

ABSTRACT

Title of Document: AN EXAMINATION OF TOXIC LEADERSHIP, JOB OUTCOMES, AND THE IMPACT OF MILITARY DEPLOYMENT

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Despite increasing coverage of toxic leadership from the popular press and lay publications, it has only recently been the subject of rigorous empirical scrutiny. This investigation tested a moderated mediation model to examine the relationships between toxic leadership, group cohesion, and job outcome variables among military personnel in different deployment situations. Using conservation of resources (COR) theory as a grounding framework, responses were collected from military personnel who were stationed "in garrison" (i.e. at home, in a low stress situation), deployed, (a high stress situation), and deployed to an active combat zone (an extreme stress situation). Hypotheses were focused on group-level ratings of toxic leadership and job outcomes. Multilevel analyses were used to control for individual-level effects. Confirmatory factor analysis showed support for a five-factor structure of toxic leadership that includes dimensions of self-promotion, abusive supervision, unpredictability, narcissism, and authoritarian leadership. The higher-order construct of toxic leadership and its five component dimensions had direct negative effects on

all four job outcome variables: group-level job satisfaction, group productivity, group-level organizational trust, and group-level organizational commitment. Toxic leadership also had a direct negative effect on group cohesion. Group cohesion was found to be a full mediator of the relationships between self-promotion, abusive supervision, and unpredictability and group-level job satisfaction. Group cohesion was found to be a partial mediator for the 17 remaining relationships between the toxic leadership dimensions and job outcomes. Relative importance analysis indicated that while the toxic leadership dimensions of unpredictability and abusive supervision were key predictors of job outcomes, self-promotion was the dimension with the most predictive power. No support was found for the hypothesized interactions caused by deployment status. Future directions are proposed for research on destructive leadership styles, and implications for practitioners are discussed.

AN EXAMINATION OF TOXIC LEADERSHIP, JOB OUTCOMES, AND THE
IMPACT OF MILITARY DEPLOYMENT

By

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Dedication

In memory of Lt. J. Wesley Van Dorn: lifelong friend and role model for all that leaders can and should be. We miss you.

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Table of Contents

Dedication.....	ii
Acknowledgements.....	iii
Table of Contents.....	iv
List of Tables.....	vi
List of Figures.....	viii
Introduction.....	1
Toxic Leadership.....	2
Differentiating Toxic Leadership from Other Destructive Leadership Styles.....	4
Destructive Leadership:.....	5
Petty Tyranny:.....	5
Workplace Bullying:.....	6
Abusive Supervision:.....	7
Conservation of Resources Theory.....	8
Hypotheses.....	13
Main Effects - Toxic Leadership and Job Outcomes.....	14
Group-level Job Satisfaction:.....	14
Group Productivity:.....	15
Group-level Organizational Trust:.....	16
Group-level Organizational Commitment:.....	17
Differential Impact of Toxic Leadership Dimensions.....	18
Group Cohesion Mediating the Relationship between Toxic Leadership and Job Outcomes.....	21
The Moderating Impact of Deployment Status.....	25
Method.....	30
Participants.....	30
Measures.....	31
Procedure.....	32
Analyses.....	33
Results.....	35
Discussion.....	47
Empirical Support for the Impact of Toxic Leadership.....	47
Differential Impact of Toxic Leadership Dimensions.....	48
Group Cohesion as a Mediator.....	50
The Impact of Deployment.....	51

Limitations	53
Implications for Future Research.....	54
Implications for Practitioners.....	56
Conclusion	57
Tables.....	59
Figures.....	92
Appendix A: Scales and Measures	100
References.....	102

List of Tables

Table 1: ICCs and rwgs.....	59
Table 2: Correlations among Mean Scores (Aggregated to the Group Level)	60
Table 3: Multilevel Regression of Job Outcome Variables on Toxic Leadership Dimensions	61
Table 4: Multilevel Regression of Job Outcome Variables on Toxic Leadership Dimensions (controlling for group size).....	62
Table 5: Multilevel Regression of Job Outcome Variables on Toxic Leadership Dimensions	63
Table 6: Relative Weight Analysis of Toxic Leadership Dimensions on Outcome Variables	66
Table 7: Multilevel Regression of Group Cohesion on Toxic Leadership Dimensions (<i>in garrison only</i>)	67
Table 8: Multilevel Regression of Job Outcome Variables on Group Cohesion (<i>in garrison only</i>).....	70
Table 9: Multilevel Regression of Job Outcome Variables on Toxic Leadership Dimensions, controlling for Group Cohesion (<i>in garrison only</i>)	71
Table 10: Mediation Test Comparing Observed R to \hat{r}	76
Table 11: Mediation Test Comparing Observed B to \hat{B}	76
Table 12: Mediation Test Comparing Observed Standardized B to Reproduced Standardized \hat{B}	77
Table 13: Regression of Job Outcome Variables on Group Cohesion, controlling for Self-Promotion (<i>in garrison only</i>)	78
Table 14: Regression of Job Outcome Variables on Group Cohesion, controlling for Abusive Supervision (<i>in garrison only</i>).....	79
Table 15: Regression of Job Outcome Variables on Group Cohesion, controlling for Unpredictability (<i>in garrison only</i>).....	80
Table 16: Regression of Job Outcome Variables on Group Cohesion, controlling for Narcissism (<i>in garrison only</i>)	81

Table 17: Regression of Job Outcome Variables on Group Cohesion, controlling for Authoritarian Leadership (<i>in garrison only</i>).....	82
Table 18: Interaction Analysis for Relationship between Self-Promotion and Group Cohesion	83
Table 19: Interaction Analysis for Relationship between Abusive Supervision and Group Cohesion	84
Table 20: Interaction Analysis for Relationship between Unpredictability and Group Cohesion	85
Table 21: Interaction Analysis for Relationship between Narcissism and Group Cohesion	86
Table 22: Interaction Analysis for Relationship between Authoritarian Leadership and Group Cohesion	87
Table 23: Interaction Analysis for Relationship between Group Cohesion and Job Satisfaction.....	88
Table 24: Interaction Analysis for Relationship between Group Cohesion and Work Group Productivity.....	89
Table 25: Interaction Analysis for Relationship between Group Cohesion and Organizational Trust	90
Table 26: Interaction Analysis for Relationship between Group Cohesion and Organizational Commitment.....	91

List of Figures

Figure 1: Overall Model.....	92
Figure 2: Hypothesized Relationships	93
Figure 3: Results of Confirmatory Factor Analysis.....	94
Figure 4: Results of Sobel Tests Using Self-Promotion as the Independent Variable	95
Figure 5: Results of Sobel Tests Using Abusive Supervision as the Independent Variable.....	96
Figure 6: Results of Sobel Tests Using Unpredictability as the Independent Variable	97
Figure 7: Results of Sobel Tests Using Narcissism as the Independent Variable	98
Figure 8: Results of Sobel Tests Using Authoritarian Leadership as the Independent Variable.....	99

Introduction

Although leadership has been a focal topic of organizational science since the inception of the field, only recently have researchers begun to directly explore negative leadership styles (Pelletier, 2010; 2012). For decades, academic researchers focused on how leaders improve their organizations and increase the effectiveness of their followers. Many theories of positive leadership appeared to assume that dysfunctional leadership was simply the absence or opposite of effective leadership (Hunter, Bedell-Avers, & Mumford, 2007). However, as organizations are beginning to recognize that some leaders are hostile toward employees, peers, and even customers, they are searching for more understanding about how these negative leadership styles impact workplace outcomes. Researchers have also started examining negative leadership styles, and are beginning to show how such behaviors cascade throughout organizations and impact the bottom line. For example, Mawritz, Mayer, Hoobler, Wayne, and Marinova (2012) showed that abusive supervision among senior managers was positively related to this same leadership style among front-line supervisors, which in turn was positively related to interpersonal deviance among employees. This “trickle-down” model of abusive supervision explains how negative leadership behaviors can be replicated downward throughout the organization, creating a highly destructive leadership climate.

For organizations with strict hierarchical structures (such as the military), these findings are especially pertinent. Lian, Ferris, and Douglas (2012) found that subordinates with a strong hierarchies were more likely to tolerate abusive supervision. Social learning theory (Bandura, 1973) suggests that people who expect

leaders to display strong authority will be more likely to view their leaders as having high status (Bochner & Hesketh, 1994). Therefore, they are more likely to emulate their leaders, even if these leadership behaviors are destructive. This means that organizations must be proactive about identifying and correcting destructive leadership before it becomes a pervasive part of the culture.

Toxic Leadership

A number of academic and popular press articles have focused on a specific type of destructive leadership called “toxic leadership” (e.g. Brandel, 2006; Dyck, 2001; Frost, 2004; Goldman, 2006; Goldman, 2011; Henley, 2003; Korn, 2004; Lester, 2007; Lipman-Blumen, 2005b; Lipman-Blumen, 2005c; Lubit, 2004; Macklem, 2005; Pelletier, 2010; Pelletier, 2012; Simmons, 2001; Taylor, 2007; West, 2007; Whicker, 1996; Wilson-Starks, 2003). These articles describe the destructive effects of toxic leadership in a wide range of organizations, industries, and organizational stakeholders. For example, authors have suggested that toxic leadership might impair the physical and mental health of employees (Dyck, 2001), invoke dysfunctional group behavior (Wilson-Starks, 2003), or increase absenteeism and employee withdrawal (Macklem, 2005).

Although most publications focus on civilians working in private organizations (e.g., Pelletier, 2010) or university students (e.g., Pelletier, 2012), the United States military is particularly interested in toxic leadership because of the potentially mutinous and even lethal consequences that result due to failures of military leadership (Di Genio, 2002; Jaffe, 2011; Reed, 2004; Steele, 2011; Tan &

Gould, 2011; Williams, 2005). The U.S. military has publicly acknowledged a desire to identify toxic leaders within its ranks so they can be coached appropriately.

Unfortunately, despite a growing number of articles, the relationships between toxic leadership and job-related outcomes have not been rigorously tested (Goldman, 2006; Macklem, 2005; Pelletier, 2010). There have only been a few empirical investigations on toxic leadership (e.g., Pelletier, 2012), and most of these were conducted to define the construct space of multiple negative leadership styles (e.g., Pelletier, 2010; Schmidt, 2008). Schmidt (2008) conducted a series of three studies to empirically define toxic leadership and to develop a valid measure of this construct. After a qualitative study capturing critical incidents of toxic leadership, he found five dimensions of toxic leader behavior: self-promotion, abusive supervision, unpredictability, narcissism, and authoritarianism. During a subsequent quantitative study, he tested this five-factor model using exploratory factor analysis. In a follow-up study, Schmidt, Hanges, and Muhammad (in production) collected a new data set and confirmed the Schmidt (2008) factor structure. Their results demonstrated that the five factors could be distinguished from one another and these factors also loaded onto a single second-order construct they called “toxic leadership”¹. As a result, Schmidt et al. concluded that toxic leadership is a multi-dimensional construct that includes an array of destructive behaviors.

Toxic leadership is conceptualized as a group-level variable. While Whicker (1996) and Lipman-Blumen (2005) described how some toxic leaders focus their negative behaviors on a few particular subordinates, these authors also agreed that

¹ These authors also demonstrated that this model with five dimensions that loaded onto a second-order factor fit the data better than a model where all items loaded directly onto a single factor of toxic leadership.

such behaviors impacted the whole work group. Pelletier (2012) agreed, and proposed that toxic leadership behaviors directed at some group members would still impact the rest of the group, creating negative effects for all members. Reed (2004) wrote that toxic leaders eroded esprit de corps and group morale, thus indicating that it was a group-level construct. The current investigation examines the impact of toxic leadership, conceptualized at the group level, on group-level job outcome variables.

Differentiating Toxic Leadership from Other Destructive Leadership Styles

Schmidt (2008) added to the extant literature by showing that toxic leadership includes a broader spectrum of behaviors than had been studied previously. Pelletier (2010) supported this conclusion in her review of the behavioral overlap and uniqueness of several negative leadership styles. Specifically, she compared the behaviors in the definitions of abusive supervision (Tepper, 2000; 2007), petty tyranny (Ashforth, 1994; 1997), destructive leadership (Einarsen, Aasland, & Skogstad, 2007), bullying (Namie & Namie, 2000), and toxic leadership (Lipman-Blumen, 2005, Reed, 2004). Although abusive supervision has received the most empirical attention of these theories, her review showed that it was more narrowly focused on a subset of negative behaviors than toxic leadership. In fact, of all the theories she reviewed, toxic leadership was the most comprehensive in terms of the number and types of behaviors included. Therefore, her review supported Schmidt's assertion that toxic leadership is an umbrella term that covers several distinct but related dimensions of negative leadership, and that each dimension uniquely captures specific negative leadership behaviors. The following is a brief review of these

leadership styles and explanation for how toxic leadership covers a wider domain of behaviors.

Destructive Leadership:

Destructive leadership was introduced by Einarsen, Aasland, and Skogstad (2007), and defined as, "...the systematic and repeated behaviour by a leader, supervisor, or manager that violates the legitimate interest of the organisation by undermining and/or sabotaging the organisation's goals, tasks, resources, and effectiveness and/or motivation, well-being or job satisfaction of subordinates." (p. 208). This definition is quite broad, and includes any sort of harmful actions aimed toward individual subordinates, the organization as a whole, and everything in between. Toxic leadership is a narrower set of behaviors that specifically involve leader behavior directed at subordinates. Further, the definition of destructive leadership includes physical harm and sexual misconduct, which are outside the scope of toxic leadership (Pelletier, 2010; Schmidt 2008). Therefore, destructive leadership is an overarching construct that includes many negative leadership behaviors that leaders can display, including toxic leadership (and its dimensions), workplace aggression, sexual harassment, and interpersonal violence.

Petty Tyranny:

Ashforth (1994; 1997) introduced the concept of "petty tyranny," which he defined as "the tendency to lord one's power over others," (Ashforth, 1997, p. 126). Petty tyranny includes such behaviors as "arbitrariness, self-aggrandizement, belittling others, lack of consideration, a forcing style of conflict resolution, discouraging initiative, and noncontingent punishment." (Ashforth, 1994, p. 755).

There are only a handful of articles on petty tyranny and the construct remains undeveloped. In his reviews of destructive leadership, Tepper (2000; 2007) demonstrated that the construct does not necessitate the implication of hostility, which makes it conceptually different from other negative leadership styles. Most of the behaviors Ashforth described would be considered aggravating and annoying, but not necessarily destructive (Tepper, 2000). Therefore, petty tyranny lacks many of the more hostile elements of toxic leadership (Pelletier, 2010).

Workplace Bullying:

Another topic of recent interest is workplace bullying, which has spawned significant interest among researchers and practitioners (Samnani, & Singh, 2012). Bullying has been defined in many ways, but a definition that is commonly used follows: “Bullying at work means harassing, offending, socially excluding someone or negatively affecting someone's work tasks. In order for the label bullying (or mobbing) to be applied to a particular activity, interaction or process it has to occur repeatedly and regularly (e.g. weekly) and over a period of time (e.g. about six months).” (Einarsen, Hoel, Zapf, & Cooper, 2003, p. 15). Fox and Stallworth (2005) described several types of bullying based on the level of the bully and the level of the target. They concluded that bullying can occur between supervisors and subordinates, among subordinates (and among supervisory-level peers), and between customers/clients and employees, so bullying does not require a supervisory/subordinate relationship. While many people report being bullied by their managers (Rayner & Cooper, 1997), many are also victims of bullies that are not in supervisory roles. In their review of 20 years of workplace bullying research,

Samnani and Singh (2012) concluded that bullying was sufficiently different in scope and meaning from supervisory mistreatment such as abusive supervision.

Abusive Supervision:

Tepper (2000) introduced the concept of “abusive supervision,” defined as “sustained display of hostile verbal and nonverbal behaviors, excluding physical contact,” (Tepper, 2000, p. 178). Unlike petty tyranny, abusive supervision includes nonverbal, intentional hostile behaviors. Abusive supervision has captured the attention of many researchers in recent years and has spawned serious scholarly discussion. For example, articles have shown that subordinates of abusive supervisors performed fewer organizational citizenship behaviors (Zellars, Tepper, & Duffy, 2002), experienced decreased job satisfaction (Tepper, Hoobler, Duffy, & Ensley, 2004), had decreased perceptions of interactional justice and affective commitment to the organization (Aryee, Sun, Chen, & Debrah, 2007), and engaged in more interpersonal deviance (Mawritz et al., 2012).

While there is a strong series of investigations on abusive supervision, the construct does not capture all the behaviors described as “toxic leadership.” In her review of the literature, Pelletier (2010) demonstrates that a wide range of behaviors described as “toxic” by Lipman-Blumen (2005), Kellerman (2004), and others are not covered in the construct space of abusive supervision. These excluded behaviors include stifling subordinate dissent (authoritarianism), ignoring subordinate ideas and input (narcissism), taking credit for others’ work (self-promotion), and vacillating between multiple types of behavior (unpredictability). All of these additional behaviors were captured in the broader definition and scale developed and validated

by Schmidt (2008) and highlighted as important elements of toxic leadership by Pelletier (2010; 2012).

For more complete comparisons across multiple destructive leadership styles, refer to the reviews conducted by Pelletier (2010) and Schmidt (2008). Both authors agreed that while there is overlap between toxic leadership behaviors and those described by petty tyranny, bullying, and abusive supervision, but none of these other styles are as comprehensive as toxic leadership. Independently, both authors concluded that toxic leadership is a multi-dimensional construct that more completely captures the full range of behaviors described in the extant literature on toxic leadership.

Conservation of Resources Theory

Unfortunately, few empirical studies have been conducted to explore the impact of toxic leadership. Moreover, the extant literature lacks a theoretical explanation for why toxic leadership has profoundly negative effects. The current investigation used conservation of resources (COR) theory (Hobfoll, 1989; 1998; 2001) as a theoretical foundation for the proposed impact these leaders had on their subordinate groups. COR theory holds that people aim to acquire and retain resources, both material (e.g., financial security) and psychological (e.g., social relationships, recognition). Resources are defined as “. . . objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as means for [their] attainment . . .” (Hobfoll, 1989, p. 516). Losing or being threatened with losing these resources can induce distress, so coping mechanisms are activated to prevent this negative outcome. Studies have used COR to show a variety

of general and specific psychological distress symptoms when coping mechanisms are unsuccessful, including job strain (Vinokur, Pierce, Lewandowski-Romps, Hobfoll, & Galea, 2011), post-traumatic stress (Hobfoll, Canetti-Nisim, & Johnson, 2006), and job burnout (Hobfoll & Shirom, 1993; 2000).

The underlying mechanism for COR theory is the notion that people have a finite amount of resources, and must expend them to meet daily demands. Ideally, they counteract this expenditure by also gaining resources through a variety of inputs (e.g., social connections with family and friends, material and financial gains through employment, psychological resources through a sense of mastery or competence at work, etc.). People experience negative consequences when their resources are depleted over time without replenishment (Wright & Cropanzano, 1998; Harris, Wheeler, and Kacmar, 2011).

COR theory is highly applicable to organizational research. Previous studies have found that the workplace can increase or deplete resources, and these resource levels impact employee well-being (Kalshoven & Boon, 2012). For example, Kalshoven and Boon found that ethical leadership behaviors provided job resources, such as emotional support and role clarification. These increased resources boosted subordinate well-being, which in turn has been consistently linked to higher organizational performance (van Dierendock, Haynes, Borrill, & Stride, 2004). Conversely, work-related resource depletion has been linked to lower job satisfaction and higher intent to turnover (Wright & Cropanzano, 1998; Harris et al., 2011). Vinokur et al. (2011) found enough evidence for the impact of job-related resource

depletion that they defined “job burnout” as the distress and negative psychological outcomes that result from a depletion of coping resources in the workplace.

This connection between resource depletion and negative job outcomes is frequently found in COR research. For example, a study on interpersonal deviance among coworkers found that incivility was associated with resource depletion, which in turn was associated with higher levels of burnout and turnover intentions (Giumetti, McKibben, Hatfield, Schroeder, & Kowalski, 2012). This study showed support for the notion that resource depletion was connected with negative outcomes and can be caused by incivility and unkind treatment from others in the workplace. Resource depletion and its effects on job outcomes is especially important for military personnel because the stressors they encounter through the occupational hazards of deployment and the stress of combat can lead to particularly negative consequences for physical and mental health (Elder, Shanahan, & Clipp, 1997; Hobfoll et al., 2012; Neria & Koenen, 2003). Indeed, Vinokur et al. (2011) found many military personnel had depleted their resources, essentially “burning out” and resulting in higher levels of PTSD and depression and lower levels of job functioning during future employment. The military lifestyle exposes personnel to both traumatic events that cause rapid resource loss (Hobfoll, 1991) and regular job demands that slowly sap resources over a prolonged period of time (Hobfoll & Shirom, 1993). This combination results in severe resource depletion (Hobfoll et al., 2012) that prevents people from completing their tasks because they have no resources left. Resource depletion may also lead to greater interpersonal and organizational deviance because

resources are required for people to regulate their actions and display appropriate behaviors (Baumeister, Vohs, & Tice, 2007).

Within organizational research, COR theory has been frequently applied to positive leadership styles, which have often been cited as a source of resources. Kalshoven and Boon (2012) found evidence for the “positive spiral” that results from ethical leadership behaviors. That is, ethical leadership boosted employee resources, so employees were able to be more productive and masterful, which in turn provided even more resources. Ethical leaders defended their employees, protected them from unfair treatment, and were able to mobilize additional resources when needed. Even when employees were feeling resource loss due to other aspects of the job, the impact of this loss was partially mitigated by the positive resources ethical leaders provided. Thus, Kalshoven and Boon asserted that ethical leaders provide a “safety net” for employees that feel threatened with low levels of well-being at work. Similarly, Halbesleben (2006) wrote that LMX is a prime source of resources, and a positive relationship with a supervisor can replenish and protect employee resources. This assertion was supported by Harris et al. (2011), who found that the leader-subordinate relationship (as measured by LMX) provided resources, which in turn improved job outcomes for individual employees.

Interestingly, despite lots of research and empirical evidence for the resource increases due to positive leadership behaviors, there is very little research using COR theory to explain the impact of negative leadership behaviors. Perry, Witt, Penney, and Atwater (2010) used COR theory as an explanation for increased exhaustion among subordinates whose personality traits were misaligned with their supervisors’

leadership styles. But, their focus was on a positive leadership style (goal-focused leadership), and misalignment between subordinates and supervisors was due to low subordinate conscientiousness. Thus, they were still examining a positive leadership style, and the undesirable behavior they studied was displayed by the followers, not the leaders. Recently, Byrne, Dioisi, Barling, Akers, Robertson, Lys, Wylie, and Dupré (2013) published a study examining leaders' resource levels and subsequent leadership behaviors. They found that leaders with fewer resources were more likely to engage in negative leadership behaviors. While this study made a more direct connection between COR theory and destructive leadership, it examined the resource levels of the leaders, not the subordinates. Finally, Chi and Liang (2013) used COR theory as a framework to understand the impact of abusive supervision, and concluded that this negative leadership style decreased employee resources, which contributed to greater levels of work withdrawal. These few studies are the first to use COR theory as a theoretical framework to explain negative leadership styles (Byrne et al., 2013; Chi & Liang, 2013), creating a need for further exploration.

This gap in COR theory as it applies to negative leadership is particularly striking because a foundational element of the theory is that losing resources has more impact and is more meaningful than gaining resources (Hobfoll & Lilly, 1993; Wells et al., 1999). Hobfoll (2001) discussed both positive and negative spirals that result from resource gain or loss, and asserted that the negative stress spirals have more impact than positive spirals. This aligns with Tversky and Kahneman (1981), who showed empirical evidence that people overestimate the negative impact of loss and underestimate the positive impact of gain. In a longitudinal study, Wells et al.

(1999) found that resource loss significantly predicted poorer mental health and well-being outcomes (e.g., depressive mood, anger), and found that resource gain had no impact on the same outcome variables. They also found that the impact of resource loss lasted much longer than the impact of resource gain, and showed empirical evidence for the “loss begets loss” negative spiral suggested by Hobfoll. In short, a decrease in resources has a significantly greater negative impact than the positive impact created by an equivalent increase in resources.

Therefore, it is critical to understand how negative leadership affects subordinate resources. While previous studies have shown the beneficial resource gains provided by positive leadership styles, there may be more potential for reducing employee stress and improving job outcomes by preventing resource loss as opposed to boosting resource gain. The current study endeavored to close this research gap by using COR theory to conceptualize toxic leadership as a cause of resource depletion. This investigation examined how toxic leadership behaviors lead to negative job outcomes by initiating or magnifying subordinate resource loss.

Hypotheses

I partnered with two military organizations to plan this investigation. Both the Defense Equal Opportunity Management Institute (DEOMI) and the Army Research Institute (ARI) were interested in exploring the level of toxic leadership reported among military personnel and the outcomes that resulted from these behaviors.

Figure 1 displays the model that was tested during this investigation. Toxic leadership was hypothesized to affect group cohesion, which in turn was hypothesized to affect job outcomes. I expected both relationships in this mediation

hypothesis to be moderated by the environmental impact of deployment, either abroad or to a combat zone.

Figure 2 shows the hypothesized direction of the relationships. When warfighters were “in garrison” (i.e. stationed at home with their families), toxic leadership was hypothesized to decrease group cohesion, an effect that in turn would decrease job outcomes (job satisfaction, organizational trust, organizational affective commitment, and group productivity). Deployment was hypothesized to reverse these relationships, however, suggesting that toxic leadership would actually increase group cohesion, which in turn would decrease job outcomes. Rationale for the hypotheses outlined in Figure 2 is explained in the sections that follow.

Main Effects - Toxic Leadership and Job Outcomes

Group-level Job Satisfaction:

Schmidt (2008) found preliminary evidence indicating a negative relationship between toxic leadership and subordinate satisfaction. In fact, he used four different satisfaction variables: satisfaction with the leader, the job, the pay, and the coworkers. Toxic leadership was only hypothesized to impact satisfaction with the leader, but he found that subordinate responses were related to all four variables. The study proposed here will attempt to replicate these findings and explain them using COR theory. Since the literature on COR theory indicates that toxic leadership should deplete resources and that depleted resources lead to decreased satisfaction, I hypothesized that toxic leadership would negatively impact subordinate job satisfaction.

Hypothesis 1: There will be a negative relationship between toxic leadership and subordinate job satisfaction.

Group Productivity:

Many authors have called for empirical studies on toxic leadership and work group productivity. Wilson-Starks (2003) proposed that toxic leaders would have a negative impact on group productivity. While this is anecdotally sensible, some authors have argued that toxic leaders may actually have a short-term positive impact on productivity levels through their negative behaviors. For example, Whicker (1996) described toxic leaders that bullied their subordinates into higher levels productivity, forcing them to produce more by instilling fear of the toxic reprisals. She admitted, however, that these gains were short-lived, and conceded that the toxic leadership would eventually lead to subordinate burnout and/or turnover.

