing posttraumatic stress. The results from this study also confirm the value of including emotion regulation inventory items in measurements of college self-efficacy and general self-efficacy. A focus on cognitive appraisal could prove to be useful by examining it as a component of college self-efficacy and predicting academic performance among adult learners. Finally, it is suggested the development of clearly defined interventions aimed at strengthening emotion regulation strategies to improve mental health and academic related outcomes be considered when attempting to support and expand the academic social-network among CSSV.

COMPETING INTERESTS

The authors have no competing interests to declare.

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