COR theory would suggest that toxic leadership decreases employees' resources, making them less able to cope with the demands of the job. Previous studies have found that such resource loss increases job strain (Vinokur et al., 2011) and job burnout (Hobfoll & Shirom, 1993; 2000), thus providing support for a negative relationship between toxic leadership and productivity. Given these findings, it seems plausible that subordinates of a toxic leader would be less productive and have fewer resources to dedicate to the work group's success. Therefore, I hypothesized that toxic leadership would be negatively related to subordinate perceptions of work group productivity.

Hypothesis 2: There will be a negative relationship between toxic leadership and subordinate perceptions of group productivity.

Group-level Organizational Trust:

Another outcome variable explored in this study was organizational trust, or the degree to which subordinates believed their organization valued its members. The literature on COR theory has shown that positive feelings associated with being valued by an organization provided employees with additional resources (Kalshoven & Boon, 2012). Since leaders represent the organizational authority with whom subordinates generally have the most contact, many employees use their leaders' behaviors to interpret how the organization feels about them (Tepper, Henle, Lambert, Giacalone, & Duffy, 2008). Halbesleben (2006) found that positive LMX relationships buoyed subordinate resources even when other elements of the job created resource strain. Halbesleben wrote that leaders who displayed positive leadership behaviors sent a message to employees that they and their efforts were valued, thus protecting them from additional resource loss.

These findings indicate that employees look to their leaders for indications of how they are valued, especially when their resources are being taxed by other aspects of the job. Recent research has found that employees look for clues from their supervisor's behavior to determine their value and worth, and that employees who were uncertain about their own competence were much more likely to engage in antisocial and deviant behavior as a reaction to perceived social injustices (Mayer, Thau, Workman, Van Dijke, and De Cremer, 2012). Unfortunately, it is likely that toxic leaders send a message that employees are not respected or valued and can be treated poorly with impunity. Rather than buffering employees from the normal

resource demands of the job, then, toxic leaders likely create additional resource loss by conveying this demoralizing message.

Further, subordinates of toxic leaders may begin to blame the organization as a whole for having a culture, policies, or practices that tolerate (or even reward) toxic behaviors (Folger & Cropanzano, 1998, 2001). Research has shown that employees can attribute negative leadership styles to the organization, and respond by reacting negatively to the organization as a whole. For example, Bowling and Michel (2011) found that when subordinates attributed abusive supervisory behavior to the permissive culture of the organization, the relationship between their perceptions of abusive supervision and their display of organization-directed counterproductive and deviant behaviors was significantly stronger.

Since the presence of toxic leadership indicates that the organization is willing to sacrifice its employees' well-being, I hypothesized that it would be associated with low levels of organizational trust.

Hypothesis 3: There will be a negative relationship between toxic leadership and subordinate reports of organizational trust.

Group-level Organizational Commitment:

Most articles describing toxic leadership have called for more research on how this style impacts subordinate retention. COR theory has also been used to explain retention and turnover, with several articles finding evidence for work-related resource depletion causing a higher intent to turnover (Wright & Cropanzano, 1998; Harris et al., 2011). Employee retention and turnover can be difficult to study in a military environment, however, because soldiers have made contractual obligations to

serve for certain periods of time. As a proxy, this investigation examined affective organizational commitment. Positive leadership styles are frequently associated with affective organizational commitment (Schaubroeck, Walumbwa, Ganster, & Kepes, 2007), and many researchers have demonstrated empirical evidence for the negative relationship between organizational commitment and destructive leadership styles (e.g., Aryee, Chen, Sun, & Debrah, 2007; Duffy et al., 2002; Rafferty and Restubog, 2011; Tepper, 2000; Tepper, Duffy, Hoobler, & Ensley, 2004). Given the particular importance of organizational commitment to the U.S. military, which has recently experienced challenges recruiting and retaining highly-qualified candidates (Steele, 2011), this was an outcome of keen interest.

Exposure to toxic leadership likely decreases subordinate resources, and employees may react by blaming the organization for having a culture that tolerates these behaviors. By conceptualizing the organization as a partial cause for resource depletion, employees would likely decrease their affective organizational commitment. I tested this relationship and hypothesized that toxic leadership would be negatively associated with organizational commitment.

Hypothesis 4: There will be a negative relationship between toxic leadership and subordinates' organizational commitment.

Differential Impact of Toxic Leadership Dimensions

While both Pelletier (2010) and Schmidt (2008) asserted the multi-dimensional nature of toxic leadership, there remain questions regarding the relative impact of each dimension. Pelletier left this issue unaddressed, but Schmidt conducted initial analyses and suggested further research. Schmidt found that

unpredictability was the most potent of the five dimensions. He collected responses on toxic leadership, positive leadership styles (i.e., transformational leadership and LMX), and the original abusive supervision scale published by Tepper (2000). When controlling for these other leadership styles, including abusive supervision, the unpredictability dimension of Schmidt's toxic leadership scale significantly predicted job outcomes. Schmidt did not offer an explanation for these findings, so the current investigation examined the relative impact of each toxic leadership dimension and predicted that some would be more potent than others.

COR theory would suggest unpredictability to be the most destructive of the five toxic leadership dimensions. The unpredictable behavioral changes displayed by toxic leaders would require subordinates to expend more resources and be on constant alert. Employees would need to be ready to cope with volatility at any moment, and they would never have an opportunity to let down their guard. Schmidt (2008) collected qualitative data that supported this when several respondents said they would rather have a supervisor who was predictably abusive than one who was sometimes positive and sometimes negative. In their book on uncertainty, Hodgson and White (2001) described the extreme difficulty of tolerating constant ambiguity at work, especially from one's leaders. They asserted that leaders must provide assurance to employees by transforming uncertainty into predictable outcomes. Given this research and the predictions suggested by COR theory, I hypothesized that unpredictability would have greater impact than the other four toxic leadership dimensions.

Hypothesis 5: Of the five toxic leadership dimensions, unpredictability will show the strongest relationships with outcome variables.

After unpredictability, I hypothesized that abusive supervision would have the next highest level of impact. Abusive supervision drains employee resources because of the direct and hostile nature of the behaviors. Abusive supervisors use public humiliation, repeated reminders of employees' past mistakes, and hostile language (e.g., calling people "stupid") to verbally and emotionally assault their victims (Tepper, 2000; 2007). Because these behaviors are more direct and individually-focused than behaviors in the authoritarianism, narcissism, and self-promotion dimensions of toxic leadership, they likely require more resources to process. Abusive supervision is not likely to require as many resources as unpredictability, however, because abusive behaviors can be low base-rate phenomena. Even if they drain resources, sporadic abuse allows for resource replenishment between incidents. Alternatively, if the abuse is constant, then subordinates can become accustomed to the hostility and maintain coping mechanisms to deflect the constant abuse. COR theory would predict the mercurial nature of unpredictability to be the most difficult because employees may be caught unawares by toxic behaviors and not be able to effectively engage coping mechanisms. Therefore, I hypothesized that abusive supervision would cause greater resource drain than authoritarianism, narcissism, and self-promotion, but not as much as unpredictability.

Hypothesis 6: After unpredictability, abusive supervision will show the second highest strength of relationships with outcome variables.

Group Cohesion Mediating the Relationship between Toxic Leadership and Job Outcomes

While the main effects hypothesized above fit COR theory, extant research suggests a more complex model involving group cohesion. Group cohesion is often defined as a multidimensional construct that includes members' attraction to the group and their willingness to continue working with the group in the future (Michalisin, Karau, Tangpong, 2007). Lipman-Blumen (2005) described the critical importance of feeling like part of a group for positive personal and professional outcomes, asserting that this social support is as important in the workplace as it is in other aspects of life. She explained that group cohesion is the manifestation of employees' sense of belonging, connectedness, and positive social relationships with one another, and suggested that it is both strongly impacted by toxic leadership and an important indicator of job outcomes. In essence, Lipman-Blumen suggested that group cohesion mediates the relationship between toxic leadership and job outcomes. This hypothesis has not yet undergone empirical testing, however.

Group cohesion has also been conceptualized as an important work-related resource that mediates relationships between workplace stressors and job outcomes. Schat and Frone (2011) found that exposure to workplace aggression threatened supportive relationships with co-workers (i.e., group cohesion), and that this reduction in resources was related to a decrease in affective commitment to the organization. They posited that employees exposed to workplace aggression may blame the organization for "allowing" these types of actions to occur. While Schat and Frone did not examine leadership styles, they clearly found a mediation effect

between workplace stress (aggression) and a job outcome variable (commitment). They conceptualized group cohesion as an important resource that can be altered by the amount of stress in the workplace.

I empirically tested the model suggested by Lipman-Blumen and hypothesized that group cohesion would mediate the main effect relationships described in Hypotheses 1-4. Under normal conditions, COR theory would predict that toxic leadership is negatively related to work group cohesion. Hobfoll (2001) described how people who lack resources in one domain of their lives take a defensive posture by investing fewer resources in that domain. For example, people who suffer interpersonal loss have a more difficult time investing in future interpersonal relationships. Similarly, since toxic leaders accelerate resource depletion, subordinates would likely invest as few resources as possible in the group so they can avoid further resource loss.

Instead, employees would be more likely to conserve those resources rather than using them to assist fellow group members, reducing the overall number of helping and citizenship behaviors that build mutual commitment and trust. Because of the resource drain associated with group membership, subordinates would be less likely to be attracted to the group or want to work with it in the future, causing a decrease in group cohesion. Therefore, I hypothesized a negative relationship between toxic leadership and group cohesion.

COR theory would also predict that group cohesion is positively related to job outcomes. Hobfoll (2009) wrote that social support is a key resource that makes humans resilient to the demands and stresses of everyday life. Group members who

feel cohesive with one another gain the benefits of social support, making them more resilient and boosting their performance. Further, the resources gained through membership in a group with high cohesion would make people willing to invest more resources in the group and its success. Following the model outlined in Figure 1, then, I hypothesized that group cohesion would mediate the relationships between toxic leadership and job outcomes, such that high levels of toxic leadership would be associated with low levels of group cohesion, which in turn would be associated with low levels of job outcomes.

Hypothesis 7: In non-deployed situations, group cohesion will fully mediate the relationship between toxic leadership and job outcomes such that there will be a negative relationship between toxic leadership and subordinate perceptions of work group cohesion, and a positive relationship between subordinate perceptions of work group cohesion and reported job outcomes.

Hypothesis 7 fits COR theory, but there remains a confusing discrepancy in the toxic leadership literature. While many publications described toxic leadership as harmful to cohesion because the destructive behaviors erode engagement and encourage attrition, other articles described how groups coalesce because the members have a common enemy in the leader.

For example, Pelletier (2010) wrote that toxic leaders "...promote divisiveness between work groups or individuals" (p. 373), suggesting that toxic leadership would erode work group cohesion. Steele (2011) described how toxic leadership in the U.S. Army significantly increases intent to turnover, a relationship

that is fully mediated by a decrease in unit morale. Conversely, some articles also suggested that toxic leadership can bring groups together. Schmidt (2008) gathered qualitative data citing how some groups became more cohesive and banded together in the face of a common enemy (their leader). Steele (2011) described how military personnel in particular often become more mission-focused, and worked more closely with others in the unit to achieve mission objectives rather than focus on the leader's behavior. Alexander, MacLaren, O'Gorman, and Taheri (2012) found that workplace bullying actually increased group cohesion. They described the long history of quasi-abusive practices that military leaders use in boot camp and Special Forces training as examples of toxic leadership behaviors that can actually build camaraderie and feelings of connectedness among the followers.

The discrepancy between these viewpoints demonstrates an important lack of clarity in the literature. Indeed, Lipman-Blumen (2005) described both points of view in her book. On one hand, she asserted that "...characteristic destructive behaviors of toxic leaders include... maliciously setting constituents against one another" (p. 20), and on the other hand she wrote that organizing and fighting back as a group is "...one of our most potent weapons against toxic leadership" (p. 47). The result is general confusion about why toxic leadership seems to destroy the bonds in some groups and solidify them in others. The moderation hypotheses I proposed were intended to clarify this confusion by showing that both relationships occur, but under different environmental circumstances.

The Moderating Impact of Deployment Status

In addition to testing the direct and mediated relationships between toxic leadership and employee job outcomes, this study also explored the moderating impact of deployment status. A number of articles have implicated environmental conditions in the presence and impact of toxic and destructive leadership. For example, in their description of the “toxic triangle” of destructive leadership, Padilla, Hogan, and Kaiser (2007) wrote that there had to be a “conducive environment” that allowed these negative behaviors to manifest. In articles that focus particularly on toxic leadership in the U.S. military (e.g., Di Genio, 2002; Jaffe, 2011; Reed, 2004; Steele, 2011; Williams, 2005), authors have called for investigations on the different impact of these leaders at home versus in combat zones. They argued that the dynamics of war greatly alter the normal relationships found in organizational research, so toxic leadership should be studied in combat situations to assess its true impact in a military setting.

This study endeavored to fill this research gap by studying the impact of toxic leadership on military personnel that were stationed at home (“in garrison”), stationed away from their homes and families (“deployed”), and deployed to an active combat zone. Each of these situations represented a different level of stress, which COR theory would predict created different levels of resource drain. By analyzing data collected in these three contexts, this study examined the moderating impact of deployment status on the aforementioned hypotheses.

Using COR theory as a theoretical framework, I conceptualized the deployment status of military personnel as a proxy for environmental stress. There is

significant support for this assumption in the extant research. Studies have repeatedly shown that deployed military personnel, particularly those engaged in combat during that deployment, have increased risk of developing post-traumatic stress (PTS) symptoms (Vinokur et al., 2011). Within the military context, these are also referred to as combat stress reactions (CSR). Deployed personnel leave behind family, friends, and communities, sometimes for as long as 15 months. This separation from the network of relationships can create significant loss of social resources (Vinokur et al.). Soldiers in military reserve units are particularly vulnerable because they must also leave their civilian jobs while deployed, thus halting their career progression and non-military professional development. Reservists who interrupt their civilian career paths may earn less while serving and experience opportunity loss as potential promotions and other advancement opportunities occur while they are away. These losses can induce additional stress above and beyond the normal impact of military action (Grissmer, Kirby, Sze, & Adamson, 1995). Vinokur et al. (2011) found that deployment predicted resource loss and post-traumatic symptoms, which in turn reduced mental health outcomes (e.g., increased job burnout) and organizational outcomes (e.g., decreased organizational commitment and job satisfaction).

Given these findings, I hypothesized that deployment status would moderate the relationships between toxic leadership, group cohesion, and job outcomes. Previous research has shown that the experience of deployment, especially to a combat zone, increases resource expenditure. Deployment and combat expose warfighters to threatening situations that require greater resource expenditure because they must engage more coping mechanisms.

The assumption implicit in Hypothesis 7 is that subordinates withdraw and invest fewer resources in the group because they have other sources of resource gain. Rather than invest in a group that does not show resource return, they conserve those resources to invest in other areas of their lives (e.g., family, friends, community, etc.) that do reciprocate. This withdrawal was expected to reduce work group cohesion, which in turn was expected to reduce job outcomes.

In a deployment situation, however, access to most resource sources is severely restricted, so the military unit may be transformed into one of the few sources of interpersonal relationships and feelings of belonging. Therefore, under deployed situations, particularly during deployments to combat zones that are dangerous and traumatic, the work group may become a much more critical source of resource gain and preservation. This follows Hobfoll's (2001) concept of "resource substitution," which involves replenishing lost resources from one aspect of life with different resources from another aspect. In describing this type of resource replenishment, Hobfoll asserted that resources are flexible, and can be more or less valued in different situations. Morelli and Cunningham (2012) echoed this concept in their investigation on resources and the value placed on them, and showed that the same resources can have greater or lesser value in different circumstances.

I hypothesized that under the high stress situations of deployment when other sources of resources are no longer available, the relationship between toxic leadership and group cohesion would reverse. In deployed situations, all members of the group are similarly cut off from their various sources of outside resources. The normal methods for regaining resources are difficult or impossible to access, and group

members only have each other to rely on. Therefore I predicted that rather than retreating from the group and investing their resources elsewhere, deployed soldiers would actually cohere more because they would depend on one another to provide the resources needed to cope with toxic leadership. If supported, this reversal would explain the discrepancy in the literature regarding how toxic leadership impacts group cohesion.

Hypothesis 8: In deployed situations, combat status will moderate the positive relationship between toxic leadership and group cohesion such that this positive relationship will be stronger in a combat zone than in a non-combat deployment situation.

I predicted that this moderator would also reverse the second arrow in the model shown in Figure 1. From the perspective of COR theory, as ties among group members become stronger, then stressors experienced by group members become more salient (and more resource-depleting) to the rest of the group. Therefore, the toxic behaviors directed at members of a group that is highly cohesive will induce greater distress and resource loss than similar behaviors directed at a group that is less cohesive. I expected this resource loss to be associated with subsequent decreases in job outcomes. This hypothesis is consistent with results found by Zeidner, Ben-Zur, and Reshef-Well (2011), who reported that people witnessing traumatic events to others with whom they identified strongly experienced “vicarious threat,” which in turn caused significant resource loss and decreased affect. The trauma and reality of deployment, particularly to a combat zone, create the possibility that some of the

group members may be seriously wounded or even killed. Loss of health and life among members of a highly cohesive group increases distress and the resources needed to successfully activate coping mechanisms for the rest of the group members. While cohesion can be a source of resources, the close bonds also create the possibility for significant resource loss if something happens to one of the group's members. This hypothesis also offers an explanation for the many military research studies using COR theory that have shown increased resource loss and decreased work outcomes in deployment situations.

Hypothesis 9: In deployed situations, combat status will moderate the negative relationship between group cohesion and job outcomes such that the negative relationship will be stronger in a combat zone than in a non-combat deployment situation.

While the relationship between military deployment and resource loss is well-established, there are two important research gaps in the literature. Most of these studies were conducted after the participants' deployment ended, so were retrospective in nature. There is very little published research on data gathered from soldiers during their deployment (Jones, Seddon, Fear, McAllister, Wessely, & Greenberg, 2012). The present study included data gathered from military personnel who were in the midst of deployment, while the impact of the environment was immediately salient. Further, there has only been one other research study that uses COR theory as a framework to explain the impact of negative, destructive, or toxic leadership styles. Since almost all leadership research using COR theory has been on

positive styles, the current investigation represents a new direction for the literature COR theory.

Method

Participants

Participants were drawn from a data set that included 5,182 military personnel that responded to a survey sent by the Defense Equal Opportunity Management Institute (DEOMI). Because toxic leadership was conceptualized as a group-level phenomenon, the relationships were hypothesized at group level and it was important to ensure that the groups were meaningful. All participants identified their military units, but some units had members with different deployment statuses because the individuals had different deployment rotation schedules. Left unaccounted for, these differences would create confusion within with data set because parts of the unit would be referring to different leaders when providing responses. Therefore, I sorted the respondents into new groups that shared both the same unit identification code and the same deployment status because this would cause unit members to report on the same leader. Using these new groups, I eliminated those with fewer than 10 respondents, following the convention DEOMI established for group-level research. This ensured that my group-level analyses would be comparable to other group-level analyses arising from the DEOMI survey tool. The resulting data set included 3,319 participants nested within 149 groups. These became the final participants for this investigation. Groups ranged in size from 10 (the minimum size allowed) to 184 people, with an average group size of 39.7 and a median group size of 24.0.

Of 3,319 participants, 2,747 (82.8%) were male and 572 (17.2%) were female. They varied across all categories of race/national origin: 2,219 (66.9%) were White, 534 (16.1%) were Black, 160 (4.8%) were Asian, 88 (2.7%) were Native American, and 82 (2.5%) were Native Hawaiian/Pacific Islander. In addition, 552 (16.6%) participants identified as Hispanic. Some of these overlap with other categories because it is asked as a separate question that allows people to identify with Hispanic ethnicity and also a racial category. Most respondents (2,926; 88.2%) were enlisted personnel while 393 (11.9%) were officers or warrant officers. They represented all branches of the military, including 1,540 (46.4%) from the Army, 882 (26.6%) from the Marine Corps, 627 (18.9%) from the Navy, 147 (4.4%) from the Air Force, and 123 (3.7%) from the Coast Guard. Most of the participants were Active Duty personnel (2,295; 69.1%), 314 (9.4%) were National Guardsmen or Reservists who were on active duty while responding, and the rest (710, 21.4%) were traditional National Guardsmen or Reservists (i.e., not on active duty but still participating in training and support activities).

The participant group was divided by deployment status. 2,541 people (76.5%) nested within 113 groups were in garrison, 121 people (3.6%) nested within nine groups were deployed, and 657 people (19.8%) nested within 27 groups were deployed to a combat zone. These three groups formed the three levels of the hypothesized moderating variable.

Measures

The outcome measures were all chosen by DEOMI and adapted for the DEOCS survey. Items and response options are detailed in Appendix A.

Organizational commitment was a 5-item scale ($\alpha = .84$), organizational trust was measured with three items ($\alpha = .87$), work group productivity was a 4-item scale ($\alpha = .90$), work group cohesion was measured with four items ($\alpha = .92$), and job satisfaction was a 5-item scale ($\alpha = .86$). There was only room on the survey for a shortened version of the Schmidt (2008) toxic leadership scale. Therefore, the results of the factor analysis presented in the 2008 study were used to select three items from each of the five dimensions. The result was a 15-item version of the toxic leadership scale. The Cronbach's alphas for the five subscales follow: self-promotion ($\alpha = .85$), abusive supervision ($\alpha = .79$), unpredictability ($\alpha = .85$), narcissism ($\alpha = .81$), and authoritarianism ($\alpha = .84$). All items were measured using a 1-5 Likert scale, with 1 representing "Strongly Disagree" and 5 representing "Strongly Agree." The items for each measure are shown in Appendix A.

Procedure

DEOMI distributed the survey to units whose commanding officers had requested the questionnaire. Because the survey included other variables on harassment and discrimination, many commanding officers requested this survey to understand cultural currents in their units. All members of the commanders' units were sent an email invitation to participate by DEOMI. Participation was voluntary and participants were told that their supervisors would not see their results nor be able to tell which warfighters chose to participate. Responses were sent through a proprietary online tool and submitted directly to DEOMI for analysis. All participants completed an Informed Consent for DEOMI's standard questions (including the items for all outcome variables described above). They were then asked if they were willing

to respond to additional items on leadership. Those who agreed completed a second Informed Consent approved by the University of Maryland's Institutional Review Board (IRB), and completed the 15-item version of Schmidt's (2008) toxic leadership scale. Respondents rated their supervisors on observable behaviors associated with each of the toxic leadership dimensions. All other scales were developed by DEOMI and ARI for the purposes of this study.

This was a cross-sectional study with self-report data. Although this design can raise concerns over same-source bias, I was limited by the constraints of DEOMI's research protocols. Gathering data while soldiers are engaged in combat or deployed overseas is extraordinarily difficult, so the format had to be self-report to minimize the research impact. I worked with DEOMI to offset this limitation by collecting a very large data set, which even when divided among the three environmental conditions provided large sample sizes within each condition.

Analyses

Due to the nested nature of the data and the hypotheses that conceptualize each variable at the group level of analysis, the data were aggregated on the new groups that combined both unit identification and deployment status. I computed ICC(1) for each measure to estimate the variance that was explained by the respondent's group membership. ICC(1)s provide empirical evidence justifying aggregation of individual responses to the group level of analysis. A one-way ANOVA tests whether the ICC(1) is statistically different from zero. All the ICC(1) calculations were statistically significant at $p < .001$. The average ICC(1) value for the independent variables, meditating variable, and outcome variables was 0.06, a

level that is consistent with the range of acceptability of 0.05 – 0.20 outlined in Bliese (2000). Given these results, there was justification for aggregating the data to the group level. ICC(2) calculations were also completed for each measure. The average ICC(2) value was 0.57, and all meditating variable and outcome variables had ICC(2) values of at least 0.60.

In addition to the ICC calculations, I also computed the r_{wg} for each variable. Initially introduced by James, Demaree, and Wolf (1984, 1993), r_{wg} is one of the more popular indices of inter-rater agreement (LeBreton & Senter, 2008), and is used when multiple judges rate a single target (i.e., the leader) on a single variable (e.g., toxic leadership dimensions) using an interval scale. The results of the ICC and r_{wg} analyses are shown in Table 1, and supported aggregation of the data.

To test the factor structure of toxic leadership, I performed a confirmatory factor analysis using a two-level model in Mplus. The resulting model, displayed in Figure 3 with item and dimension loadings, demonstrated acceptable indices of fit. The RMSEA was 0.07 and the CFI was 0.96. All items loaded on the appropriate dimensions and were significant at the $p < .01$ level. Further, all five dimensions significantly loaded onto a higher-order factor of toxic leadership. These results confirm the factor structure of toxic leadership as described by Schmidt (2008). Table 2 shows the correlations between each of the variables in this study. As expected, there are significant correlations among the five toxic leadership dimensions. Later analyses were conducted to account for this multicollinearity.

Results

Hypotheses 1-4 predicted that there would be negative relationships between each of the five dimensions of toxic leadership and each of the four outcome variables. Because the hypotheses were focused on the group level of analysis, I used multilevel regressions to test them. In Step 1 of the regression, the individual-level variable for the toxic leadership dimension was entered as a predictor. In step 2, I added the group-level variable of the toxic leadership dimension. This multi-step process controlled for the individual-level effects when examining the results for the group-level relationships.

Table 3 shows the results for these analyses. In each case, the individual-level relationships in Step 1 of the regressions were negative and significant at the $p < .01$ level. In Step 2, I controlled for the individual-level and added the group-level variable as a predictor. In each case, the individual-level relationship became non-significant and the group-level relationship was negative and significant at the $p < 0.01$ level. Table 4 shows a similar analysis, though this time group size was entered in Step 1 as a control variable. When controlling of the variation in group sizes, the results remained the same. Aggregated ratings of toxic leadership dimensions were significant at the $p < 0.01$ level and individual-level ratings became non-significant.

Because the analyses showed multicollinearity among the toxic leadership dimensions, it was likely that the other toxic leadership dimensions would also show individual-level effects on the outcome variables. To test if there were still significant relationships between the independent variables and outcome variables when accounting for all the toxic leadership dimensions, I conducted another set of

multilevel regressions. In Step 1, I entered all five individual-level toxic leadership dimensions. In Step 2, I entered the group-level variable for the dimension of interest. Table 5 displays the results, and shows that other dimensions indeed had individual-level effects, but even with these accounted for, there were significant negative relationships between each dimension of toxic leadership and every job outcome variable, fully supporting Hypotheses 1-4.

Hypotheses 5 stated that of the five toxic leadership dimensions, unpredictability would show the strongest relationships with the job outcome variables. Hypothesis 6 stated that after unpredictability, abusive supervision would be the dimension with the next strongest relationships to job outcomes. While many researchers often rely on the standardized beta weights produced by multiple regression analyses to compare the importance of various predictors (Tonidandel & LeBreton, 2011), it has long been known that such comparisons do not adequately partition the variance among predictors that are correlated with one another (Darlington, 1968). In cases of multicollinearity, predictors have both independent and combined effects on the outcome variable. Comparisons of standardized beta weights or simple bivariate correlation coefficients do not account for the combined effects and only demonstrate the independent effects of predictors on outcome variables. While changes in R^2 can be assessed to demonstrate explanatory power above and beyond other predictors, this technique depends on the order in which variables are entered into a stepwise regression (LeBreton, Hargis, Griepentrog, Oswald, & Ployhart, 2007) because shared variance is assigned to the predictor that was entered into the equation first (Tonidandel & LeBreton, 2011).

Since researchers are often interested in understanding the relative importance of correlated predictors, relative weight analysis (Fabbris, 1980; Johnson, 2000) was developed to take into account both independent and combined contributions (Johnson and LeBreton, 2004). Tonidandel and LeBreton (2011) provide a detailed description of how relative weight analysis is performed. In short, independent variables are transformed into a new set of predictors that are orthogonal to one another. Regressions are then performed with these new predictors, yielding a new set of standardized beta weights that do not suffer from multicollinearity (Tonidandel & LeBreton, 2011). These new beta weights can then be converted back into the metric of the original variables for comparison to one another.

Following the procedure outlined in Tonidandel and LeBreton (2011), I conducted a series of relative weight analyses for each of the five toxic leadership dimensions on all four outcome variables and for the hypothesized mediator. These analyses were all performed using group-level data and the results are displayed in Table 6.

Table 6 is divided into five segments, one for each of the four outcome variables and the proposed mediator. The first segment shows the relative weights for each of the five toxic leadership dimensions in predicting job satisfaction. The first column, “Rescaled Relative Weight,” partitions the variance explained by each dimension so that all figures sum to 100. This allows for easy rank ordering of the predictors, with the highest number being the most important. The second column, “Raw Relative Weight,” shows the beta weight for each predictor. The analyses included a 95% confidence interval, and those bounds are displayed in the next two

columns. Finally, the analyses enabled me to test if one predictor was significantly different ($p < .05$) from the other predictors in the model. I began by conducting each test twice to determine first, if unpredictability was significantly different from the other toxic leadership dimensions (Hypothesis 5), then again to see if abusive supervision was different (Hypothesis 6). After seeing the results, which are detailed below, I conducted a third test (post-hoc) for each outcome to see if self-promotion was significantly different than the other dimensions.

The results displayed in Table 6 showed that relative importance for the five dimensions differed based on the outcome variable being predicted. Hypothesis 5 stated that unpredictability would be the most important predictor of job outcomes. In fact, unpredictability was tied with self-promotion for being the most important predictor of group productivity and group cohesion. When predicting group productivity, unpredictability had the highest raw relative weight of all five dimensions, but the raw relative weight for self-promotion was within the confidence interval for unpredictability, so the two could not be significantly differentiated from one another. When predicting group cohesion, unpredictability had the second highest raw relative weight (behind self-promotion), but again the two could not be differentiated. Unpredictability was tied with both self-promotion and abusive supervision for being the most important predictor of organizational commitment. In this case, abusive supervision had the highest raw relative weight, but all three dimensions were within the same confidence interval and were not significantly different from one another. Unpredictability was the third most important for organizational trust and job satisfaction. In these cases, it was significantly different

from the other predictors. In sum, unpredictability was only the most important predictor for two outcome variables, but in neither of these cases could it be differentiated from other toxic leadership dimensions. Therefore, I did not find support for Hypothesis 5.

Hypothesis 6 stated that abusive supervision would be the second most important predictor for job outcomes. It was indeed the second most important predictor for job satisfaction and organizational trust. In both cases, abusive supervision was significantly different from all the other toxic leadership dimensions, showing partial support for Hypothesis 6.

Unexpectedly, self-promotion was a key predictor for many of the outcomes, and had the highest raw relative weight when predicting job satisfaction, organizational trust, and group cohesion. Although no hypotheses were put forward regarding self-promotion, the results showing its importance caused me to conduct another set of post-hoc analyses examining the significant differences between it and the other dimensions. Table 6 shows that for both job satisfaction and organizational trust, self-promotion was the most important predictor and was significantly different from all other dimensions.

While the results of the relative importance analyses did not fully support the hypotheses, they demonstrated the value of using specific toxic leadership dimensions to predict job outcomes. These findings are explored further in the Discussion section.

Hypothesis 7 predicted that group cohesion would fully mediate the relationship between toxic leadership and job outcomes, such that there would be a negative relationship between toxic leadership and subordinate perceptions of work

group cohesion, and a positive relationship between subordinate perceptions of work group cohesion and reported job outcomes. Hypothesis 7 specifically focused on respondents that were in garrison since later hypotheses examined the impact of deployment. Therefore, only respondents that were in garrison were included in this test.

I tested the hypothesized relationships between the independent variables (x , which in this study consisted of the five toxic leadership dimensions) and the mediator (m , group cohesion in this study) using the following equation:

$$\text{Equation 1: } m = b_{mx}x + e$$

If the beta weights are both significant and in the proposed direction, the results would indicate that the mediator is a probabilistic outcome of the independent variables. Table 7 shows that when controlling for the individual level effects, all toxic leadership dimensions predicted group cohesion at the group level of analysis. These relationships were negative and significant at the $p < 0.01$ level.

Next I tested the relationships between the mediator and the dependent variables using the following equation:

$$\text{Equation 2: } y = b_{ym}m + e$$

The results displayed in Table 8 show that when controlling for individual-level effects, group cohesion significantly predicted ratings of all four outcome variables at the group-level. All relationships were positive and significant at the $p < 0.01$ level.

Having established that all relationships between the independent variables and the mediator and between the mediator and dependent variables were significant and in the expected directions, I then tested the relationship between the independent

and dependent variables while controlling for the mediator. I performed multilevel regressions with the aggregated variables to test for mediation at the group level of analysis. In Step 1, I entered the individual-level variables for all five toxic leadership dimensions and group cohesion. In Step 2, I added the group-level variable for group cohesion, effectively controlling for this mediator. In Step 3, I entered the group-level variable for the toxic leadership dimension of interest. I conducted similar analyses for each of the five dimensions. Full mediation would be supported if the addition of the mediator eliminated the significant relationships between the independent and dependent variables. Table 9 shows that while most relationships did not become non-significant, several did. In particular, adding group cohesion eliminated significant relationships between self-promotion, abusive supervision, and unpredictability and the group productivity outcome.

While these initial results suggested three fully mediated relationships, James, Mulaik, and Brett (2006) suggested an additional test involving a comparison of statistical differences between observed and reproduced correlation coefficients and betas. Specifically, they recommended multiplying the *r*s that were observed between the independent variables and mediator and between the mediator and dependent variables. The product would create a reproduced value, as exemplified in the following formula which was used to reproduce an *r* value (\hat{r}):

$$\text{Equation 3: } \hat{r}_{yx} = b_{mx} b_{ym}$$

James et al. (2006) recommended testing for significant differences between the reproduced \hat{r} and the *r* observed when dependent variables are regressed on the independent variables. If there are no significant differences between these values,

then the only path from the independent to the dependent variables is assumed to be through the mediator. Raw and standardized betas can also be compared to reproduced betas and similarly tested for significant differences. I conducted the analyses all three ways, and found the results to be stable across all approaches. The results, displayed in Tables 10 through 12, confirmed the initial findings above and suggested that three of the 20 relationships between toxic leadership dimensions and group outcomes were fully mediated by group cohesion.

With the failure to support full mediation for the remaining 17 relationships, it would be likely that these were partially mediated relationships (James et al., 2006). To test for partial mediation, James et al. (2006) used a final equation (Equation 4, below) that incorporates effects from both the independent and mediating variables:

$$\text{Equation 4: } y = b_{yx.m}x + b_{ym.x}m + e$$

The first beta weight - $b_{yx.m}x$ - is calculated by regressing the outcome variables on the independent variables while controlling for the mediating variable. These results are displayed in Table 9. The second beta weight, $b_{ym.x}m$, is calculated by regressing the outcome variables on the mediating variable while controlling for the independent variables. These results are displayed in Tables 13 through 17. James et al. advised that if all the beta weights from Equations 1 and 4 were shown to be significant, then partial mediation would be supported. Tables 9 and 13-17 show the multilevel regressions indicated by Equation 4 where all 17 relationships indeed had significant beta weights in the expected directions, suggesting partial mediation for these relationships.

Preacher and Hayes (2004) cautioned that for studies with large sample sizes like this one, it is possible to find support for partial mediation when there are more robust effects occurring. They described that when analyzing large data sets, a mediating variable can create a large change in the x - y relationship without causing a drop in statistical significance (Type II error). This occurs because even small regression beta weights can be statistically significant when using large samples. I therefore followed Preacher and Hayes' recommendation and conducted significance tests to demonstrate the impact of the mediator. Specifically, I conducted a series of Sobel tests (Sobel, 1982) for each of these relationships. Sobel tests have greater statistical power and are more parsimonious than the traditional Baron and Kenny (1986) approach because they require one fewer hypothesis test (MacKinnon et al., 2002; Preacher & Hayes, 2004). Further, they provide the benefit of incorporating bootstrapped samples to build confidence intervals around each result. Figures 4-8 show the Sobel tests for each of the 20 relationships (five toxic leadership dimensions predicting four job outcomes, using group cohesion as a mediator). In the figures, a represents the coefficient of the relationship between the independent variable (toxic leadership dimension) and the mediator (group cohesion). Then b represents the coefficient of the relationship between the mediator and dependent variable (job outcome). There are two coefficients for the relationship between the independent and dependent variables: c represents the relationship without the mediator and c' represents the relationship when the mediator is included.

The Sobel tests confirmed the findings described above. In every case, there was a significant direct relationship between toxic leadership and job outcomes (c).

Further, all relationships between toxic leadership and group cohesion (*a*) and between group cohesion and job outcomes (*b*) were in the expected directions and significant at the $p < .01$ level. Seventeen of these direct relationships between the toxic leadership and job outcomes remained significant even when accounting for the mediating influence of group cohesion (c'). This suggested that partial mediation was occurring. In three of the figures, however, the inclusion of the mediator made the relationships between the toxic leadership and job outcome non-significant, reducing c' to near zero and suggesting full mediation. This full mediation was occurring when self-promotion, abusive supervision, and unpredictability are predicting work group productivity.

In sum, the results of the mediation analyses remained stable across multiple methods. Three of the 20 relationships demonstrated full mediation, lending partial support to Hypothesis 7.

The mediation analysis above was focused on participants who were in garrison while responding to the survey. All analyses were also conducted with the entire data set, and the results were the same, though the effects somewhat weaker with the full sample. Hypotheses 8 and 9, however, asserted that these relationships would be moderated by deployment and deployment to active combat zones. Since deployment status had more than two levels, I created an effects coded variable in the data set and used this variable to compare groups. Respondents in garrison were coded as 1, those who were deployed were coded as 0, and those in combat were coded as -1. I then ran a series of hierarchical linear models in R using a regression framework.

To test Hypothesis 8, I ran four models for each analysis: Model 1 regressed group cohesion on the individual-level rating of toxic leadership, Model 2 added the group-level aggregated score for toxic leadership, Model 3 added the effects-coded direct impact of deployment status, and Model 4 tested the interactions between group-level ratings of toxic leadership and deployment status. I began by testing for moderation in the relationships between the toxic leadership dimensions and group cohesion. The results of these analyses are displayed in Tables 18 through 22. Each table was also graphed (see corresponding Figures), and while some of the graphs look promising, the magnitude of the effects are not large enough to be significant. For all five toxic leadership dimensions, significant relationships ($p < 0.01$) were found in all individual-level and group-level ratings (Models 1 and 2). As predicted, these relationships were negative, showing that individual and aggregated ratings of toxic leadership predicted a decrease in aggregated ratings of group cohesion. When testing Model 3 for the unpredictability dimension, deployment status showed a significant main effect ($p < .05$) on ratings of group cohesion. Deployment status did not show a significant effect for the other four dimensions of toxic leadership. The results of Model 4 showed no significant interactions between group ratings of toxic leadership and deployment status. Therefore, the results did not show support for Hypothesis 8.

A similar approach was used to test Hypothesis 9, though group cohesion was used as the independent variable to predict job outcomes. Tables 23 through 26 display the results of these analyses. As with the previous set of analyses, Models 1 and 2 showed that individual- and group-level ratings of group cohesion significantly

predicted all four outcome variables. Model 3 also showed direct main effects of deployment on ratings of organizational commitment and work group productivity. Model 4 showed no significant interaction terms. These results failed to show support for Hypothesis 9.

To ensure these results were stable, I tested the moderation hypotheses using an SEM approach with MPLUS.² The results were nearly identical to those described above showing stability across multiple methods. I then conducted post-hoc analyses by breaking the dataset into deployment conditions to see if interactions would arise within each condition. I did not find any interaction effects with these additional analyses. In fact, the model would not converge when examining only the participants who were deployed or in combat. I could not build a new model that would adequately fit the data for these two subgroups.

In sum, significant negative relationships were found between toxic leadership dimensions and job outcomes, fully supporting Hypotheses 1-4. In examining the relative importance of each dimension, unpredictability was tied as the most important toxic leadership dimension for some of the outcome variables, but could not be statistically differentiated from other toxic leadership dimensions. Therefore, I did not find evidence to support Hypothesis 5. Abusive supervision was the second most important dimension when predicting some of the outcome variables, partially supporting Hypothesis 6. Unexpectedly, the self-promotion dimension was found to be the most predictive of the toxic leadership dimensions. Group cohesion fully mediated the relationships between self-promotion, abusive supervision, and unpredictability for group productivity, showing partial support for Hypothesis 7.

² I attempted a multilevel SEM analysis in MPLUS but could not get the model to converge.

Group cohesion was a partial mediator for the other 17 relationships. While deployment status had a direct effect on several outcome variables, no evidence was found for deployment moderating the relationships in the mediation model, therefore showing no support for Hypotheses 8 or 9.

Discussion

The results of this study advanced the field's understanding of destructive leadership styles in several important ways. The analyses showed empirical support for the negative effects of toxic leadership dimensions on job outcomes, demonstrated the importance of broadening the scope of negative leadership beyond abusive supervision, implicated group cohesion as an important mediator, and demonstrated the value of COR theory as a framework for understanding negative leadership styles.

Empirical Support for the Impact of Toxic Leadership

While toxic leadership has been the subject of many articles in the popular press, its impact on job-related outcomes had not been empirically tested (Goldman, 2006; Macklem, 2005; Pelletier, 2010), so this was the first study to do so. As predicted, I found that toxic leadership had negative direct effects on four job outcomes: job satisfaction, work group productivity, organizational trust, and organizational commitment. The results supported the expectations of COR theory, a framework in which toxic leadership can be conceptualized as a source of resource loss. Using this framework, my results supported the notion that employees with toxic leaders associated their workplaces with a net loss of resources. Given this depletion, it makes sense that they reported feeling less satisfied. Further, subordinates of toxic

leaders reported feeling less productive. COR theory would explain this relationship by suggesting that subordinates would invest as little as possible in an environment that depletes their resources. Since they would be less willing to expend resources, they would also be less productive. Similarly, participants with toxic leaders reported feeling less trustful of the organization and less committed to it. These results support earlier findings (Bowling & Michel, 2011; Folger & Cropanzano, 1998, 2001) that subordinates associate destructive leadership with negative organizational cultures and blame their organizations for allowing these behaviors. It is reasonable to suggest that participants in this study also blamed their organization for condoning the leadership behaviors that were so distressing, and reported reduced levels of trust and commitment as a result. Given the significant bodies of literature on the value of each of these outcomes to individual employees, front-line supervisors, work groups, and organizations as a whole, these results demonstrated the importance of understanding and minimizing toxic leadership.

Differential Impact of Toxic Leadership Dimensions

The confirmatory factor analysis verified a good model fit for five dimensions of destructive leadership that all loaded onto a higher-order factor of “toxic leadership.” Each toxic leadership dimension had direct and indirect impact on job outcomes, and explained unique variance in predicting these outcomes. These results supported the assertions made in previous publications (Pelletier, 2010; 2012; Schmidt, 2008; Schmidt et al., in production) that toxic leadership adds to the current literature by broadening the spectrum of destructive leadership behaviors. While abusive supervision has been shown to be an important predictor of job outcomes,

there are other negative leadership behaviors that should be recognized and are not covered by the abusive supervision scale. Therefore, this study adds evidence to a growing body of literature that the spectrum of destructive leadership styles is wider than previously thought.

Interestingly, abusive supervision was not the most important predictor for any of the outcome variables or for the mediator. Rather, self-promotion was a much more important predictor. Tal-Or (2010) stated that people who self-promote often induce resentment and jealousy in those around them. It makes sense that leaders who self-promote would incite such feelings in their subordinates, particularly when taking credit for shared wins. Self-promotion was the best predictor of job satisfaction and organizational trust, it was tied with unpredictability as the best predictor of group cohesion and group productivity, and was tied with both unpredictability and abusive supervision for being the best predictor of organizational commitment. These unexpected results suggested that self-promotion should be a greater focus for research on destructive leadership.

From the perspective of COR theory, leaders who engage in self-promotion reduce potential resources (recognition, rewards, and feelings of accomplishment/competence) from their subordinates. In fact, item 3 of the self-promotion scale, “My leader accepts credit for successes that do not belong to him/her,” is an action that directly reduces the beneficial outcomes that subordinates have earned. While all five toxic leadership dimensions reduce psychological and emotional resources, self-promotion has a unique potential to directly reduce more tangible resources (e.g., financial bonuses, promotions, etc.) Viewed this way, it is

not surprising that self-promotion was the most predictive of the five dimensions. Clearly, more research should be conducted on the role of self-promotion in destructive leadership.

Group Cohesion as a Mediator

In addition to finding support for the direct effects of each toxic leadership dimension, this study confirmed that group cohesion mediated the relationships between toxic leadership and job outcomes. While group cohesion was a partial mediator for 17 of the 20 relationships, it was a full mediator for the relationships between self-promotion, abusive supervision, and unpredictability and the job outcome of work group productivity. Therefore, this study adds to a building body of literature using COR theory to conceptualize group cohesion as an important work-related resource (Schat & Frone, 2011).

These findings underscored the importance of group cohesion as a critical factor in the manifestation of toxic leadership, and implied that building cohesion could be a way to decrease the impact of toxic leadership behaviors. This is an important point for front-line and middle managers who may be leading small groups embedded within larger units with toxic leaders. While the overall leadership climate may be toxic, building and maintaining group cohesion may buffer employees from the negative impact of the toxic behaviors. By focusing on group cohesion as a source of positive resources, it may counteract the resource drain caused by toxic leadership. Testing these ideas was beyond the scope of the current investigation but would be a rich area for future research.

The Impact of Deployment

I did not find evidence for deployment status as a moderator of the relationships described above. I had hypothesized that deployment would reverse the direction of the relationships in the proposed model, and that deployment to an active combat zone would show stronger effects than deployment to a non-combat zone. I found that under all conditions, the relationships between toxic leadership and group cohesion were negative and significant, and the relationships between group cohesion and job outcomes were positive and significant. Therefore, there was no reversal of directionality, and despite testing these hypotheses using multiple methods, I did not find significant results for any interaction effects.

Since there are not many studies that collected data while participants were in the midst of deployment or combat, it can be difficult to determine why these conditions did not affect the relationships found in the overall model. One possible explanation may be the point in time during deployment that participants responded to the survey. In a study of military units, Bartone and Adler (1999) found that group cohesion changed throughout a unit's deployment period. They found that cohesion started low in the beginning of deployment, grew stronger through the first phases of deployment, then declined toward the latter phases of deployment, creating an inverted U shape when graphing cohesion over time. They cited leadership as a critical factor impacting these changing cohesion levels, and explained the importance of capturing cohesion at multiple points throughout the deployment period. Unfortunately, I was unable to control the point in time during which data were collected, and the data did not include information on how many days each unit

had been deployed and/or in combat. Therefore, the multiple groups that were deployed and in combat were likely in different phases of those deployments, meaning that they were experiencing different levels of cohesion based on how long they had been away from home. Since cohesion was the mediator and part of all of the moderation analyses, these differing cohesion levels among deployed units may have impacted the degree to which interactions could be found.

Alternatively, perhaps in deployed situations, Hobfoll's (2001) concept of "substitution of resources" does not apply to group cohesion. Hypotheses 8 and 9 were predicated on the assumption that group cohesion would become more important in deployed and combat situations because warfighters would have restricted access to other sources of resource gain. Since the directionality and significance of the relationships between toxic leadership, group cohesion, and job outcomes remained stable across conditions, it seemed that group cohesion was always an important source of resources and deployment did not dramatically affect its role in the model. Therefore, group cohesion may not be a target for resource substitution since it is always important. Perhaps there are other variables that were not included in this study that would show more dramatic effects across deployment conditions.

Even these non-significant results were telling because they demonstrated the importance of group cohesion and the negative impact of toxic leadership, even during very strong environmental conditions. These findings underscored the importance of continued research on the processes and impact of toxic leadership behaviors.

Limitations

This study had several limitations. First, participants were invited because their commanding officers requested that their units be included in the sample. Therefore, the sample may not have been fully representative of all military units because officers were either proactively interested in understanding their units' climate or they were compelled to review it due to some incident. That said, with a starting pool of 5,181 participants, this study included responses from a very large sample, helping to counteract concerns about representativeness. The sample sizes of each condition (in garrison, deployed, combat) differed widely, which may have contributed to the difficulty in finding interaction effects due to deployment status. However, even the condition with the fewest respondents (deployed) still contained 121 participants, an adequate sample size when compared with many investigations on leadership.

The data were cross-sectional and therefore did not allow for causal inferences. While the mediation analysis implied directional relationships between toxic leadership dimensions, group cohesion, and job outcomes, data were not collected over time so this assumption could not be empirically tested. Relatedly, given the findings of Bartone and Adler (1999) regarding the changing level of group cohesion over the course of a deployment, the cross-sectional nature of this study did not allow me to pinpoint which phase of deployment the participants were in while responding.

Implications for Future Research

The results of this study suggested several areas for continued investigation. First, they confirmed the factor structure of toxic leadership and demonstrated the value of researching more than just abusive supervision. These findings alone suggested additional research on many of the relationships that have already been found between abusive supervision and job outcomes, because researchers may be able to explain more variance using a more complete scale of toxic leadership behaviors. Given the particular importance of self-promotion and its higher predictive power than abusive supervision, and given the prominent role of unpredictability, these dimensions should be particular areas of focus for further research and theory development. Similarly, research should be conducted on the other dimensions of toxic leadership. While self-promotion had the highest impact, all five dimensions explained unique variance in the dependent variables, so all five are valuable to include in future investigations on the impact of toxic leadership. It would be beneficial to understand more about the impact and nomological net surrounding largely unexplored dimensions, such as authoritarian leadership.

With the evidence showing group cohesion as a full mediator for some of the relationships in this model, more research should be done on its role in buffering subordinates from the effects of toxic leadership. Bartone and Adler (1999) asserted that leadership behaviors play a critical role in building and sustaining group cohesion, but what happens when those leadership behaviors are destructive? Going further, the variables included in this research were limited, and there are likely many other mediators, outcomes, and moderators that can be investigated to

gain a better understanding of toxic leadership and its impact. This is the first empirical study on this topic, so clearly there is much yet to discover.

A better understanding of the experience of deployment is needed. Most studies collected data once warfighters returned home, but more information is needed about what happens during the deployment itself. It is likely that Bartone and Adler's (1999) research discovered just one of several variables that evolve over time during deployment, suggesting that future studies should strive to collect data multiple times throughout the deployment period and carefully document each phase to uncover additional curvilinear relationships.

Conservation of resources theory can provide powerful explanatory mechanisms for many of the investigations on destructive leadership, but this study is one of the first to make this connection. Since there is evidence supporting COR theory's assertion that negative experiences have greater impact on resource loss than positive experiences do on resource gain (Hobfoll, Vinokur, Pierce, & Lewandowski-Romps, 2012), this is a theoretical framework that fits many of the relationships involving destructive leadership styles. Future research should seek to expand the theoretical connections and empirical evidence linking destructive leadership with COR theory.

While this investigation benefitted from a large sample that was diverse within a military context (i.e., all branches of the military, wide span of ranks included, multiple job types), future research should test the generalizability of these results by examining how toxic leadership operates in other industries. Schmidt (2008) stated the value of beginning with military samples for this type of research

since the military has a higher threshold of acceptability for toxic behaviors (e.g., drill sergeants yelling at new recruits during boot camp). Schmidt's assumption was that behaviors crossing the threshold and becoming labeled "toxic" within a more forgiving military context would most certainly be considered destructive in a civilian workspace. This assumption should be tested however, so future investigations can explore toxic leadership in the private and public sectors.

Implications for Practitioners

This study unveiled evidence for the importance of toxic leadership and its impact on job outcomes. As employers seek to attract, engage, and retain top talent, they should proactively think about how to prevent toxic leadership in their organizations. It can be tempting to manage by numbers and reward managers who get the best results, but it is also important to understand and assess how the results were achieved. Whicker (1996) and Lipman-Blumen (2005a) explained that toxic leadership often creates short-term boosts in productivity since subordinates are acting out of fear. But these bursts of activity quickly result in burnout, withdrawal, and attrition, which are ultimately very costly to the organization. Subordinates who turnover due to toxic leadership not only drain the organization of valuable institutional knowledge, they also leave vacancies that can take significant amounts of time and money to fill. Further, in the age of social media outlets such as Glassdoor and LinkedIn, subordinates of toxic leaders now have anonymous vehicles through which to publically vent about all the wrongs they suffer at work. Toxic leadership is harder than ever to hide, so organizations should be proactive at detecting and correcting it.

For front-line supervisors or middle managers embedded within a department or organization led by toxic leaders, they serve the unfortunate role of being “toxin filters” (Frost, 2003). The results of this investigation demonstrated the value of group cohesion, and one way to filter the impact of toxic behaviors from above is to bolster group cohesion below. Building group cohesion not only augments this important source of resources, but it also demonstrates that the front-line leader recognizes the toxic behaviors and does not condone them. This differentiation creates empathy and solidarity among subordinates, which in and of themselves can be considered resources that the front-line leader is providing.

Conclusion

This investigation provided the first empirical data on the impact of toxic leadership on job outcomes. Using a validated measure of toxic leadership to investigate a moderated mediation model, I found evidence to support the five-factor structure of toxic leadership, demonstrated that these dimensions have direct effects on important job outcomes, found evidence that group cohesion is an important mediator of these relationships, and underscored the importance of broadening the spectrum of destructive leadership styles that are being investigated by researchers. By demonstrating how specific toxic leader behaviors impact job outcomes, these results can help military and business leaders identify, correct, and prevent toxic leadership in their organizations. This study was one of the few that used data collected from military personnel in the midst of deployment, and broadened the application of COR theory by expanding its use to a negative leadership style. Therefore, the method was unique and the results are applicable to several bodies of

research. By advancing knowledge of toxic leadership, there may be increased opportunity to decrease its prevalence and reduce its destructive impact.

Tables

Table 1: ICCs and rwgs

Variable	ICC(1)	ICC(2)	r_{wg}
Toxic Leadership	0.06	0.57	0.71
Self-Promotion	0.04	0.46	0.63
Abusive Supervision	0.04	0.50	0.64
Unpredictability	0.05	0.54	0.63
Narcissism	0.04	0.52	0.67
Authoritarian Leadership	0.05	0.49	0.70
Work Group Cohesion	0.06	0.60	0.72
Job Satisfaction	0.06	0.63	0.75
Work Group Productivity	0.06	0.64	0.79
Organizational Trust	0.08	0.67	0.56
Organizational Commitment	0.05	0.65	0.59

Table 2: Correlations among Mean Scores (Aggregated to the Group Level)

	Self-Promotion	Abusive Supervision	Unpredictability	Narcissism	Authoritarian Leadership	Group Cohesion	Group-level Job Satisfaction	Group Productivity	Organizational Trust	Organizational Commitment
Self-Promotion	1									
Abusive Supervision	.85**	1								
Unpredictability	.87**	.91**	1							
Narcissism	.80**	.83**	.83**	1						
Authoritarian Leadership	.80**	.85**	.83**	.84**	1					
Cohesion	-.59**	-.57**	-.59**	-.48**	-.49**	1				
Job Satisfaction	-.67**	-.67**	-.65**	-.51**	-.60**	.81**	1			
Productivity	-.50**	-.50**	-.52**	-.38**	-.47**	.85**	.82**	1		
Trust	-.73**	-.72**	-.71**	-.62**	-.65**	.76**	.81**	.64**	1	
Commitment	-.72**	-.75**	-.75**	-.69**	-.69**	.57**	.67**	.49**	.82**	1

N = 3,319 nested within 149 groups, all are significant at the $p < .01$ level

Table 3: Multilevel Regression of Job Outcome Variables on Toxic Leadership Dimensions

Toxic Leadership Dimensions	Job Satisfaction					Group Productivity					Organizational Trust					Organizational Commitment				
	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²
<i>Step 1:</i>																				
Self-Promotion (individual level)	-0.08 **	0.01	-0.22	0.22	0.05	-0.06 **	0.01	-0.16	0.16	0.03	-0.11 **	0.01	-0.24	0.24	0.06	-0.10 **	0.01	-0.24	0.24	0.06
<i>Step 2:</i>																				
Self-Promotion (individual level)	0.00	0.01	6.00			0.00	0.01	0.00			0.00	0.01	0.00		0.00	0.01	0.00			
Self-Promotion (group level)	-0.74 **	0.02	-0.67	0.67	0.45	-0.56 **	0.02	-0.50	0.50	0.25	-1.03 **	0.02	-0.73	0.73	0.53	-0.89 **	0.02	-0.72	0.72	0.52
<i>Step 1:</i>																				
Abusive Supervision (individual level)	-0.09 **	0.01	-0.23	0.23	0.05	-0.07 **	0.01	-0.17	0.17	0.03	-0.12 **	0.01	-0.25	0.25	0.06	-0.11 **	0.01	-0.26	0.26	0.07
<i>Step 2:</i>																				
Abusive Supervision (individual level)	0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	0.00		0.00	0.01	0.00			
Abusive Supervision (group level)	-0.73 **	0.02	-0.67	0.67	0.44	-0.56 **	0.02	-0.50	0.50	0.25	-1.02 **	0.02	-0.72	0.72	0.52	-0.92 **	0.02	-0.75	0.75	0.56
<i>Step 1:</i>																				
Unpredictability (individual level)	-0.08 **	0.01	-0.23	0.23	0.05	-0.07 **	0.01	-0.18	0.18	0.03	-0.12 **	0.01	-0.25	0.25	0.06	-0.11 **	0.01	-0.27	0.26	0.07
<i>Step 2:</i>																				
Unpredictability (individual level)	0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	0.00		0.00	0.01	0.00			
Unpredictability (group level)	-0.66 **	0.01	-0.65	0.65	0.42	-0.55 **	0.02	-0.52	0.52	0.27	-0.94 **	0.02	-0.71	0.71	0.51	-0.85 **	0.01	-0.75	0.74	0.56
<i>Step 1:</i>																				
Narcissism (individual level)	-0.07 **	0.01	-0.17	0.17	0.03	-0.05 **	0.01	-0.13	0.13	0.02	-0.11 **	0.01	-0.21	0.21	0.04	-0.10 **	0.01	-0.23	0.23	0.05
<i>Step 2:</i>																				
Narcissism (individual level)	0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	0.00		0.00	0.01	0.00			
Narcissism (group level)	-0.59 **	0.02	-0.51	0.51	0.26	-0.46 **	0.02	-0.38	0.38	0.15	-0.93 **	0.02	-0.62	0.62	0.39	-0.89 **	0.02	-0.69	0.69	0.48
<i>Step 1:</i>																				
Authoritarian Leadership (individual level)	-0.08 **	0.01	-0.21	0.20	0.04	-0.06 **	0.01	-0.16	0.18	0.03	-0.11 **	0.01	-0.22	0.22	0.05	-0.10 **	0.01	-0.24	0.24	0.06
<i>Step 2:</i>																				
Authoritarian Leadership (individual level)	0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	0.00		0.00	0.01	0.00			
Authoritarian Leadership (group level)	-0.68 **	0.02	-0.60	0.60	0.36	-0.55 **	0.02	-0.47	0.50	0.25	-0.95 **	0.02	-0.65	0.65	0.42	-0.88 **	0.02	-0.69	0.69	0.48

N = 3,319, †p < 0.1, *p < 0.05, **p < 0.01

Table 4: Multilevel Regression of Job Outcome Variables on Toxic Leadership Dimensions (controlling for group size)

Toxic Leadership Dimensions	Job Satisfaction					Group Productivity					Organizational Trust					Organizational Commitment				
	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²
<i>Step 1:</i>																				
Group Size	0.00 **	0.00	0.13	0.13	0.02	0.00 **	0.00	0.13	0.13	0.02	0.00 **	0.00	0.16	0.16	0.03	0.00 **	0.00	0.27	0.27	0.07
<i>Step 2:</i>																				
Group Size	0.00 **	0.00	0.13			0.00 **	0.00	0.12			0.00 **	0.00	0.16			0.00 **	0.00	0.26		
Self-Promotion (individual level)	-0.08 **	0.01	-0.22	0.25	0.06	-0.06 **	0.01	-0.16	0.20	0.04	-0.11 **	0.01	-0.23	0.28	0.08	-0.09 **	0.01	-0.23	0.35	0.12
<i>Step 3:</i>																				
Group Size	0.00 **	0.00	0.05			0.00 **	0.00	0.07			0.00 **	0.00	0.08			0.00 **	0.00	0.18		
Self-Promotion (individual level)	0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	0.00		
Self-Promotion (group level)	-0.73 **	0.02	-0.67	0.67	0.46	-0.55 **	0.02	-0.49	0.50	0.25	-1.02 **	0.02	-0.72	0.73	0.54	-0.86 **	0.02	-0.70	0.74	0.55
<i>Step 2:</i>																				
Group Size	0.00 **	0.00	0.12			0.00 **	0.00	0.12			0.00 **	0.00	0.15			0.00 **	0.00	0.25		
Abusive Supervision (individual level)	-0.09 **	0.01	-0.22	0.26	0.07	-0.07 **	0.01	-0.17	0.21	0.04	-0.12 **	0.01	-0.24	0.29	0.09	-0.10 **	0.01	-0.24	0.36	0.13
<i>Step 3:</i>																				
Group Size	0.00	0.00	0.00			0.00 †	0.00	0.03			0.00 †	0.00	0.02			0.00 **	0.00	0.12		
Abusive Supervision (individual level)	0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	0.00		
Abusive Supervision (group level)	-0.73 **	0.02	-0.67	0.67	0.44	-0.56 **	0.02	-0.49	0.50	0.25	-1.01 **	0.02	-0.72	0.72	0.52	-0.89 **	0.02	-0.72	0.76	0.58
<i>Step 2:</i>																				
Group Size	0.00 **	0.00	0.12			0.00 **	0.00	0.12			0.00 **	0.00	0.15			0.00 **	0.00	0.25		
Unpredictability (individual level)	-0.08 **	0.01	-0.22	0.26	0.07	-0.07 **	0.01	-0.18	0.22	0.05	-0.11 **	0.01	-0.24	0.29	0.09	-0.10 **	0.01	-0.25	0.37	0.13
<i>Step 3:</i>																				
Group Size	0.00 †	0.00	0.03			0.00 **	0.00	0.04			0.00 **	0.00	0.05			0.00 **	0.00	0.15		
Unpredictability (individual level)	0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	0.00		
Unpredictability (group level)	-0.66 **	0.02	-0.65	0.65	0.42	-0.54 **	0.02	-0.51	0.52	0.27	-0.93 **	0.02	-0.71	0.71	0.51	-0.82 **	0.01	-0.72	0.76	0.58
<i>Step 2:</i>																				
Group Size	0.00 **	0.00	0.12			0.00 **	0.00	0.12			0.00 **	0.00	0.15			0.00 **	0.00	0.25		
Narcissism (individual level)	-0.06 **	0.01	-0.16	0.21	0.04	-0.05 **	0.01	-0.12	0.18	0.03	-0.10 **	0.01	-0.20	0.26	0.07	-0.09 **	0.01	-0.21	0.34	0.12
<i>Step 3:</i>																				
Group Size	0.00	0.00	0.02			0.00 **	0.00	0.04			0.00 †	0.00	0.03			0.00 **	0.00	0.12		
Narcissism (individual level)	0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	0.00		
Narcissism (group level)	-0.59 **	0.02	-0.51	0.51	0.26	-0.45 **	0.02	-0.37	0.39	0.15	-0.92 **	0.02	-0.62	0.62	0.39	-0.86 **	0.02	-0.66	0.70	0.49
<i>Step 2:</i>																				
Group Size	0.00 **	0.00	0.12			0.00 **	0.00	0.12			0.00 **	0.00	0.15			0.00 **	0.00	0.25		
Authoritarian Leadership (individual level)	-0.08 **	0.01	-0.20	0.24	0.06	-0.06 **	0.01	-0.15	0.20	0.04	-0.11 **	0.01	-0.21	0.27	0.07	-0.09 **	0.01	-0.22	0.34	0.12
<i>Step 3:</i>																				
Group Size	0.00	0.00	-0.01			0.00	0.00	0.02			0.00	0.00	0.01			0.00 **	0.00	0.11		
Authoritarian Leadership (individual level)	0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	0.00		
Authoritarian Leadership (group level)	-0.68 **	0.02	-0.60	0.60	0.36	-0.54 **	0.02	-0.46	0.47	0.22	-0.94 **	0.02	-0.64	0.65	0.42	-0.85 **	0.02	-0.67	0.70	0.49

N = 3,319, †p < 0.1, *p < 0.05, **p < 0.01

Table 5: Multilevel Regression of Job Outcome Variables on Toxic Leadership Dimensions

Toxic Leadership Dimensions	<u>Job Satisfaction</u>					<u>Group Productivity</u>					<u>Organizational Trust</u>					<u>Organizational Commitment</u>				
	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²
Self-Promotion																				
<i>Step 1:</i>																				
Self-Promotion (individual level)	-0.02 *	0.01	-0.06			-0.01	0.01	-0.03			-0.03 *	0.01	-0.06			-0.01	0.01	-0.02		
Abusive Supervision (individual level)	-0.04 **	0.01	-0.10			-0.02 †	0.01	-0.06			-0.05 **	0.01	-0.10			-0.04 **	0.01	-0.10		
Unpredictability (individual level)	-0.03 **	0.01	-0.09			-0.04 **	0.01	-0.10			-0.04 **	0.02	-0.09			-0.04 **	0.01	-0.10		
Narcissism (individual level)	0.01	0.01	0.03			0.02	0.01	0.04			-0.01	0.01	-0.02			-0.02 †	0.01	-0.05		
Authoritarian Leadership (individual level)	-0.03 *	0.01	-0.07	0.25	0.06	-0.02 *	0.01	-0.06	0.19	0.04	-0.02 †	0.01	-0.05	0.27	0.08	-0.03 *	0.01	-0.06	0.29	0.08
<i>Step 2:</i>																				
Self-Promotion (individual level)	0.02 *	0.01	0.05			0.02 *	0.01	0.06			0.03 **	0.01	0.07			0.04 **	0.01	0.11		
Abusive Supervision (individual level)	-0.03 **	0.01	-0.06			-0.01	0.01	-0.03			-0.03 **	0.01	-0.06			-0.03 **	0.01	-0.07		
Unpredictability (individual level)	-0.01	0.01	-0.03			-0.02 *	0.01	-0.06			-0.02	0.01	-0.03			-0.02 †	0.01	-0.04		
Narcissism (individual level)	0.02 **	0.01	0.06			0.02 *	0.01	0.05			0.01	0.01	0.01			-0.01	0.01	-0.02		
Authoritarian Leadership (individual level)	-0.01 †	0.01	-0.03			-0.01	0.01	-0.03			-0.01	0.01	-0.01			-0.01	0.01	-0.02		
Self-Promotion (group level)	-0.73 **	0.02	-0.67	0.68	0.46	-0.56 **	0.02	-0.49	0.50	0.25	-1.02 **	0.02	-0.72	0.73	0.53	-0.87 **	0.02	-0.71	0.73	0.53
Abusive Supervision																				
<i>Step 1:</i>																				
Self-Promotion (individual level)	-0.02 *	0.01	-0.06			-0.01	0.01	-0.03			-0.03 *	0.01	-0.06			-0.01	0.01	-0.02		
Abusive Supervision (individual level)	-0.04 **	0.01	-0.10			-0.02 †	0.01	-0.06			-0.05 **	0.01	-0.10			-0.04 **	0.01	-0.10		
Unpredictability (individual level)	-0.03 **	0.01	-0.09			-0.04 **	0.01	-0.10			-0.04 **	0.02	-0.09			-0.04 **	0.01	-0.10		
Narcissism (individual level)	0.01	0.01	0.03			0.02	0.01	0.04			-0.01	0.01	-0.02			-0.02 †	0.01	-0.05		
Authoritarian Leadership (individual level)	-0.03 *	0.01	-0.07	0.25	0.06	-0.02 *	0.01	-0.06	0.19	0.04	-0.02 †	0.01	-0.05	0.27	0.08	-0.03 *	0.01	-0.06	0.29	0.08
<i>Step 2:</i>																				
Self-Promotion (individual level)	-0.03 **	0.01	-0.08			-0.02 †	0.01	-0.04			-.036 **	0.01	-0.08			-0.02 *	0.01	-0.04		
Abusive Supervision (individual level)	0.03 *	0.01	0.05			0.02 *	0.01	0.05			0.03 **	0.01	0.07			0.03 **	0.01	0.07		
Unpredictability (individual level)	-0.01	0.01	-0.02			-0.02 †	0.01	-0.06			-0.01	0.01	-0.02			-0.01	0.01	-0.03		
Narcissism (individual level)	0.03 **	0.01	0.06			0.02 *	0.01	0.06			0.01	0.01	0.02			-0.01	0.01	-0.01		
Authoritarian Leadership (individual level)	-0.01	0.01	-0.02			-0.01	0.01	-0.03			0.00	0.01	0.00			0.00	0.01	-0.01		
Abusive Supervision (group level)	-0.73 **	0.02	-0.67	0.67	0.45	-0.56 **	0.02	-0.50	0.50	0.25	-1.02 **	0.02	-0.72	0.73	0.53	-0.91 **	0.02	-0.74	0.75	0.56

N = 3,319, †p < 0.1, *p < 0.05, **p < 0.01

Table 5 (continued): Multilevel Regression of Job Outcome Variables on Toxic Leadership Dimensions

Toxic Leadership Dimensions	<u>Job Satisfaction</u>					<u>Group Productivity</u>					<u>Organizational Trust</u>					<u>Organizational Commitment</u>				
	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²
<u>Unpredictability</u>																				
<i>Step 1:</i>																				
Self-Promotion (individual level)	-0.02 *	0.01	-0.06			-0.01	0.01	-0.03			-0.03 *	0.01	-0.06			-0.01	0.01	-0.02		
Abusive Supervision (individual level)	-0.04 **	0.01	-0.10			-0.02 †	0.01	-0.06			-0.05 **	0.01	-0.10			-0.04 **	0.01	-0.10		
Unpredictability (individual level)	-0.03 **	0.01	-0.09			-0.04 **	0.01	-0.10			-0.04 **	0.02	-0.09			-0.04 **	0.01	-0.10		
Narcissism (individual level)	0.01	0.01	0.03			0.02	0.01	0.04			-0.01	0.01	-0.02			-0.02 †	0.01	-0.05		
Authoritarian Leadership (individual level)	-0.03 *	0.01	-0.07	0.25	0.06	-0.02 *	0.01	-0.06	0.19	0.04	-0.02 †	0.01	-0.05	0.27	0.08	-0.03 *	0.01	-0.06	0.29	0.08
<i>Step 2:</i>																				
Self-Promotion (individual level)	-0.03 **	0.01	-0.07			-0.01	0.01	-0.04			-0.03 **	0.01	-0.07			-0.01	0.01	-0.03		
Abusive Supervision (individual level)	-0.02 †	0.01	-0.04			-0.01	0.01	-0.02			-0.02 †	0.01	-0.04			-0.02 †	0.01	0.04		
Unpredictability (individual level)	0.03 **	0.01	0.07			0.01	0.01	0.02			0.04 **	0.01	0.08			0.03 **	0.01	0.08		
Narcissism (individual level)	0.02 **	0.01	0.06			0.02 *	0.01	0.06			0.01	0.01	0.01			-0.01	0.01	-0.02		
Authoritarian Leadership (individual level)	-0.01 †	0.01	-0.04			-0.01	0.01	-0.04			-0.01	0.01	-0.02			-0.01	0.01	-0.02		
Unpredictability (group level)	-0.66 **	0.01	-0.65	0.65	0.43	-0.54 **	0.02	-0.52	0.52	0.27	-0.93 **	0.02	-0.71	0.72	0.51	-0.84 **	0.01	-0.74	0.75	0.56
<u>Narcissism</u>																				
<i>Step 1:</i>																				
Self-Promotion (individual level)	-0.02 *	0.01	-0.06			-0.01	0.01	-0.03			-0.03 *	0.01	-0.06			-0.01	0.01	-0.02		
Abusive Supervision (individual level)	-0.04 **	0.01	-0.10			-0.02 †	0.01	-0.06			-0.05 **	0.01	-0.10			-0.04 **	0.01	-0.10		
Unpredictability (individual level)	-0.03 **	0.01	-0.09			-0.04 **	0.01	-0.10			-0.04 **	0.02	-0.09			-0.04 **	0.01	-0.10		
Narcissism (individual level)	0.01	0.01	0.03			0.02	0.01	0.04			-0.01	0.01	-0.02			-0.02 †	0.01	-0.05		
Authoritarian Leadership (individual level)	-0.03 *	0.01	-0.07	0.25	0.06	-0.02 *	0.01	-0.06	0.19	0.04	-0.02 †	0.01	-0.05	0.27	0.08	-0.03 *	0.01	-0.06	0.29	0.08
<i>Step 2:</i>																				
Self-Promotion (individual level)	-0.03 **	0.01	-0.07			-0.01	0.01	-0.04			-0.03 **	0.01	-0.07			-0.01	0.01	-0.03		
Abusive Supervision (individual level)	-0.02 *	0.01	-0.06			-0.01	0.01	-0.03			-0.02 *	0.01	-0.05			-0.02 *	0.01	-0.05		
Unpredictability (individual level)	-0.02 *	0.01	-0.06			-0.03 **	0.01	-0.08			-0.03 *	0.01	-0.05			-0.02 *	0.01	-0.06		
Narcissism (individual level)	0.06 **	0.01	0.14			0.05 **	0.01	0.12			0.06 **	0.01	0.12			0.04 **	0.01	0.10		
Authoritarian Leadership (individual level)	-0.02 †	0.01	-0.04			-0.02	0.01	-0.04			-0.01	0.01	-0.01			-0.01	0.01	-0.02		
Narcissism (group level)	-0.58 **	0.02	-0.50	0.53	0.28	-0.44 **	0.02	-0.37	0.40	0.16	-0.91 **	0.02	-0.61	0.63	0.40	-0.88 **	0.02	-0.68	0.70	0.49

N = 3,319, †p < 0.1, *p < 0.05, **p < 0.01

Table 5 (continued): Multilevel Regression of Job Outcome Variables on Toxic Leadership Dimensions

Toxic Leadership Dimensions	<u>Job Satisfaction</u>					<u>Group Productivity</u>					<u>Organizational Trust</u>					<u>Organizational Commitment</u>				
	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²
<u>Authoritarian Leadership</u>																				
<i>Step 1:</i>																				
Self-Promotion (individual level)	-0.02 *	0.01	-0.06			-0.01	0.01	-0.03			-0.03 *	0.01	-0.06			-0.01	0.01	-0.02		
Abusive Supervision (individual level)	-0.04 **	0.01	-0.10			-0.02 †	0.01	-0.06			-0.05 **	0.01	-0.10			-0.04 **	0.01	-0.10		
Unpredictability (individual level)	-0.03 **	0.01	-0.09			-0.04 **	0.01	-0.10			-0.04 **	0.02	-0.09			-0.04 **	0.01	-0.10		
Narcissism (individual level)	0.01	0.01	0.03			0.02	0.01	0.04			-0.01	0.01	-0.02			-0.02 †	0.01	-0.05		
Authoritarian Leadership (individual level)	-0.03 *	0.01	-0.07	0.25	0.06	-0.02 *	0.01	-0.06	0.19	0.04	-0.02 †	0.01	-0.05	0.27	0.08	-0.03 *	0.01	-0.06	0.29	0.08
<i>Step 2:</i>																				
Self-Promotion (individual level)	-0.03 **	0.01	-0.08			-0.01	0.01	-0.04			-0.03 **	0.01	-0.07			-0.01	0.01	-0.03		
Abusive Supervision (individual level)	-0.02 †	0.01	-0.04			-0.01	0.01	-0.02			-0.02 †	0.01	-0.04			-0.02 †	0.01	-0.04		
Unpredictability (individual level)	-0.02 *	0.01	-0.06			-0.03 **	0.01	0.08			-0.03 *	0.01	-0.06			-0.03 **	0.01	-0.07		
Narcissism (individual level)	0.02 **	0.01	0.06			0.02 *	0.01	0.06			0.01	0.01	0.01			-0.01	0.01	-0.02		
Authoritarian Leadership (individual level)	0.03 **	0.01	0.07			0.02 †	0.01	0.05			0.05 **	0.01	0.10			0.04 **	0.01	0.10		
Authoritarian Leadership (group level)	-0.67 **	0.02	-0.59	0.61	0.37	-0.54 **	0.02	-0.46	0.47	0.22	-0.93 **	0.02	-0.64	0.65	0.43	-0.87 **	0.02	-0.68	0.70	0.49

N = 3,319, †p < 0.1, *p < 0.05, **p < 0.01

Table 6: Relative Weight Analysis of Toxic Leadership Dimensions on Outcome Variables

	Rescaled Relative Weight	Raw Relative Weight	Confidence Interval Lower Bound	Confidence Interval Upper Bound	Significantly Different from Unpredictability?	Significantly Different from Abusive Supervision?	Significantly Different from Self-Promotion?
Job Satisfaction							
Self-Promotion	26.84	0.14	0.13	0.15	yes	yes	(not applicable)
Abusive Supervision	23.58	0.12	0.11	0.13	yes	(not applicable)	yes
Unpredictability	21.04	0.11	0.10	0.11	(not applicable)	yes	yes
Narcissism	11.00	0.06	0.05	0.06	yes	yes	yes
Authoritarian Leadership	17.54	0.09	0.08	0.10	yes	yes	yes
Group Productivity							
Self-Promotion	23.17	0.07	0.06	0.08	no	no	(not applicable)
Abusive Supervision	21.41	0.06	0.06	0.07	yes	(not applicable)	no
Unpredictability	25.56	0.08	0.07	0.08	(not applicable)	yes	no
Narcissism	10.89	0.03	0.03	0.04	yes	yes	yes
Authoritarian Leadership	18.98	0.06	0.05	0.06	yes	no	yes
Organizational Trust							
Self-Promotion	25.86	0.15	0.14	0.16	yes	yes	(not applicable)
Abusive Supervision	22.96	0.13	0.12	0.14	yes	(not applicable)	yes
Unpredictability	21.28	0.12	0.12	0.13	(not applicable)	yes	yes
Narcissism	13.99	0.08	0.07	0.09	yes	yes	yes
Authoritarian Leadership	15.91	0.09	0.08	0.10	yes	yes	yes
Organizational Commitment							
Self-Promotion	20.77	0.12	0.12	0.13	no	no	(not applicable)
Abusive Supervision	22.33	0.13	0.13	0.14	no	(not applicable)	no
Unpredictability	21.70	0.13	0.12	0.14	(not applicable)	no	no
Narcissism	17.60	0.11	0.10	0.11	yes	yes	yes
Authoritarian Leadership	17.60	0.11	0.10	0.11	yes	yes	yes
Group Cohesion							
Self-Promotion	26.90	0.10	0.09	0.11	no	yes	(not applicable)
Abusive Supervision	21.41	0.08	0.07	0.09	yes	(not applicable)	yes
Unpredictability	25.02	0.09	0.09	0.10	(not applicable)	yes	no
Narcissism	12.97	0.05	0.04	0.05	yes	yes	yes
Authoritarian Leadership	13.70	0.05	0.05	0.06	yes	yes	yes

N = 3,319, all significance tests use a $p < .05$ criterion

Table 7: Multilevel Regression of Group Cohesion on Toxic Leadership Dimensions (*in garrison only*)

Toxic Leadership Dimensions	Group Cohesion				
	B	Std. Error	Std. B	R	R ²
<u>Self-Promotion</u>					
<i>Step 1:</i>					
Self-Promotion (individual level)	-0.03 †	0.01	-0.06		
Abusive Supervision (individual level)	-0.03 †	0.02	-0.07		
Unpredictability (individual level)	-0.04 *	0.02	-0.09		
Narcissism (individual level)	-0.01	0.01	-0.01		
Authoritarian Leadership (individual level)	-0.01	0.01	-0.03	0.23	0.06
<i>Step 2:</i>					
Self-Promotion (individual level)	0.02	0.01	0.04		
Abusive Supervision (individual level)	-0.01	0.01	-0.03		
Unpredictability (individual level)	-0.02 †	0.01	-0.06		
Narcissism (individual level)	0.01	0.01	0.02		
Authoritarian Leadership (individual level)	0.01	0.01	0.02		
Self-Promotion (group level)	-0.77 **	0.02	-0.62	0.62	0.39
<u>Abusive Supervision</u>					
<i>Step 1:</i>					
Self-Promotion (individual level)	-0.03 †	0.01	-0.06		
Abusive Supervision (individual level)	-0.03 †	0.02	-0.07		
Unpredictability (individual level)	-0.04 *	0.02	-0.09		
Narcissism (individual level)	-0.01	0.01	-0.01		
Authoritarian Leadership (individual level)	-0.01	0.01	-0.03	0.23	0.06
<i>Step 2:</i>					
Self-Promotion (individual level)	-0.03 **	0.01	-0.07		
Abusive Supervision (individual level)	0.03 *	0.01	0.07		
Unpredictability (individual level)	-0.02 †	0.01	-0.06		
Narcissism (individual level)	0.01	0.01	0.02		
Authoritarian Leadership (individual level)	0.01	0.01	0.02		
Abusive Supervision (group level)	-0.72 **	0.02	-0.59	0.60	0.36

N = 2,541, †*p*<0.1, **p*<.05, ***p*<.01

Table 7 (continued): Multilevel Regression of Group Cohesion on Toxic Leadership Dimensions (*in garrison only*)

Toxic Leadership Dimensions	<u>Group Cohesion</u>				
	B	Std. Error	Std. B	R	R ²
<u>Unpredictability</u>					
<i>Step 1:</i>					
Self-Promotion (individual level)	-0.03 †	0.01	-0.06		
Abusive Supervision (individual level)	-0.03 †	0.02	-0.07		
Unpredictability (individual level)	-0.04 *	0.02	-0.09		
Narcissism (individual level)	-0.01	0.01	-0.01		
Authoritarian Leadership (individual level)	-0.01	0.01	-0.03	0.23	0.06
<i>Step 2:</i>					
Self-Promotion (individual level)	-0.02 *	0.01	-0.06		
Abusive Supervision (individual level)	0.00	0.01	0.00		
Unpredictability (individual level)	0.01	0.01	0.03		
Narcissism (individual level)	0.01	0.01	0.02		
Authoritarian Leadership (individual level)	0.01	0.01	0.01		
Unpredictability (group level)	-0.73 **	0.02	-0.62	0.62	0.39
<u>Narcissism</u>					
<i>Step 1:</i>					
Self-Promotion (individual level)	-0.03 †	0.01	-0.06		
Abusive Supervision (individual level)	-0.03 †	0.02	-0.07		
Unpredictability (individual level)	-0.04 *	0.02	-0.09		
Narcissism (individual level)	-0.01	0.01	-0.01		
Authoritarian Leadership (individual level)	-0.01	0.01	-0.03	0.23	0.06
<i>Step 2:</i>					
Self-Promotion (individual level)	-0.03 *	0.01	-0.06		
Abusive Supervision (individual level)	-0.01	0.01	-0.02		
Unpredictability (individual level)	-0.03 *	0.01	-0.08		
Narcissism (individual level)	0.04 **	0.01	0.10		
Authoritarian Leadership (individual level)	0.00	0.01	0.01		
Narcissism (group level)	-0.65 **	0.02	-0.51	0.53	0.28

N = 2,541, † $p < 0.1$, * $p < .05$, ** $p < .01$

Table 7 (continued): Multilevel Regression of Group Cohesion on Toxic Leadership Dimensions (*in garrison only*)

Toxic Leadership Dimensions	<u>Group Cohesion</u>				
	B	Std. Error	Std. B	R	R ²
<u>Authoritarian Leadership</u>					
<i>Step 1:</i>					
Self-Promotion (individual level)	-0.03 †	0.01	-0.06		
Abusive Supervision (individual level)	-0.03 †	0.02	-0.07		
Unpredictability (individual level)	-0.04 *	0.02	-0.09		
Narcissism (individual level)	-0.01	0.01	-0.01		
Authoritarian Leadership (individual level)	-0.01	0.01	-0.03	0.23	0.06
<i>Step 2:</i>					
Self-Promotion (individual level)	-0.02 *	0.01	-0.06		
Abusive Supervision (individual level)	-0.01	0.01	-0.02		
Unpredictability (individual level)	-0.03 *	0.01	-0.08		
Narcissism (individual level)	0.01	0.01	0.01		
Authoritarian Leadership (individual level)	0.04 **	0.01	0.09		
Authoritarian Leadership (group level)	-0.65 **	0.02	-0.51	0.53	0.28

N = 2,541, † $p < 0.1$, * $p < .05$, ** $p < .01$

Table 8: Multilevel Regression of Job Outcome Variables on Group Cohesion (*in garrison only*)

	<u>Job Satisfaction</u>					<u>Group Productivity</u>					<u>Organizational Trust</u>					<u>Organizational Commitment</u>				
	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²
<i>Step 1:</i>																				
Group Cohesion (individual level)	0.13 **	0.01	0.01	0.35	0.12	0.14 **	0.01	0.36	0.36	0.13	0.16 **	0.01	0.33	0.33	0.11	0.10 **	0.01	0.25	0.25	0.06
<i>Step 2:</i>																				
Group Cohesion (individual level)	0.00	0.00	0.00			0.00	0.00	0.00			0.00	0.01	0.00			0.00	0.01	0.00		
Group Cohesion (group level)	0.79 **	0.01	0.86	0.86	0.74	0.84 **	0.01	0.88	0.87	0.77	0.94 **	0.02	0.80	0.79	0.63	0.61 **	0.02	0.62	0.62	0.38

N = 2,541, †p < 0.1, *p < .05, **p < .01

Table 9: Multilevel Regression of Job Outcome Variables on Toxic Leadership Dimensions, controlling for Group Cohesion (in garrison only)

Toxic Leadership Dimensions	Job Satisfaction					Group Productivity					Organizational Trust					Organizational Commitment				
	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²
<i>Step 1:</i>																				
Self-Promotion (individual level)	0.00	0.01	-0.01			0.01	0.01	0.02			0.00	0.02	0.00			0.01	0.01	0.02		
Abusive Supervision (individual level)	-0.02	0.01	-0.05			-0.01	0.01	-0.02			-0.05 **	0.02	-0.09			-0.05 **	0.01	-0.12		
Unpredictability (individual level)	-0.01	0.01	-0.03			-0.01	0.01	-0.03			-0.01	0.02	-0.02			-0.01	0.02	-0.02		
Narcissism (individual level)	0.00	0.01	-0.01			0.00	0.01	0.01			-0.03 *	0.02	-0.07			-0.04 **	0.01	-0.09		
Authoritarian Leadership (individual level)	-0.03 *	0.01	-0.06			-0.02 †	0.01	-0.05			-0.01	0.02	-0.03			-0.03 †	0.01	-0.06		
Group Cohesion (individual level)	0.11 **	0.01	0.29	0.38	0.14	0.13 **	0.01	0.34	0.88	0.77	0.12 **	0.01	0.26	0.36	0.13	0.07 **	0.01	0.16	0.33	0.11
<i>Step 2:</i>																				
Self-Promotion (individual level)	-0.01 *	0.01	-0.04			0.00	0.01	0.00			-0.01	0.01	-0.02			0.00	0.01	0.00		
Abusive Supervision (individual level)	-0.01	0.01	-0.02			0.00	0.01	0.01			-0.03 **	0.01	-0.06			-0.04 **	0.01	-0.10		
Unpredictability (individual level)	0.00	0.01	-0.01			0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	-0.01		
Narcissism (individual level)	0.01 *	0.01	0.03			0.02 **	0.01	0.05			-0.02	0.01	-0.03			-0.03 **	0.01	-0.06		
Authoritarian Leadership (individual level)	-0.03 **	0.01	-0.07			-0.02 **	0.01	-0.05			-0.02	0.01	-0.03			-0.03 *	0.01	-0.06		
Group Cohesion (individual level)	-0.02 **	0.01	-0.04			0.00	0.00	0.00			-0.02 **	0.01	-0.05			-0.03 **	0.01	-0.07		
Group Cohesion (group level)	0.79 **	0.01	0.85	0.86	0.74	0.84 **	0.01	0.88	0.88	0.77	0.93 **	0.02	0.79	0.80	0.64	0.60 **	0.02	0.60	0.64	0.41
<i>Step 3:</i>																				
Self-Promotion (individual level)	0.00	0.01	0.01			0.00	0.01	0.00			0.02 *	0.01	0.04			0.04 **	0.01	0.09		
Abusive Supervision (individual level)	-0.01	0.01	-0.02			0.00	0.01	0.01			-0.03 **	0.01	-0.05			-0.04 **	0.01	-0.08		
Unpredictability (individual level)	0.00	0.01	0.00			0.00	0.01	0.00			0.01	0.01	0.01			0.00	0.01	0.01		
Narcissism (individual level)	0.02 **	0.01	0.04			0.02 **	0.01	0.05			-0.01	0.01	-0.02			-0.02 *	0.01	-0.05		
Authoritarian Leadership (individual level)	-0.02 **	0.01	-0.05			-0.02 **	0.01	-0.05			0.00	0.01	0.00			-0.01	0.01	-0.02		
Group Cohesion (individual level)	0.00	0.00	-0.01			0.00	0.00	0.00			0.00	0.01	0.00			0.00	0.01	-0.01		
Group Cohesion (group level)	0.62 **	0.01	0.67			0.85 **	0.01	0.88			0.64 **	0.02	0.55			0.26 **	0.02	0.27		
Self-Promotion (group level)	-0.34 **	0.01	-0.30	0.89	0.79	0.00	0.02	0.00	0.88	0.77	-0.58 **	0.02	-0.40	0.86	0.73	-0.68 **	0.02	-0.55	0.76	0.58

N = 2,541, †p < 0.1, *p < 0.05, **p < 0.01

Table 9 (continued): Multilevel Regression of Job Outcome Variables on Toxic Leadership Dimensions, controlling for Group Cohesion (*in garrison only*)

Toxic Leadership Dimensions	Job Satisfaction					Group Productivity					Organizational Trust					Organizational Commitment				
	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²
<i>Step 1:</i>																				
Self-Promotion (individual level)	0.00	0.01	-0.01			0.01	0.01	0.02			0.00	0.02	0.00			0.01	0.01	0.02		
Abusive Supervision (individual level)	-0.02	0.01	-0.05			-0.01	0.01	-0.02			-0.05 **	0.02	-0.09			-0.05 **	0.01	-0.12		
Unpredictability (individual level)	-0.01	0.01	-0.03			-0.01	0.01	-0.03			-0.01	0.02	-0.02			-0.01	0.02	-0.02		
Narcissism (individual level)	0.00	0.01	-0.01			0.00	0.01	0.01			-0.03 *	0.02	-0.07			-0.04 **	0.01	-0.09		
Authoritarian Leadership (individual level)	-0.03 *	0.01	-0.06			-0.02 †	0.01	-0.05			-0.01	0.02	-0.03			-0.03 †	0.01	-0.06		
Group Cohesion (individual level)	0.11 **	0.01	0.29	0.38	0.14	0.13 **	0.01	0.34	0.88	0.77	0.12 **	0.01	0.26	0.36	0.13	0.07 **	0.01	0.16	0.33	0.11
<i>Step 2:</i>																				
Self-Promotion (individual level)	-0.01 *	0.01	-0.04			0.00	0.01	0.00			-0.01	0.01	-0.02			0.00	0.01	0.00		
Abusive Supervision (individual level)	-0.01	0.01	-0.02			0.00	0.01	0.01			-0.03 **	0.01	-0.06			-0.04 **	0.01	-0.10		
Unpredictability (individual level)	0.00	0.01	-0.01			0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	-0.01		
Narcissism (individual level)	0.01 *	0.01	0.03			0.02 **	0.01	0.05			-0.02	0.01	-0.03			-0.03 **	0.01	-0.06		
Authoritarian Leadership (individual level)	-0.03 **	0.01	-0.07			-0.02 **	0.01	-0.05			-0.02	0.01	-0.03			-0.03 *	0.01	-0.06		
Group Cohesion (individual level)	-0.02 **	0.01	-0.04			0.00	0.00	0.00			-0.02 **	0.01	-0.05			-0.03 **	0.01	-0.07		
Group Cohesion (group level)	0.79 **	0.01	0.85	0.86	0.74	0.84 **	0.01	0.88	0.88	0.77	0.93 **	0.02	0.79	0.80	0.64	0.60 **	0.02	0.60	0.64	0.41
<i>Step 3:</i>																				
Self-Promotion (individual level)	-0.02 **	0.01	-0.04			0.00	0.01	0.00			-0.02 *	0.01	-0.03			-0.01	0.01	-0.02		
Abusive Supervision (individual level)	0.01 †	0.01	0.03			0.00	0.01	0.01			..011	0.01	0.02			0.01	0.01	0.03		
Unpredictability (individual level)	0.00	0.01	0.00			0.00	0.01	0.00			0.01	0.01	0.02			0.01	0.01	0.01		
Narcissism (individual level)	0.02 **	0.01	0.04			0.02 **	0.01	0.05			-0.01	0.01	-0.01			-0.02 *	0.01	-0.04		
Authoritarian Leadership (individual level)	-0.02 **	0.01	-0.05			-0.02 **	0.01	-0.05			0.00	0.01	0.00			-0.01	0.01	-0.02		
Group Cohesion (individual level)	0.00	0.00	-0.01			0.00	0.00	0.00			0.00	0.01	0.00			0.00	0.01	-0.04		
Group Cohesion (group level)	0.65 **	0.01	0.70			0.85 **	0.01	0.88			0.65 **	0.02	0.55			0.25 **	0.02	0.25		
Abusive Supervision (group level)	-0.29 **	0.01	-0.26	0.89	0.78	0.01	0.01	0.01	0.88	0.77	-0.59 **	0.02	-0.41	0.86	0.74	-0.75 **	0.02	-0.62	0.80	0.64

N = 2,541, †p < 0.1, *p < 0.05, **p < 0.01

Table 9 (continued): Multilevel Regression of Job Outcome Variables on Toxic Leadership Dimensions, controlling for Group Cohesion (*in garrison only*)

Toxic Leadership Dimensions	Job Satisfaction					Group Productivity					Organizational Trust					Organizational Commitment				
	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²
<i>Step 1:</i>																				
Self-Promotion (individual level)	0.00	0.01	-0.01			0.01	0.01	0.02			0.00	0.02	0.00			0.01	0.01	0.02		
Abusive Supervision (individual level)	-0.02	0.01	-0.05			-0.01	0.01	-0.02			-0.05 **	0.02	-0.09			-0.05 **	0.01	-0.12		
Unpredictability (individual level)	-0.01	0.01	-0.03			-0.01	0.01	-0.03			-0.01	0.02	-0.02			-0.01	0.02	-0.02		
Narcissism (individual level)	0.00	0.01	-0.01			0.00	0.01	0.01			-0.03 *	0.02	-0.07			-0.04 **	0.01	-0.09		
Authoritarian Leadership (individual level)	-0.03 *	0.01	-0.06			-0.02 †	0.01	-0.05			-0.01	0.02	-0.03			-0.03 †	0.01	-0.06		
Group Cohesion (individual level)	0.11 **	0.01	0.29	0.38	0.14	0.13 **	0.01	0.34	0.36	0.13	0.12 **	0.01	0.26	0.36	0.13	0.07 **	0.01	0.16	0.33	0.11
<i>Step 2:</i>																				
Self-Promotion (individual level)	-0.01 *	0.01	-0.04			0.00	0.01	0.00			-0.01	0.01	-0.02			0.00	0.01	0.00		
Abusive Supervision (individual level)	-0.01	0.01	-0.02			0.00	0.01	0.01			-0.03 **	0.01	-0.06			-0.04 **	0.01	-0.10		
Unpredictability (individual level)	0.00	0.01	-0.01			0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	-0.01		
Narcissism (individual level)	0.01 *	0.01	0.03			0.02 **	0.01	0.05			-0.02	0.01	-0.03			-0.03 **	0.01	-0.06		
Authoritarian Leadership (individual level)	-0.03 **	0.01	-0.07			-0.02 **	0.01	-0.05			-0.02	0.01	-0.03			-0.03 *	0.01	-0.06		
Group Cohesion (individual level)	-0.02 **	0.01	-0.04			0.00	0.01	0.00			-0.02 **	0.01	-0.05			-0.03 **	0.01	-0.07		
Group Cohesion (group level)	0.79 **	0.01	0.85	0.86	0.74	0.84 **	0.01	0.88	0.88	0.77	0.93 **	0.02	0.79	0.80	0.64	0.60 **	0.02	0.60	0.64	0.41
<i>Step 3:</i>																				
Self-Promotion (individual level)	-0.01 *	0.01	-0.04			0.00	0.01	0.00			-0.01	0.01	-0.02			0.00	0.01	0.001		
Abusive Supervision (individual level)	0.00	0.01	-0.01			0.00	0.01	0.01			-0.02 †	0.01	-0.04			-0.02 *	0.01	-0.05		
Unpredictability (individual level)	0.01 †	0.01	0.03			0.00	0.01	0.00			0.03 **	0.01	0.06			0.03 **	0.01	0.08		
Narcissism (individual level)	0.02 **	0.01	0.04			0.02 **	0.01	0.05			-0.01	0.01	-0.02			-0.02 *	0.01	-0.05		
Authoritarian Leadership (individual level)	-0.02 **	0.07	-0.05			-0.02 **	0.01	-0.05			0.00	0.01	-0.01			-0.01	0.01	-0.02		
Group Cohesion (individual level)	0.00	0.00	-0.01			0.00	0.00	0.00			0.00	0.01	-0.01			0.00	0.01	-0.01		
Group Cohesion (group level)	0.64 **	0.01	0.70			0.85 **	0.01	0.88			0.66 **	0.02	0.56			0.25 **	0.02	0.25		
Unpredictability (group level)	-0.29 **	0.01	-0.26	0.88	0.78	0.01	0.01	0.01	0.88	0.77	-0.53 **	0.02	-0.38	0.85	0.72	-0.68 **	0.02	-0.59	0.78	0.60

N = 2,541, †p < 0.1, *p < 0.05, **p < 0.01

Table 9 (continued): Multilevel Regression of Job Outcome Variables on Toxic Leadership Dimensions, controlling for Group Cohesion (*in garrison only*)

Toxic Leadership Dimensions	Job Satisfaction					Group Productivity					Organizational Trust					Organizational Commitment				
	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²
<i>Step 1:</i>																				
Self-Promotion (individual level)	0.00	0.01	-0.01			0.01	0.01	0.02			0.00	0.02	0.00			0.01	0.01	0.02		
Abusive Supervision (individual level)	-0.02	0.01	-0.05			-0.01	0.01	-0.02			-0.05 **	0.02	-0.09			-0.05 **	0.01	-0.12		
Unpredictability (individual level)	-0.01	0.01	-0.03			-0.01	0.01	-0.03			-0.01	0.02	-0.02			-0.01	0.02	-0.02		
Narcissism (individual level)	0.00	0.01	-0.01			0.00	0.01	0.01			-0.03 *	0.02	-0.07			-0.04 **	0.01	-0.09		
Authoritarian Leadership (individual level)	-0.03 *	0.01	-0.06			-0.02 †	0.01	-0.05			-0.01	0.02	-0.03			-0.03 †	0.01	-0.06		
Group Cohesion (individual level)	0.11 **	0.01	0.29	0.38	0.14	0.13 **	0.01	0.34	0.36	0.13	0.12 **	0.01	0.26	0.36	0.13	0.07 **	0.01	0.16	0.33	0.11
<i>Step 2:</i>																				
Self-Promotion (individual level)	-0.01 *	0.01	-0.04			0.00	0.01	0.00			-0.01	0.01	-0.02			0.00	0.01	0.00		
Abusive Supervision (individual level)	-0.01	0.01	-0.02			0.00	0.01	0.01			-0.03 **	0.01	-0.06			-0.04 **	0.01	-0.10		
Unpredictability (individual level)	0.00	0.01	-0.01			0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	-0.01		
Narcissism (individual level)	0.01 *	0.01	0.03			0.02 **	0.01	0.05			-0.02	0.01	-0.03			-0.03 **	0.01	-0.06		
Authoritarian Leadership (individual level)	-0.03 **	0.01	-0.07			-0.02 **	0.01	-0.05			-0.02	0.01	-0.03			-0.03 *	0.01	-0.06		
Group Cohesion (individual level)	-0.02 **	0.01	-0.04			0.00	0.01	0.00			-0.02 **	0.01	-0.05			-0.03 **	0.01	-0.07		
Group Cohesion (group level)	0.79 **	0.01	0.85	0.86	0.74	0.84 **	0.01	0.88	0.88	0.77	0.93 **	0.02	0.79	0.80	0.64	0.60 **	0.02	0.60	0.64	0.41
<i>Step 3:</i>																				
Self-Promotion (individual level)	-0.01 *	0.01	-0.04			0.00	0.01	0.00			-0.01	0.01	-0.02			0.00	0.01	0.00		
Abusive Supervision (individual level)	-0.01	0.01	-0.01			0.00	0.01	0.00			-0.02 *	0.01	-0.04			-0.03 **	0.01	-0.06		
Unpredictability (individual level)	0.00	0.01	-0.01			0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	-0.01		
Narcissism (individual level)	0.03 **	0.01	0.07			0.02 *	0.01	0.04			0.02 *	0.01	0.04			0.02 **	0.01	0.05		
Authoritarian Leadership (individual level)	-0.02 **	0.01	-0.06			-0.02 **	0.01	-0.06			0.00	0.01	-0.01			-0.01	0.01	-0.02		
Group Cohesion (individual level)	-0.01 †	0.00	-0.02			0.00	0.01	-0.01			-0.01	0.01	-0.02			-0.01	0.01	-0.02		
Group Cohesion (group level)	0.71 **	0.01	0.77			0.87 **	0.01	0.91			0.73 **	0.02	0.62			0.33 **	0.02	0.33		
Narcissism (group level)	-0.20 **	0.01	-0.17	0.87	0.76	0.07 **	0.02	0.06	0.88	0.77	-0.52 **	0.02	-0.34	0.85	0.72	-0.70 **	0.02	-0.56	0.78	0.62

N = 2,541, †p < 0.1, *p < 0.05, **p < 0.01

Table 9 (continued): Multilevel Regression of Job Outcome Variables on Toxic Leadership Dimensions, controlling for Group Cohesion (*in garrison only*)

Toxic Leadership Dimensions	Job Satisfaction					Group Productivity					Organizational Trust					Organizational Commitment				
	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²
<i>Step 1:</i>																				
Self-Promotion (individual level)	0.00	0.01	-0.01			0.01	0.01	0.02			0.00	0.02	0.00			0.01	0.01	0.02		
Abusive Supervision (individual level)	-0.02	0.01	-0.05			-0.01	0.01	-0.02			-0.05 **	0.02	-0.09			-0.05 **	0.01	-0.12		
Unpredictability (individual level)	-0.01	0.01	-0.03			-0.01	0.01	-0.03			-0.01	0.02	-0.02			-0.01	0.02	-0.02		
Narcissism (individual level)	0.00	0.01	-0.01			0.00	0.01	0.01			-0.03 *	0.02	-0.07			-0.04 **	0.01	-0.09		
Authoritarian Leadership (individual level)	-0.03 *	0.01	-0.06			-0.02 †	0.01	-0.05			-0.01	0.02	-0.03			-0.03 †	0.01	-0.06		
Group Cohesion (individual level)	0.11 **	0.01	0.29	0.38	0.14	0.13 **	0.01	0.34	0.36	0.13	0.12 **	0.01	0.26	0.36	0.13	0.07 **	0.01	0.16	0.33	0.11
<i>Step 2:</i>																				
Self-Promotion (individual level)	-0.01 *	0.01	-0.04			0.00	0.01	0.00			-0.01	0.01	-0.02			0.00	0.01	0.00		
Abusive Supervision (individual level)	-0.01	0.01	-0.02			0.00	0.01	0.01			-0.03 **	0.01	-0.06			-0.04 **	0.01	-0.10		
Unpredictability (individual level)	0.00	0.01	-0.01			0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	-0.01		
Narcissism (individual level)	0.01 *	0.01	0.03			0.02 **	0.01	0.05			-0.02	0.01	-0.03			-0.03 **	0.01	-0.06		
Authoritarian Leadership (individual level)	-0.03 **	0.01	-0.07			-0.02 **	0.01	-0.05			-0.02	0.01	-0.03			-0.03 *	0.01	-0.06		
Group Cohesion (individual level)	-0.02 **	0.01	-0.04			0.00	0.01	0.00			-0.02 **	0.01	-0.05			-0.03 **	0.01	-0.07		
Group Cohesion (group level)	0.79 **	0.01	0.85	0.86	0.74	0.84 **	0.01	0.88	0.88	0.77	0.93 **	0.02	0.79	0.80	0.64	0.60 **	0.02	0.60	0.64	0.41
<i>Step 3:</i>																				
Self-Promotion (individual level)	-0.01 *	0.01	-0.04			0.00	0.01	0.00			-0.01	0.01	-0.02			0.00	0.01	0.00		
Abusive Supervision (individual level)	0.00	0.01	-0.01			0.01	0.01	0.01			-0.02 *	0.01	-0.04			-0.03 **	0.01	-0.06		
Unpredictability (individual level)	0.00	0.01	-0.01			0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	-0.01		
Narcissism (individual level)	0.02 **	0.01	0.04			0.02 **	0.01	0.05			-0.01	0.01	-0.02			-0.02 *	0.01	-0.05		
Authoritarian Leadership (individual level)	0.00	0.01	0.00			-0.02 *	0.01	-0.04			0.03 **	0.01	0.05			0.03 **	0.01	0.07		
Group Cohesion (individual level)	0.00	0.00	-0.01			0.00	0.01	0.00			-0.01	0.01	-0.01			-0.01	0.01	-0.01		
Group Cohesion (group level)	0.66 **	0.01	0.72			0.81 **	0.01	0.85			0.74 **	0.02	0.62			0.34 **	0.02	0.34		
Authoritarian Leadership (group level)	-0.32 **	0.01	-0.28	0.89	0.79	-0.08 **	0.01	-0.06	0.88	0.77	-0.49 **	0.02	-0.33	0.84	0.71	-0.66 **	0.02	-0.53	0.77	0.59

N = 2,541, †p < 0.1, *p < 0.05, **p < 0.01

Table 10: Mediation Test Comparing Observed R to \hat{r}

Toxic Leadership Dimensions	Job Satisfaction		Group Productivity		Organizational Trust		Organizational Commitment	
	R	\hat{r}	R	\hat{r}	R	\hat{r}	R	\hat{r}
Self-Promotion	-0.72	-0.53	-0.54	-0.54	-0.74	-0.49	-0.73	-0.38
Abusive Supervision	-0.68	-0.51	-0.51	-0.52	-0.74	-0.47	-0.77	-0.37
Unpredictability	-0.70	-0.53	-0.54	-0.55	-0.73	-0.50	-0.75	-0.38
Narcissism	-0.57	-0.44	-0.41	-0.45	-0.66	-0.41	-0.73	-0.32
Authoritarian Leadership	-0.65	-0.44	-0.50	-0.45	-0.65	-0.41	-0.71	-0.32
<i>p</i> value:	0.00		0.91		0.00		0.00	

N = 2,541

Table 11: Mediation Test Comparing Observed B to \hat{B}

Toxic Leadership Dimensions	Job Satisfaction		Group Productivity		Organizational Trust		Organizational Commitment	
	Observed B	Reproduced \hat{B}	Observed B	Reproduced \hat{B}	Observed B	Reproduced \hat{B}	Observed B	Reproduced \hat{B}
Self-Promotion	-0.82	✔ -0.61	-0.65	✔ -0.65	-1.08	✔ -0.72	-0.88	-0.47
Abusive Supervision	-0.75	✔ -0.57	-0.59	✔ -0.60	-1.05	✔ -0.67	-0.92	-0.44
Unpredictability	-0.75	✔ -0.58	-0.61	✔ -0.62	-1.01	✔ -0.69	-0.86	-0.45
Narcissism	-0.65	✔ -0.51	-0.49	✔ -0.54	-0.98	✔ -0.61	-0.91	-0.39
Authoritarian Leadership	-0.74	✔ -0.51	-0.60	✔ -0.54	-0.96	✔ -0.60	-0.88	-0.39
<i>p</i> value:	0.00		0.90		0.00		0.00	

N = 2,541

Table 12: Mediation Test Comparing Observed Standardized B to Reproduced Standardized \hat{B}

Toxic Leadership Dimensions	Job Satisfaction		Group Productivity		Organizational Trust		Organizational Commitment	
	Observed Stnd B	Reproduced	Observed Stnd B	Reproduced	Observed Stnd B	Reproduced	Observed Stnd B	Reproduced
		Stnd \hat{B}		Stnd \hat{B}		Stnd \hat{B}		Stnd \hat{B}
Self-Promotion	-0.72	-0.53	-0.54	-0.54	-0.74	-0.49	-0.72	-0.38
Abusive Supervision	-0.68	-0.51	-0.51	-0.52	-0.74	-0.47	-0.77	-0.36
Unpredictability	-0.69	-0.53	-0.54	-0.55	-0.73	-0.50	-0.74	-0.38
Narcissism	-0.55	-0.43	-0.40	-0.44	-0.65	-0.40	-0.72	-0.31
Authoritarian Leadership	-0.64	-0.44	-0.49	-0.44	-0.64	-0.40	-0.70	-0.31
<i>p</i> value:	0.00		0.89		0.00		0.00	

N = 2,541

Table 13: Regression of Job Outcome Variables on Group Cohesion, controlling for Self-Promotion (*in garrison only*)

Toxic Leadership Dimensions	Job Satisfaction					Group Productivity					Organizational Trust					Organizational Commitment				
	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²
<i>Step 1:</i>																				
Self-Promotion (individual level)	0.00	0.01	-0.01			0.01	0.01	0.02			0.00	0.02	0.00			0.01	0.01	0.02		
Abusive Supervision (individual level)	-0.02	0.01	-0.05			-0.01	0.01	-0.02			-0.05 **	0.02	-0.09			-0.05 **	0.01	-0.12		
Unpredictability (individual level)	-0.01	0.01	-0.03			-0.01	0.01	-0.03			-0.01	0.02	-0.02			-0.01	0.01	-0.02		
Narcissism (individual level)	0.00	0.01	-0.01			0.00	0.01	0.01			-0.03 *	0.02	-0.06			-0.04 **	0.01	-0.09		
Authoritarian Leadership (individual level)	-0.03 *	0.01	-0.06			-0.02 †	0.01	-0.05			-0.01	0.02	-0.03			-0.02 †	0.01	-0.06		
Group Cohesion (individual level)	0.11 **	0.01	0.29	0.38	0.14	0.13 **	0.01	0.34	0.36	0.13	0.12 **	0.01	0.26	0.36	0.13	0.07 **	0.01	0.16	0.33	0.11
<i>Step 2:</i>																				
Self-Promotion (individual level)	0.03 **	0.01	0.09			0.04 **	0.01	0.09			0.05 **	0.01	0.10			0.05 **	0.01	0.12		
Abusive Supervision (individual level)	-0.01	0.01	-0.02			0.00	0.01	0.00			-0.03 *	0.01	-0.06			-0.04 **	0.01	-0.08		
Unpredictability (individual level)	0.00	0.01	0.00			0.00	0.01	-0.01			0.00	0.01	0.01			0.00	0.01	0.00		
Narcissism (individual level)	0.01	0.01	0.03			0.02	0.01	0.04			-0.01	0.01	-0.02			-0.02 *	0.01	-0.05		
Authoritarian Leadership (individual level)	-0.01	0.01	-0.02			-0.01	0.01	-0.01			0.01	0.01	0.02			0.00	0.01	-0.01		
Group Cohesion (individual level)	0.08 **	0.01	0.21			0.11 **	0.01	0.27			0.08 **	0.01	0.17			0.03 **	0.01	0.08		
Self-Promotion (group level)	-0.79 **	0.02	-0.69	0.00	0.55	-0.61 **	0.02	-0.51	0.60	0.36	-1.05 **	0.02	-0.72	0.76	0.58	-0.87 **	0.02	-0.71	0.74	0.54
<i>Step 3:</i>																				
Self-Promotion (individual level)	0.00	0.01	0.01			0.00	0.01	0.00			0.02 *	0.01	0.04			0.04 *	0.01	0.09		
Abusive Supervision (individual level)	-0.01	0.01	-0.02			0.00	0.01	0.01			-0.03 **	0.01	-0.05			-0.03 **	0.01	-0.08		
Unpredictability (individual level)	0.00	0.01	0.00			0.00	0.01	0.00			0.01	0.01	0.01			0.00	0.01	0.01		
Narcissism (individual level)	0.02 **	0.01	0.04			0.02 **	0.01	0.05			-0.01	0.01	-0.02			-0.02 *	0.01	-0.05		
Authoritarian Leadership (individual level)	-0.02 **	0.01	-0.05			-0.02 **	0.01	-0.05			0.00	0.01	0.00			-0.01	0.01	-0.02		
Group Cohesion (individual level)	0.00	0.00	-0.01			0.00	0.00	0.00			0.00	0.01	0.00			0.00	0.01	-0.01		
Self-Promotion (group level)	-0.34 **	0.01	-0.30			0.00	0.02	0.00			-0.58 **	0.02	-0.40			-0.68 **	0.02	-0.55		
Group Cohesion (group level)	0.62 **	0.01	0.67	0.89	0.79	0.85 **	0.01	0.88	0.88	0.77	0.64 **	0.02	0.54	0.86	0.73	0.26 **	0.02	0.27	0.76	0.58

N = 2,541, †p < 0.1, *p < 0.05, **p < 0.01

Table 14: Regression of Job Outcome Variables on Group Cohesion, controlling for Abusive Supervision (*in garrison only*)

Toxic Leadership Dimensions	Job Satisfaction					Group Productivity					Organizational Trust					Organizational Commitment				
	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²
<i>Step 1:</i>																				
Self-Promotion (individual level)	0.00	0.01	-0.01			0.01	0.01	0.02			0.00	0.02	0.00			0.01	0.01	0.02		
Abusive Supervision (individual level)	-0.02	0.01	-0.05			-0.01	0.01	-0.02			-0.05 **	0.02	-0.09			-0.05 **	0.01	-0.12		
Unpredictability (individual level)	-0.01	0.01	-0.03			-0.01	0.01	-0.03			-0.01	0.02	-0.02			-0.01	0.01	-0.02		
Narcissism (individual level)	0.00	0.01	-0.01			0.00	0.01	0.01			-0.03 *	0.02	-0.06			-0.04 **	0.01	-0.09		
Authoritarian Leadership (individual level)	-0.03 *	0.01	-0.06			-0.02 †	0.01	-0.05			-0.01	0.02	-0.03			-0.02 †	0.01	-0.06		
Group Cohesion (individual level)	0.11 **	0.01	0.29	0.38	0.14	0.13 **	0.01	0.34	0.36	0.13	0.12 **	0.01	0.26	0.36	0.13	0.07 **	0.01	0.16	0.33	0.11
<i>Step 2:</i>																				
Self-Promotion (individual level)	-0.02 †	0.01	-0.04			0.00	0.01	0.00			-0.02	0.01	-0.03			-0.01 **	0.01	-0.01		
Abusive Supervision (individual level)	0.04 **	0.01	0.10			0.04 **	0.01	0.09			0.04 **	0.01	0.07			0.02 *	0.01	0.06		
Unpredictability (individual level)	0.00	0.01	0.00			0.00	0.01	0.00			0.01	0.01	0.01			0.00	0.01	0.01		
Narcissism (individual level)	0.02	0.01	0.04			0.02	0.01	0.04			-0.01	0.01	-0.02			-0.02 *	0.01	-0.04		
Authoritarian Leadership (individual level)	-0.01	0.01	-0.02			-0.01	0.01	-0.02			0.01	0.01	0.02			0.00	0.01	0.00		
Group Cohesion (individual level)	0.08 **	0.01	0.22			0.11 **	0.01	0.28			0.08 **	0.01	0.17			0.03 **	0.01	0.08		
Abusive Supervision (group level)	-0.73 **	0.02	-0.65	0.00	0.51	-0.56 **	0.02	-0.48	0.57	0.33	-1.03 **	0.02	-0.72	0.76	0.57	-0.91 **	0.02	-0.76	0.78	0.60
<i>Step 3:</i>																				
Self-Promotion (individual level)	-0.02 **	0.01	-0.04			0.00	0.01	0.00			-0.02 *	0.01	-0.03			-0.01	0.01	-0.02		
Abusive Supervision (individual level)	0.01 †	0.01	0.03			0.00	0.01	0.01			0.01	0.01	0.02			0.01	0.01	0.03		
Unpredictability (individual level)	0.00	0.01	0.00			0.00	0.01	0.00			0.01	0.01	0.01			0.01	0.01	0.01		
Narcissism (individual level)	0.02 **	0.01	0.04			0.02 **	0.01	0.05			-0.01	0.01	-0.01			-0.02 *	0.01	-0.04		
Authoritarian Leadership (individual level)	-0.02 **	0.01	-0.05			-0.02 **	0.01	-0.05			0.00	0.01	0.00			-0.01	0.01	-0.01		
Group Cohesion (individual level)	0.00	0.00	-0.01			0.00	0.00	0.00			0.00	0.01	0.00			0.00	0.01	0.00		
Abusive Supervision (group level)	-0.29 **	0.01	-0.26			0.01	0.01	0.01			-0.59 **	0.02	-0.41			-0.74 **	0.02	-0.62		
Group Cohesion (group level)	0.65 **	0.01	0.70	0.89	0.78	0.85 **	0.01	0.88	0.88	0.77	0.65 **	0.02	0.55	0.86	0.74	0.24 **	0.02	0.25	0.80	0.64

N = 2,541, †p < 0.1, *p < 0.05, **p < 0.01

Table 15: Regression of Job Outcome Variables on Group Cohesion, controlling for Unpredictability (*in garrison only*)

Toxic Leadership Dimensions	<u>Job Satisfaction</u>					<u>Group Productivity</u>					<u>Organizational Trust</u>					<u>Organizational Commitment</u>				
	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²
<i>Step 1:</i>																				
Self-Promotion (individual level)	0.00	0.01	-0.01			0.01	0.01	0.02			0.00	0.02	0.00			0.01	0.01	0.02		
Abusive Supervision (individual level)	-0.02	0.01	-0.05			-0.01	0.01	-0.02			-0.05 **	0.02	-0.09			-0.05 **	0.01	-0.12		
Unpredictability (individual level)	-0.01	0.01	-0.03			-0.01	0.01	-0.03			-0.01	0.02	-0.02			-0.01	0.01	-0.02		
Narcissism (individual level)	0.00	0.01	-0.01			0.00	0.01	0.01			-0.03 *	0.02	-0.06			-0.04 **	0.01	-0.09		
Authoritarian Leadership (individual level)	-0.03 *	0.01	-0.06			-0.02 †	0.01	-0.05			-0.01	0.02	-0.03			-0.02 †	0.01	-0.06		
Group Cohesion (individual level)	0.11 **	0.01	0.29	0.38	0.14	0.13 **	0.01	0.34	0.36	0.13	0.12 **	0.01	0.26	0.36	0.13	0.07 **	0.01	0.16	0.33	0.11
<i>Step 2:</i>																				
Self-Promotion (individual level)	-0.01	0.01	-0.03			0.00	0.01	0.01			-0.01	0.01	-0.01			0.00	0.01	0.01		
Abusive Supervision (individual level)	0.00	0.01	0.01			0.01	0.01	0.03			-0.01	0.01	-0.02			-0.02 *	0.01	-0.05		
Unpredictability (individual level)	0.03 **	0.01	0.08			0.02 †	0.01	0.06			0.05 **	0.01	0.10			0.04 **	0.01	0.10		
Narcissism (individual level)	0.01	0.01	0.03			0.02	0.01	0.04			-0.01	0.01	-0.03			-0.02 *	0.01	-0.05		
Authoritarian Leadership (individual level)	-0.01	0.01	-0.02			-0.01	0.01	-0.02			0.01	0.01	0.01			-0.01	0.01	-0.01		
Group Cohesion (individual level)	0.08 **	0.01	0.21			0.11 **	0.01	0.27			0.08 **	0.01	0.17			0.03 **	0.01	0.07		
Unpredictability (group level)	-0.73 **	0.02	-0.67	0.00	0.52	-0.58 **	0.02	-0.51	0.60	0.36	-0.98 **	0.02	-0.71	0.75	0.56	-0.85 **	0.02	-0.73	0.75	0.57
<i>Step 3:</i>																				
Self-Promotion (individual level)	-0.01 *	0.01	-0.04			0.00	0.01	0.00			-0.01	0.01	-0.02			0.00	0.01	0.00		
Abusive Supervision (individual level)	0.00	0.01	-0.01			0.00	0.01	0.01			-0.02 †	0.01	-0.04			-0.02 *	0.01	-0.05		
Unpredictability (individual level)	0.01 †	0.01	0.03			0.00	0.01	0.00			0.03 **	0.01	0.06			0.03 **	0.01	0.08		
Narcissism (individual level)	0.02 **	0.01	0.04			0.02 **	0.01	0.05			-0.01	0.01	-0.02			-0.02 *	0.01	-0.05		
Authoritarian Leadership (individual level)	-0.02 **	0.01	-0.05			-0.02 **	0.01	-0.05			0.00	0.01	-0.01			-0.01	0.01	-0.02		
Group Cohesion (individual level)	0.00	0.00	-0.01			0.00	0.00	0.00			0.00	0.01	-0.01			0.00	0.01	-0.01		
Unpredictability (group level)	-0.29 **	0.01	-0.26			0.01	0.01	0.01			-0.53 **	0.02	-0.38			-0.68 **	0.02	-0.59		
Group Cohesion (group level)	0.64 **	0.01	0.70	0.88	0.78	0.85 **	0.01	0.88	0.88	0.77	0.66 **	0.02	0.56	0.85	0.72	0.24 **	0.02	0.25	0.78	0.60

N = 2,541, †p < 0.1, *p < 0.05, **p < 0.01

Table 16: Regression of Job Outcome Variables on Group Cohesion, controlling for Narcissism (*in garrison only*)

Toxic Leadership Dimensions	Job Satisfaction					Group Productivity					Organizational Trust					Organizational Commitment				
	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²
<i>Step 1:</i>																				
Self-Promotion (individual level)	0.00	0.01	-0.01			0.01	0.01	0.02			0.00	0.02	0.00			0.01	0.01	0.02		
Abusive Supervision (individual level)	-0.02	0.01	-0.05			-0.01	0.01	-0.02			-0.05 **	0.02	-0.09			-0.05 **	0.01	-0.12		
Unpredictability (individual level)	-0.01	0.01	-0.03			-0.01	0.01	-0.03			-0.01	0.02	-0.02			-0.01	0.01	-0.02		
Narcissism (individual level)	0.00	0.01	-0.01			0.00	0.01	0.01			-0.03 *	0.02	-0.06			-0.04 **	0.01	-0.09		
Authoritarian Leadership (individual level)	-0.03 *	0.01	-0.06			-0.02 †	0.01	-0.05			-0.01	0.02	-0.03			-0.02 †	0.01	-0.06		
Group Cohesion (individual level)	0.11 **	0.01	0.29	0.38	0.14	0.13 **	0.01	0.34	0.36	0.13	0.12 **	0.01	0.26	0.36	0.13	0.07 **	0.01	0.16	0.33	0.11
<i>Step 2:</i>																				
Self-Promotion (individual level)	-0.01	0.01	-0.02			0.01	0.01	0.02			-0.01	0.01	-0.01			0.00	0.01	0.01		
Abusive Supervision (individual level)	0.00	0.01	-0.01			0.01	0.01	0.01			-0.02	0.01	-0.04			-0.02 *	0.01	-0.06		
Unpredictability (individual level)	-0.01	0.01	-0.03			-0.01	0.01	-0.02			-0.01	0.01	-0.01			-0.01	0.01	-0.02		
Narcissism (individual level)	0.05 **	0.01	0.11			0.04 **	0.01	0.09			0.04 **	0.01	0.08			0.03 **	0.01	0.07		
Authoritarian Leadership (individual level)	-0.01	0.01	-0.03			-0.01	0.01	-0.02			0.01	0.01	0.01			0.00	0.01	-0.01		
Group Cohesion (individual level)	0.09 **	0.01	0.24			0.12 **	0.01	0.30			0.09 **	0.01	0.20			0.04 **	0.01	0.09		
Narcissism (group level)	-0.63 **	0.02	-0.53	0.62	0.39	-0.46 **	0.02	-0.37	0.50	0.25	-0.96 **	0.02	-0.64	0.69	0.48	-0.90 **	0.02	-0.71	0.74	0.55
<i>Step 3:</i>																				
Self-Promotion (individual level)	-0.01 *	0.01	-0.04			0.00	0.01	0.00			-0.01	0.01	-0.02			0.00	0.01	0.00		
Abusive Supervision (individual level)	-0.01	0.01	-0.01			0.00	0.01	0.00			-0.02 *	0.01	-0.04			-0.02 **	0.01	-0.06		
Unpredictability (individual level)	0.00	0.01	-0.01			0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	-0.01		
Narcissism (individual level)	0.03 **	0.01	0.07			0.02 *	0.01	0.04			0.02 *	0.01	0.04			0.02 **	0.01	0.05		
Authoritarian Leadership (individual level)	-0.02 **	0.01	-0.05			-0.02 **	0.01	-0.06			0.00	0.01	-0.01			-0.01	0.01	-0.02		
Group Cohesion (individual level)	-0.01 †	0.00	-0.02			0.00	0.00	-0.01			-0.01	0.01	-0.02			-0.01	0.01	-0.02		
Narcissism (group level)	-0.20 **	0.01	-0.17			0.07 **	0.01	0.06			-0.51 **	0.02	-0.34			-0.70 **	0.02	-0.56		
Group Cohesion (group level)	0.71 **	0.01	0.77	0.87	0.76	0.87 **	0.01	0.91	0.88	0.77	0.73 **	0.02	0.62	0.85	0.72	0.32 **	0.02	0.33	0.78	0.62

N = 2,541, †p < 0.1, *p < 0.05, **p < 0.01

Table 17: Regression of Job Outcome Variables on Group Cohesion, controlling for Authoritarian Leadership (*in garrison only*)

Toxic Leadership Dimensions	Job Satisfaction					Group Productivity					Organizational Trust					Organizational Commitment				
	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²	B	Std. Error	Std. B	R	R ²
<i>Step 1:</i>																				
Self-Promotion (individual level)	0.00	0.01	-0.01			0.01	0.01	0.02			0.00	0.02	0.00			0.01	0.01	0.02		
Abusive Supervision (individual level)	-0.02	0.01	-0.05			-0.01	0.01	-0.02			-0.05 **	0.02	-0.09			-0.05 **	0.01	-0.12		
Unpredictability (individual level)	-0.01	0.01	-0.03			-0.01	0.01	-0.03			-0.01	0.02	-0.02			-0.01	0.01	-0.02		
Narcissism (individual level)	0.00	0.01	-0.01			0.00	0.01	0.01			-0.03 *	0.02	-0.06			-0.04 **	0.01	-0.09		
Authoritarian Leadership (individual level)	-0.03 *	0.01	-0.06			-0.02 †	0.01	-0.05			-0.01	0.02	-0.03			-0.02 †	0.01	-0.06		
Group Cohesion (individual level)	0.11 **	0.01	0.29	0.38	0.14	0.13 **	0.01	0.34	0.36	0.13	0.12 **	0.01	0.26	0.36	0.13	0.07 **	0.01	0.16	0.33	0.11
<i>Step 2:</i>																				
Self-Promotion (individual level)	-0.01	0.01	-0.02			0.01	0.01	0.02			0.00	0.01	-0.01			0.00	0.01	0.01		
Abusive Supervision (individual level)	0.00	0.01	0.00			0.01	0.01	0.02			-0.02	0.01	-0.04			-0.03 *	0.01	-0.06		
Unpredictability (individual level)	-0.01	0.01	-0.02			-0.01	0.01	-0.02			-0.01	0.01	-0.01			-0.01	0.01	-0.02		
Narcissism (individual level)	0.01	0.01	0.03			0.01	0.01	0.03			-0.02	0.01	-0.03			-0.02 *	0.01	-0.05		
Authoritarian Leadership (individual level)	0.03 **	0.01	0.08			0.03 *	0.01	0.06			0.06 **	0.01	0.12			0.05 **	0.01	0.11		
Group Cohesion (individual level)	0.09 **	0.01	0.24			0.12 **	0.01	0.30			0.10 **	0.01	0.20			0.04 **	0.01	0.10		
Authoritarian Leadership (group level)	-0.72 **	0.02	-0.62	0.69	0.47	-0.57 **	0.02	-0.47	0.57	0.32	-0.94 **	0.02	-0.63	0.69	0.47	-0.87 **	0.02	-0.69	0.72	0.52
<i>Step 3:</i>																				
Self-Promotion (individual level)	-0.01 *	0.01	-0.04			0.00	0.01	0.00			-0.01	0.01	-0.02			0.00	0.01	0.00		
Abusive Supervision (individual level)	0.00	0.01	-0.01			0.01	0.01	0.01			-0.02 *	0.01	-0.04			-0.03 **	0.01	-0.06		
Unpredictability (individual level)	0.00	0.01	-0.01			0.00	0.01	0.00			0.00	0.01	0.00			0.00	0.01	-0.01		
Narcissism (individual level)	0.02 **	0.01	0.04			0.02 **	0.01	0.05			-0.01	0.01	-0.02			-0.02 *	0.01	-0.04		
Authoritarian Leadership (individual level)	0.00	0.01	0.00			-0.02 *	0.01	-0.04			0.03 **	0.01	0.05			0.03 **	0.01	0.07		
Group Cohesion (individual level)	0.00	0.00	-0.01			0.00	0.00	0.00			-0.01	0.01	-0.01			-0.01	0.01	-0.01		
Authoritarian Leadership (group level)	-0.32 **	0.01	-0.27			-0.08 **	0.01	-0.06			-0.49 **	0.02	-0.33			-0.66 **	0.02	-0.53		
Group Cohesion (group level)	0.66 **	0.01	0.72	0.89	0.79	0.81 **	0.01	0.84	0.88	0.77	0.73 **	0.02	0.62	0.85	0.71	0.34 **	0.02	0.34	0.77	0.59

N = 2,541, †p < 0.1, *p < 0.05, **p < 0.01

Table 18: Interaction Analysis for Relationship between Self-Promotion and Group Cohesion

	Group Cohesion			
	Raw Value	Std. Error	df	t Value
Model 1				
Intercept	4.89 **	0.05	3169	100.23
Self-Promotion (individual level)	-0.39 **	0.02	3169	-25.16
Model 2				
Intercept	5.62 **	0.20	3169	27.64
Self-Promotion (individual level)	-0.38 **	0.02	3169	-24.03
Self-Promotion (group level)	-0.30 **	0.08	147	-3.69
Model 3				
Intercept	5.73 **	0.21	3169	26.69
Self-Promotion (individual level)	-0.38 **	0.02	3169	-24.03
Self-Promotion (group level)	-0.33 **	0.08	145	-3.91
Garrison (effects coded)	-0.07	0.05	145	-1.36
Deployed (effects coded)	0.03	0.08	145	0.41
Model 4				
Intercept	5.80 **	0.41	3169	14.07
Self-Promotion (individual level)	-0.44 **	0.02	3169	-26.37
Self-Promotion (group level)	-0.51 **	0.16	143	-3.13
Garrison (direct effect)	0.23	0.43	143	0.53
Deployed (direct effect)	0.52	0.75	143	0.69
Garrison (interaction)	-0.11	0.17	143	-0.66
Deployed (interaction)	-0.13	0.29	143	-0.46

N = 3,319, †p < 0.1, *p < 0.05, **p < 0.01

Modeled Interaction Between Self-Promotion and Group Cohesion

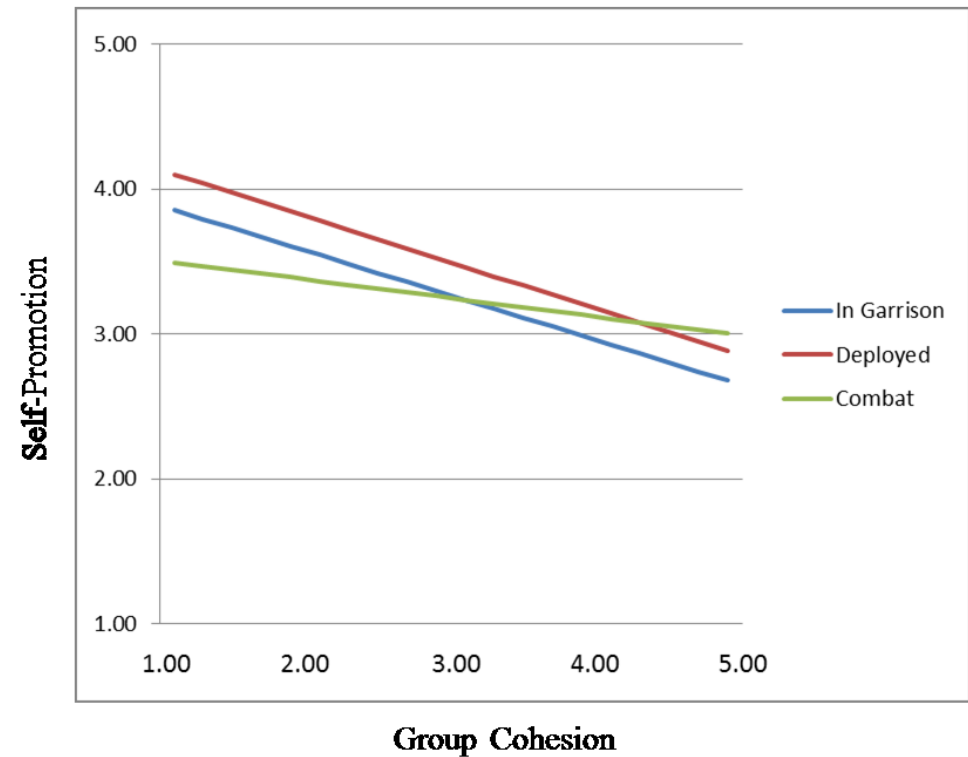


Table 19: Interaction Analysis for Relationship between Abusive Supervision and Group Cohesion

	Group Cohesion			
	Raw Value	Std. Error	df	t Value
Model 1				
Intercept	4.93 **	0.05	3169	91.39
Abusive Supervision (individual level)	-0.39 **	0.02	3169	-22.63
Model 2				
Intercept	5.73 **	0.22	3169	25.66
Abusive Supervision (individual level)	-0.37 **	0.02	3169	-21.48
Abusive Supervision (group level)	-0.31 **	0.08	147	-3.69
Model 3				
Intercept	5.79 **	0.23	3169	25.01
Abusive Supervision (individual level)	-0.37 **	0.02	3169	-21.48
Abusive Supervision (group level)	-0.32 **	0.09	145	-3.74
Garrison (effects coded)	-0.05	0.05	145	-1.08
Deployed (effects coded)	0.08	0.08	145	0.96
Model 4				
Intercept	5.63 **	0.54	3169	10.41
Abusive Supervision (individual level)	-0.37 **	0.02	3169	-21.48
Abusive Supervision (group level)	-0.26	0.20	143	-1.33
Garrison (direct effect)	0.19	0.56	143	0.34
Deployed (direct effect)	0.15	1.02	143	0.15
Garrison (interaction)	-0.09	0.20	143	-0.44
Deployed (interaction)	-0.03	0.37	143	-0.07

N = 3,319, †p < 0.1, *p < 0.05, **p < 0.01

Modeled Interaction Between Abusive Supervision and Group Cohesion

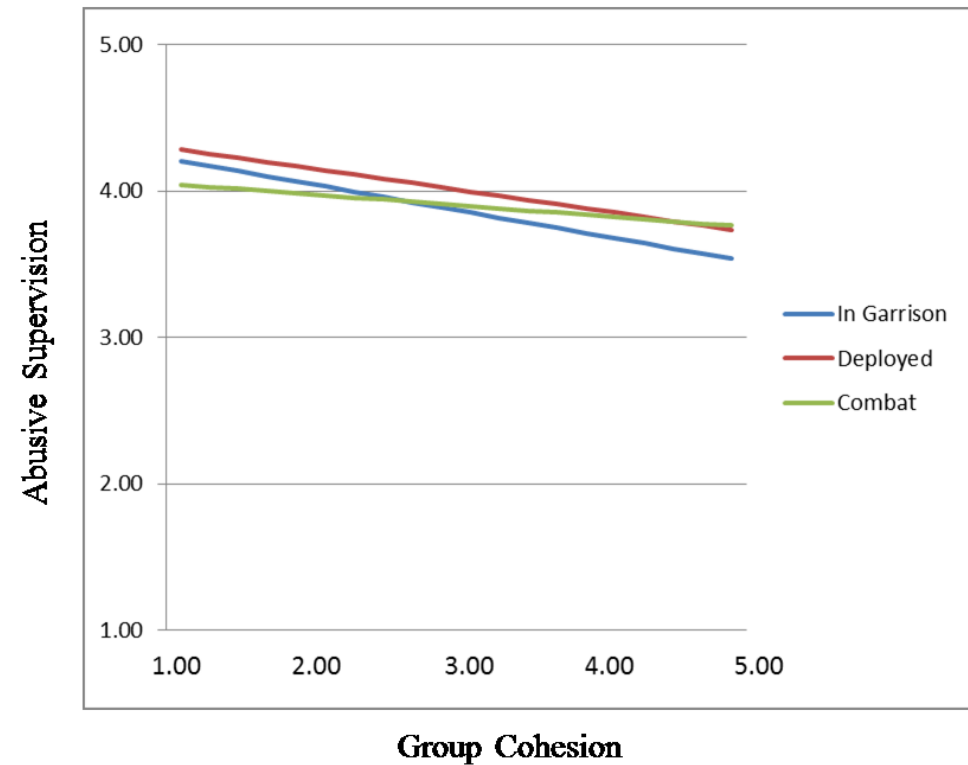


Table 20: Interaction Analysis for Relationship between Unpredictability and Group Cohesion

	Group Cohesion			
	Raw Value	Std. Error	df	t Value
Model 1				
Intercept	4.88 **	0.05	3169	95.79
Unpredictability (individual level)	-0.38 **	0.02	3169	-23.27
Model 2				
Intercept	5.61 **	0.20	3169	28.18
Unpredictability (individual level)	-0.36 **	0.02	3169	-22.02
Unpredictability (group level)	-0.29 **	0.08	147	-3.80
Model 3				
Intercept	5.77 **	0.21	3169	27.09
Unpredictability (individual level)	-0.36 **	0.02	3169	-22.02
Unpredictability (group level)	-0.33 **	0.08	145	-4.14
Garrison (effects coded)	-0.10 *	0.05	145	-1.99
Deployed (effects coded)	0.10	0.08	145	1.16
Model 4				
Intercept	5.58 **	0.73	3169	7.59
Unpredictability (individual level)	-0.36 **	0.02	3169	-22.02
Unpredictability (group level)	-0.26	0.27	143	-0.97
Garrison (direct effect)	0.25	0.75	143	0.34
Deployed (direct effect)	0.17	1.44	143	0.12
Garrison (interaction)	-0.13	0.27	143	-0.48
Deployed (interaction)	-0.02	0.52	143	-0.05

N = 3,319, †p<0.1, *p<.05, **p<.01

Modeled Interaction Between Unpredictability and Group Cohesion

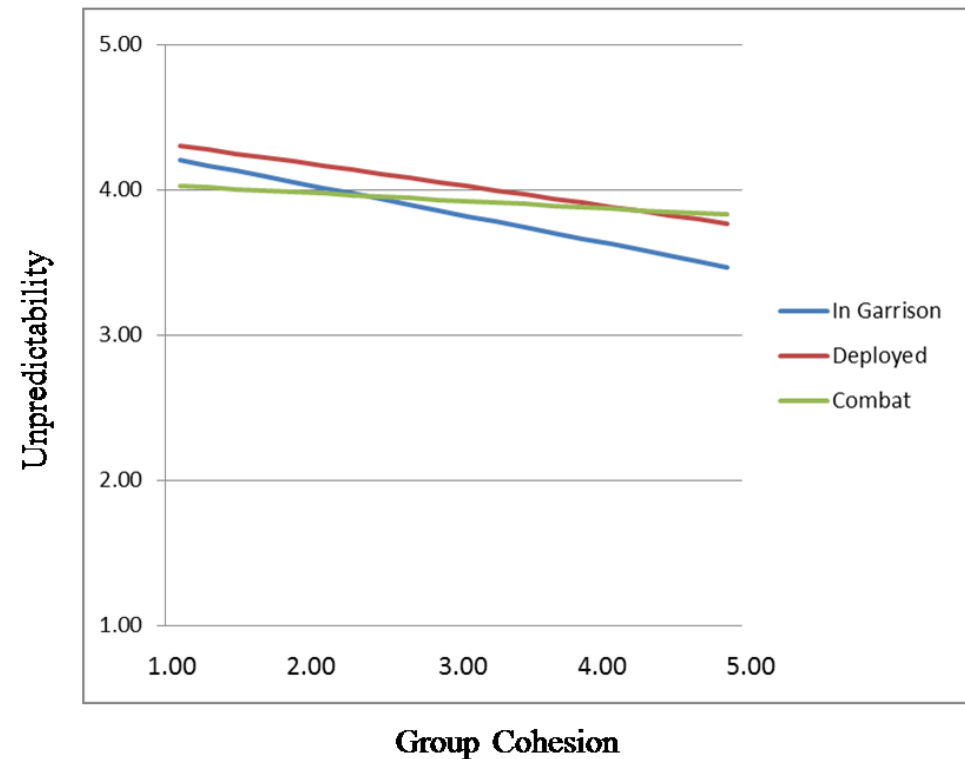


Table 21: Interaction Analysis for Relationship between Narcissism and Group Cohesion

	<u>Group Cohesion</u>			
	Raw Value	Std. Error	df	t Value
Model 1				
Intercept	4.71 **	0.06	3169	77.28
Narcissism (individual level)	-0.28 **	0.02	3169	-15.54
Model 2				
Intercept	5.63 **	0.27	3169	20.79
Narcissism (individual level)	-0.27 **	0.02	3169	-14.62
Narcissism (group level)	-0.32 **	0.09	147	-3.46
Model 3				
Intercept	5.73 **	0.28	3169	20.17
Narcissism (individual level)	-0.27 **	0.02	3169	-14.62
Narcissism (group level)	-0.34 **	0.09	145	-3.57
Garrison (effects coded)	-0.07	0.05	145	-1.22
Deployed (effects coded)	0.08	0.09	145	0.90
Model 4				
Intercept	5.86 **	1.12	3169	5.25
Narcissism (individual level)	-0.27 **	0.02	3169	-14.62
Narcissism (group level)	-0.38	0.37	143	-1.04
Garrison (direct effect)	-0.08	1.13	143	-0.07
Deployed (direct effect)	1.06	2.18	143	0.49
Garrison (interaction)	0.00	0.37	143	0.01
Deployed (interaction)	-0.32	0.72	143	-0.45

N = 3,319, †p < 0.1, *p < 0.05, **p < 0.01

Modeled Interaction Between Narcissism and Group Cohesion

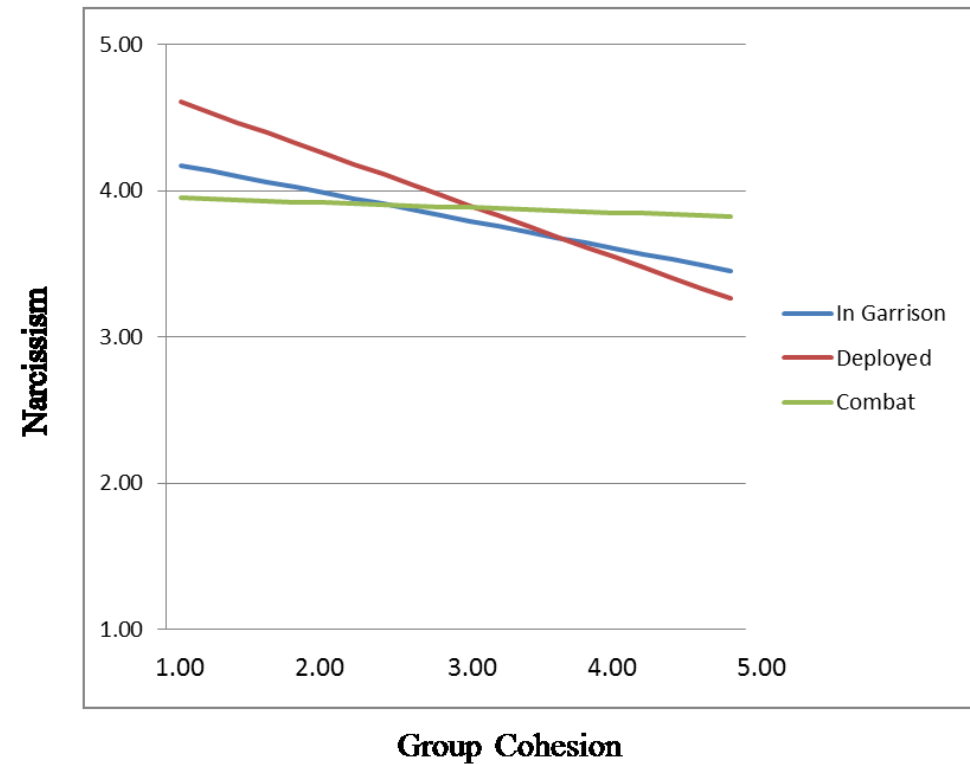


Table 22: Interaction Analysis for Relationship between Authoritarian Leadership and Group Cohesion

	Group Cohesion			
	Raw Value	Std. Error	df	t Value
Model 1				
Intercept	4.82 **	0.06	3169	84.59
Authoritarian Leadership (individual level)	-0.34 **	0.02	3169	-19.05
Model 2				
Intercept	5.59 **	0.25	3169	22.27
Authoritarian Leadership (individual level)	-0.33 **	0.02	3169	-18.13
Authoritarian Leadership (group level)	-0.29 **	0.09	147	-3.17
Model 3				
Intercept	5.65 **	0.26	3169	21.67
Authoritarian Leadership (individual level)	-0.33 **	0.02	3169	-18.13
Authoritarian Leadership (group level)	-0.30 **	0.09	145	-3.20
Garrison (effects coded)	-0.05	0.05	145	-0.92
Deployed (effects coded)	0.06	0.09	145	0.71
Model 4				
Intercept	5.40 **	0.50	3169	10.70
Authoritarian Leadership (individual level)	-0.33 **	0.02	3169	-18.13
Authoritarian Leadership (group level)	-0.21	0.18	143	-1.17
Garrison (direct effect)	0.32	0.53	143	0.60
Deployed (direct effect)	0.10	0.90	143	0.11
Garrison (interaction)	-0.13	0.19	143	-0.69
Deployed (interaction)	-0.01	0.32	143	-0.03

N = 3,319, †p<0.1, *p<.05, **p<.01

Modeled Interaction Between Authoritarian Leadership and Group Cohesion

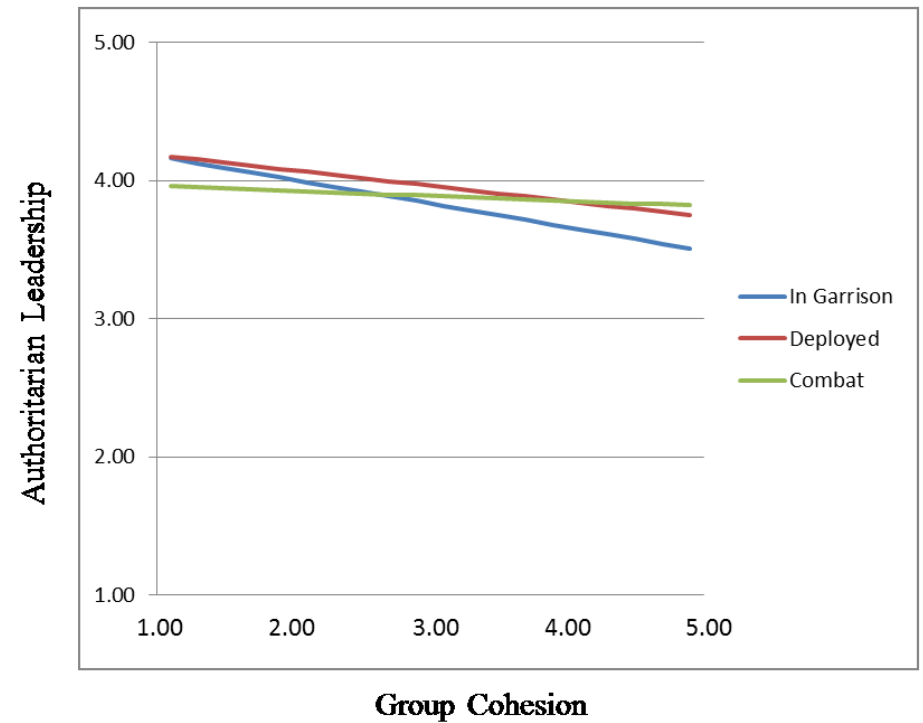


Table 23: Interaction Analysis for Relationship between Group Cohesion and Job Satisfaction

	<u>Job Satisfaction</u>			
	Raw Value	Std. Error	df	t Value
Model 1				
Intercept	1.62 **	0.05	3169	31.56
Group Cohesion (individual level)	0.55 **	0.01	3169	45.33
Model 2				
Intercept	0.86 **	0.18	3169	4.72
Group Cohesion (individual level)	0.54 **	0.01	3169	42.91
Group Cohesion (group level)	0.21 **	0.05	147	4.32
Model 3				
Intercept	0.84 **	0.18	3169	4.58
Group Cohesion (individual level)	0.54 **	0.01	3169	42.90
Group Cohesion (group level)	0.21 **	0.05	145	4.47
Garrison (effects coded)	-0.01	0.03	145	-0.42
Deployed (effects coded)	-0.06	0.06	145	-1.11
Model 4				
Intercept	0.70	0.46	3169	1.54
Group Cohesion (individual level)	0.54 **	0.01	3169	42.90
Group Cohesion (group level)	0.25 *	0.12	143	2.13
Garrison (direct effect)	0.05	0.47	143	0.10
Deployed (direct effect)	-0.94	0.86	143	-1.10
Garrison (interaction)	-0.01	0.12	143	-0.11
Deployed (interaction)	0.22	0.22	143	1.03

N = 3,319, †p < 0.1, *p < .05, **p < .01

Modeled Interaction Between Group Cohesion and Job Satisfaction

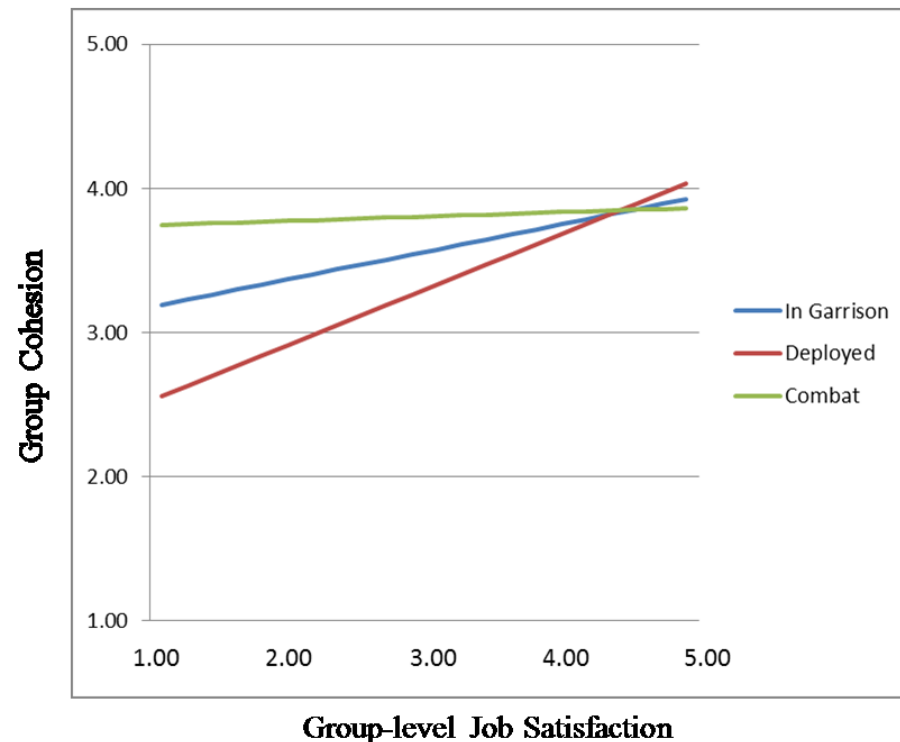


Table 24: Interaction Analysis for Relationship between Group Cohesion and Work Group Productivity

	Group Productivity			
	Raw Value	Std. Error	df	t Value
Model 1				
Intercept	1.45 **	0.05	3169	31.43
Group Cohesion (individual level)	0.67 **	0.01	3169	61.25
Model 2				
Intercept	0.90 **	0.17	3169	5.36
Group Cohesion (individual level)	0.66 **	0.01	3169	58.58
Group Cohesion (group level)	0.15 **	0.04	147	3.38
Model 3				
Intercept	0.85 **	0.17	3169	5.14
Group Cohesion (individual level)	0.66 **	0.01	3169	58.58
Group Cohesion (group level)	0.16 **	0.04	145	3.68
Garrison (effects coded)	0.00	0.03	145	-0.05
Deployed (effects coded)	-0.12 *	0.05	145	-2.25
Model 4				
Intercept	0.90 *	0.42	3169	2.17
Group Cohesion (individual level)	0.66 **	0.01	3169	58.58
Group Cohesion (group level)	0.15	0.11	143	1.38
Garrison (direct effect)	-0.06	0.43	143	-0.15
Deployed (direct effect)	-0.05	0.78	143	-0.07
Garrison (interaction)	0.02	0.11	143	0.14
Deployed (interaction)	-0.02	0.20	143	-0.08

N = 3,319, †p<0.1, *p<.05, **p<.01

Modeled Interaction Between Group Cohesion and Work Group Productivity

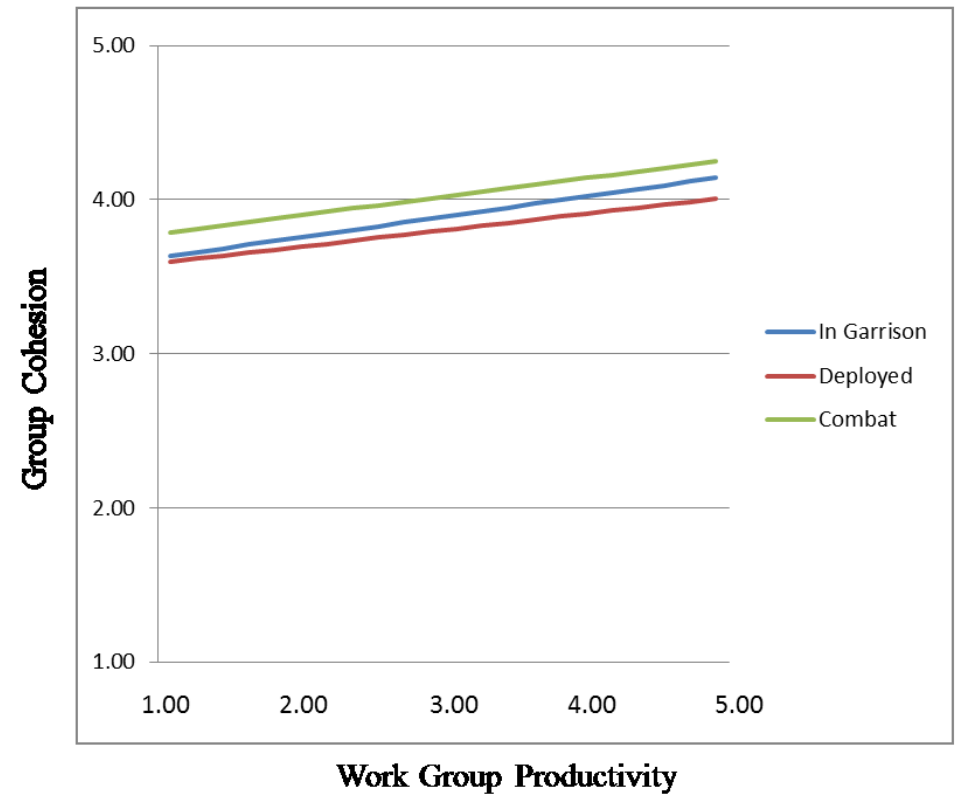


Table 25: Interaction Analysis for Relationship between Group Cohesion and Organizational Trust

	<u>Organizational Trust</u>			
	Raw Value	Std. Error	df	t Value
Model 1				
Intercept	1.09 **	0.07	3169	16.23
Group Cohesion (individual level)	0.58 **	0.02	3169	37.46
Model 2				
Intercept	-0.11	0.26	3169	-0.41
Group Cohesion (individual level)	0.57 **	0.02	3169	35.53
Group Cohesion (group level)	0.32 **	0.07	147	4.77
Model 3				
Intercept	-0.05	0.26	3169	-0.21
Group Cohesion (individual level)	0.57 **	0.02	3169	35.53
Group Cohesion (group level)	0.31 **	0.07	145	4.69
Garrison (effects coded)	0.02	0.05	145	0.41
Deployed (effects coded)	0.15 †	0.08	145	1.86
Model 4				
Intercept	-0.10	0.63	3169	-0.15
Group Cohesion (individual level)	0.57 **	0.02	3169	35.53
Group Cohesion (group level)	0.32 *	0.16	143	2.00
Garrison (direct effect)	-0.07	0.65	143	-0.11
Deployed (direct effect)	-0.90	1.18	143	-0.76
Garrison (interaction)	0.03	0.16	143	0.16
Deployed (interaction)	0.26	0.30	143	0.89

N = 3,319, †p < 0.1, *p < 0.05, **p < 0.01

Modeled Interaction Between Group Cohesion and Organizational Trust

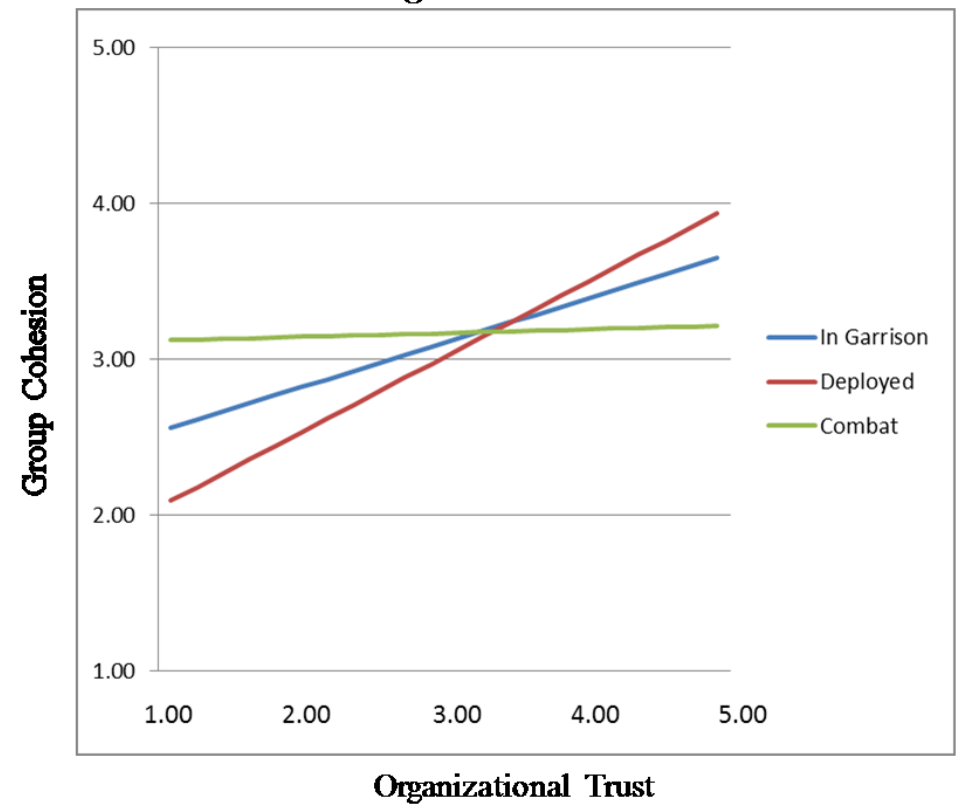
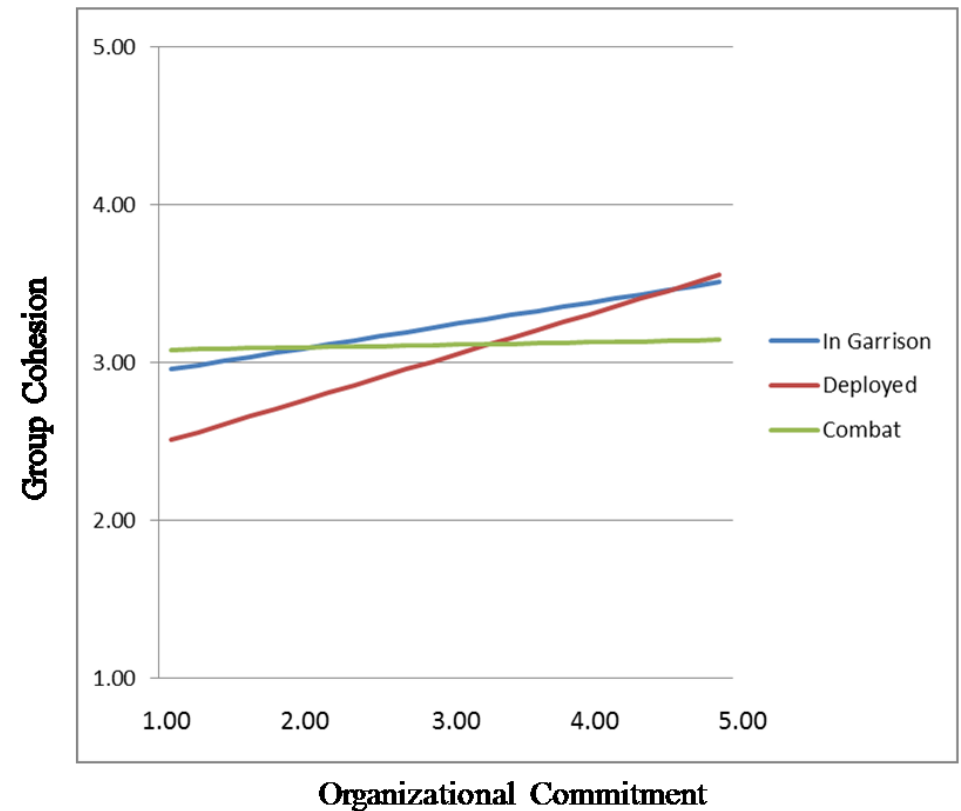


Table 26: Interaction Analysis for Relationship between Group Cohesion and Organizational Commitment

	Organizational Commitment			
	Raw Value	Std. Error	df	t Value
Model 1				
Intercept	1.68 **	0.06	3169	26.00
Group Cohesion (individual level)	0.42 **	0.01	3169	28.50
Model 2				
Intercept	1.05 **	0.27	3169	3.88
Group Cohesion (individual level)	0.42 **	0.02	3169	27.35
Group Cohesion (group level)	0.17 *	0.07	147	2.37
Model 3				
Intercept	1.04 **	0.27	3169	3.88
Group Cohesion (individual level)	0.42 **	0.02	3169	27.35
Group Cohesion (group level)	0.16 *	0.07	145	2.30
Garrison (effects coded)	0.10 *	0.05	145	2.06
Deployed (effects coded)	0.04	0.08	145	0.51
Model 4				
Intercept	0.97	0.66	3169	1.47
Group Cohesion (individual level)	0.42 **	0.02	3169	27.35
Group Cohesion (group level)	0.18	0.17	143	1.05
Garrison (direct effect)	0.11	0.68	143	0.16
Deployed (direct effect)	-0.57	1.23	143	-0.47
Garrison (interaction)	0.00	0.17	143	0.00
Deployed (interaction)	0.16	0.31	143	0.50

N = 3,319, †p < 0.1, *p < .05, **p < .01

Modeled Interaction Between Group Cohesion and Organizational Commitment



Figures

Figure 1: Overall Model

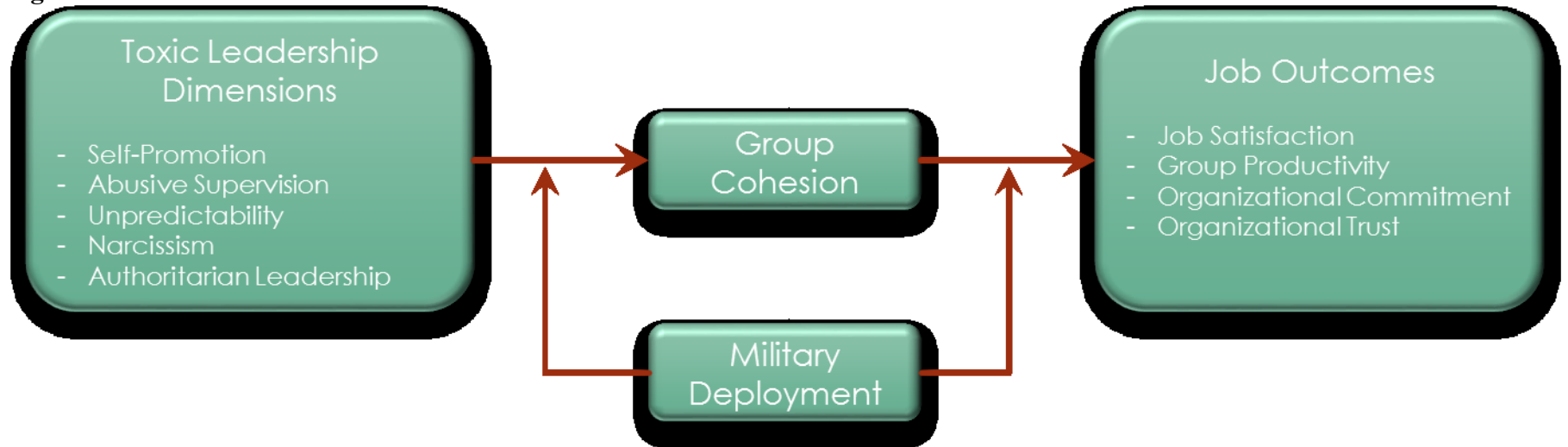


Figure 2: Hypothesized Relationships

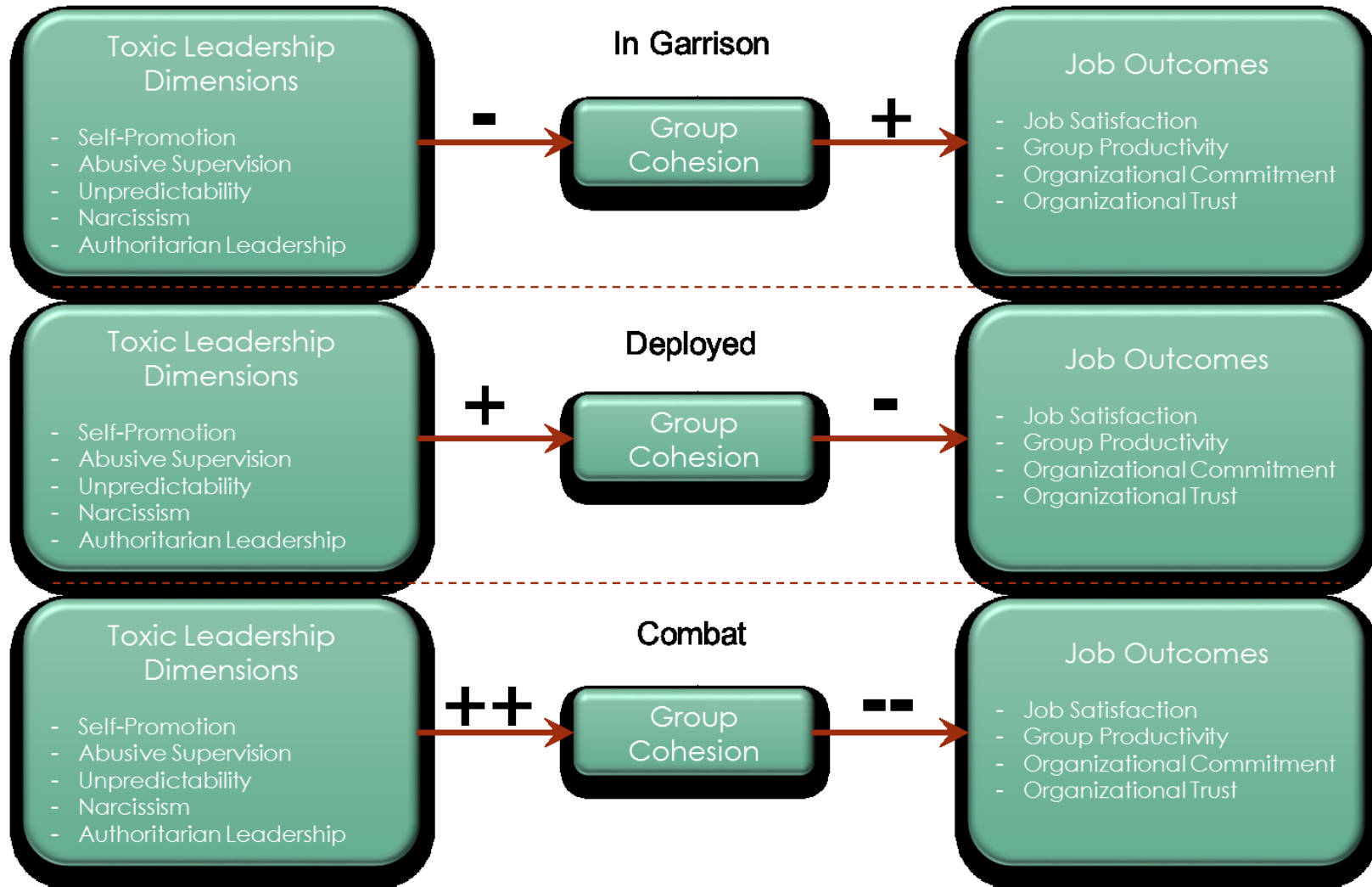
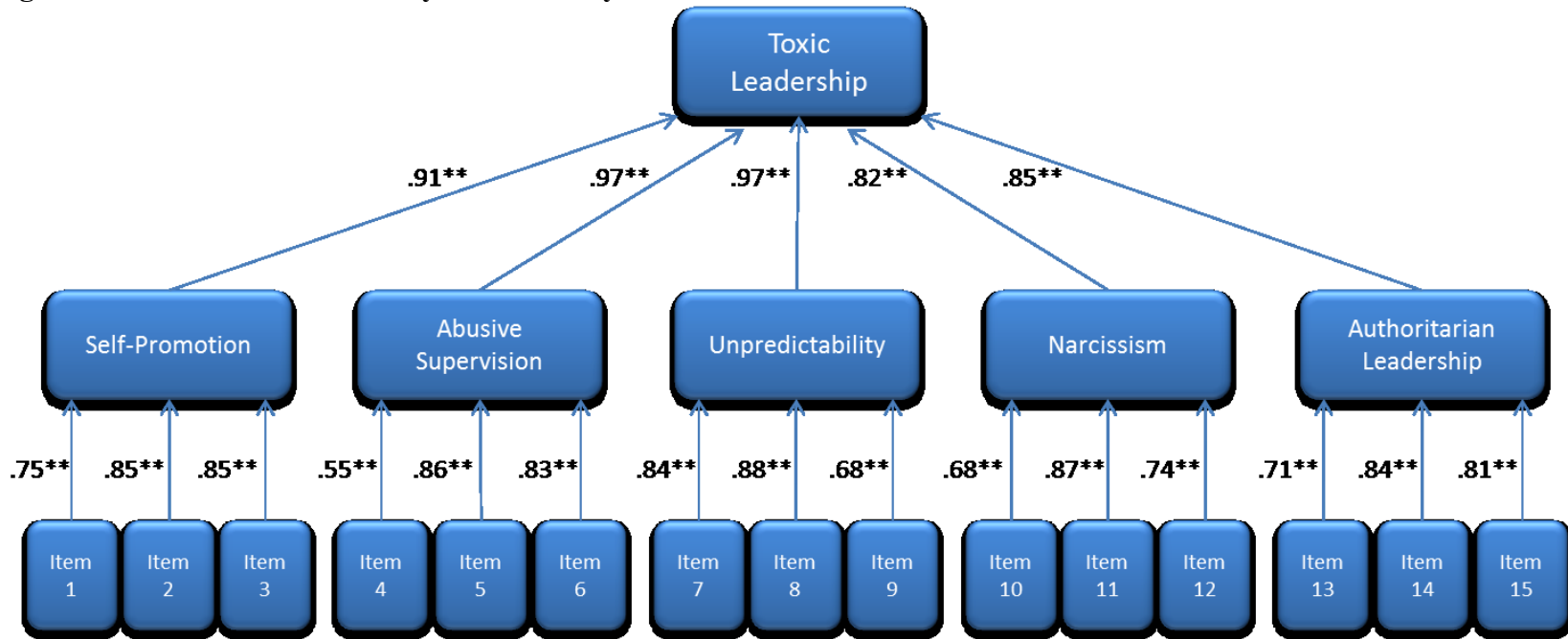
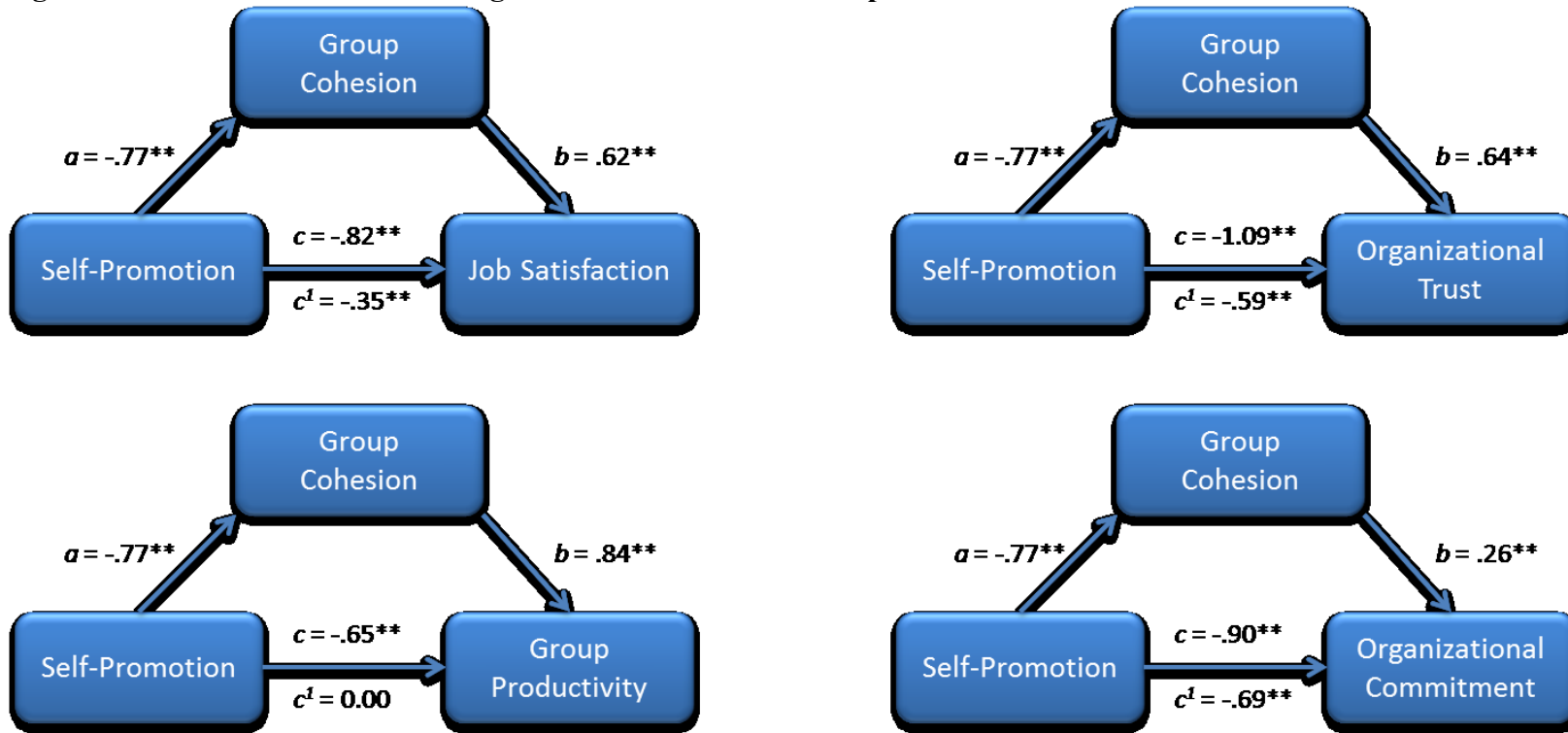


Figure 3: Results of Confirmatory Factor Analysis



N = 3,319, all are significant at the $p < .01$ level

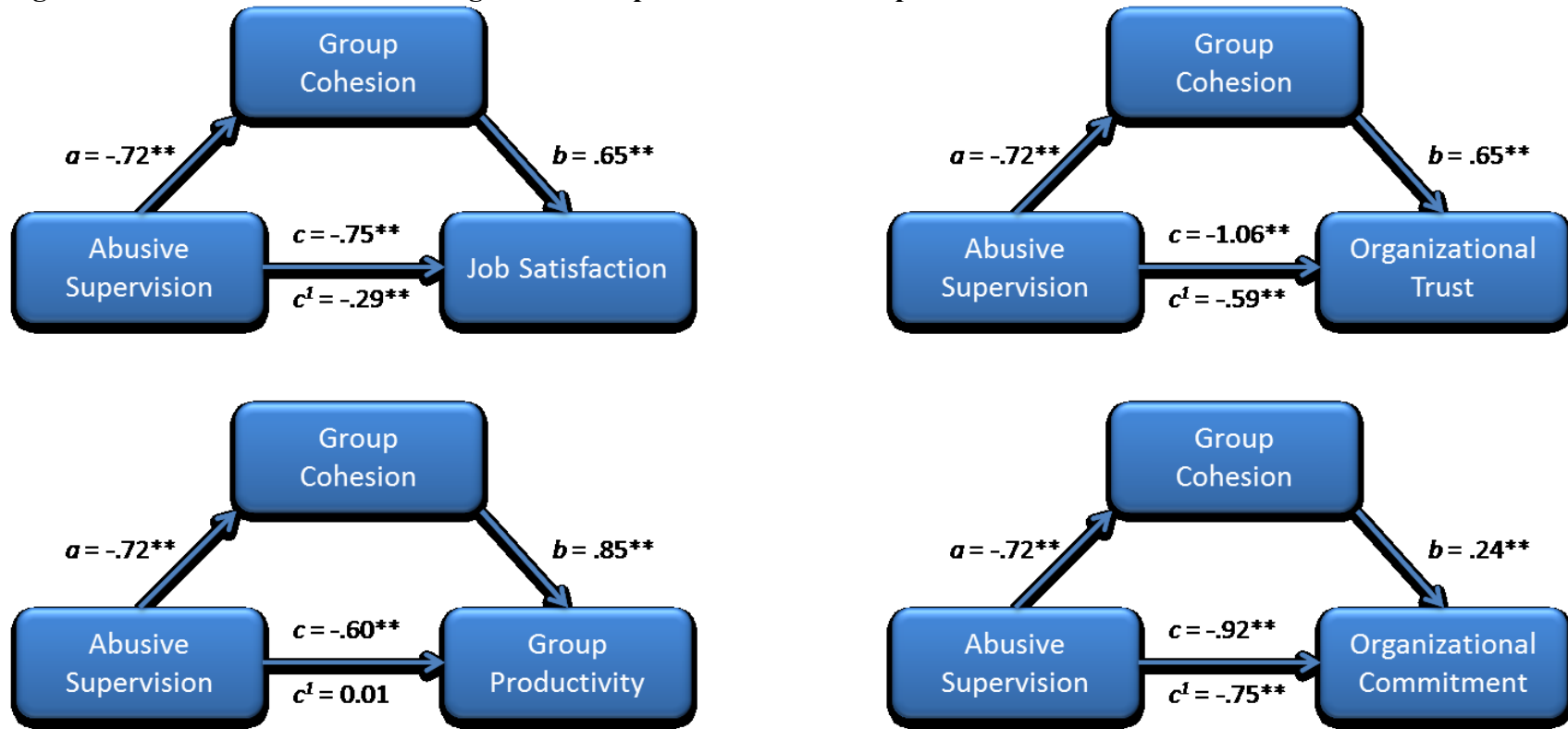
Figure 4: Results of Sobel Tests Using Self-Promotion as the Independent Variable



N = 2,541, ** $p < .01$

a = coefficient of the relationship between the independent variable (toxic leadership dimension) and the mediator (group cohesion)
 b = coefficient of the relationship between the mediator and dependent variable (job outcome)
 c = coefficient of the relationship between the IV and DV without the mediator
 c^I = coefficient of the relationship between the IV and DV when the mediator is included

Figure 5: Results of Sobel Tests Using Abusive Supervision as the Independent Variable



N = 2,541, ** $p < .01$

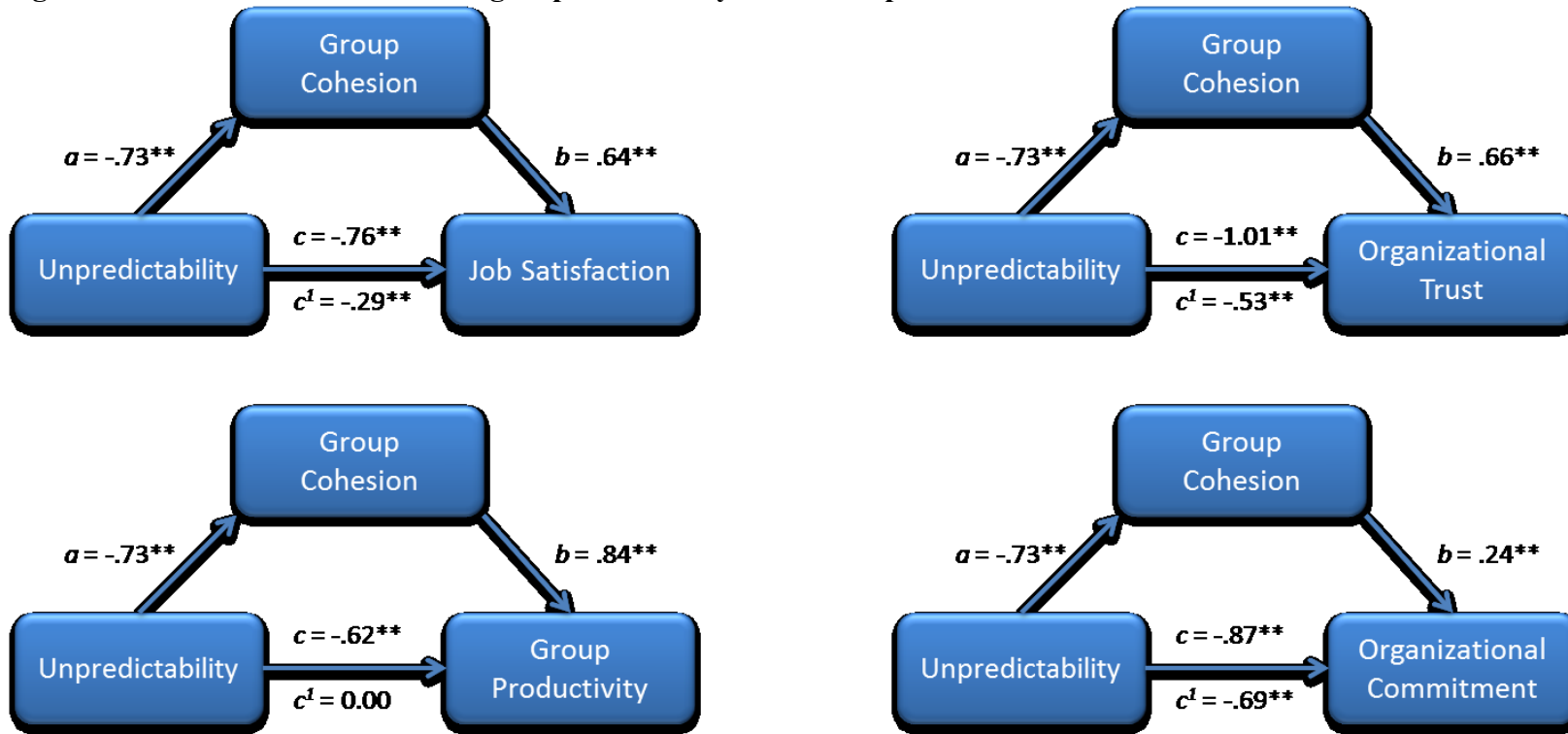
a = coefficient of the relationship between the independent variable (toxic leadership dimension) and the mediator (group cohesion)

b = coefficient of the relationship between the mediator and dependent variable (job outcome)

c = coefficient of the relationship between the IV and DV without the mediator

c' = coefficient of the relationship between the IV and DV when the mediator is included

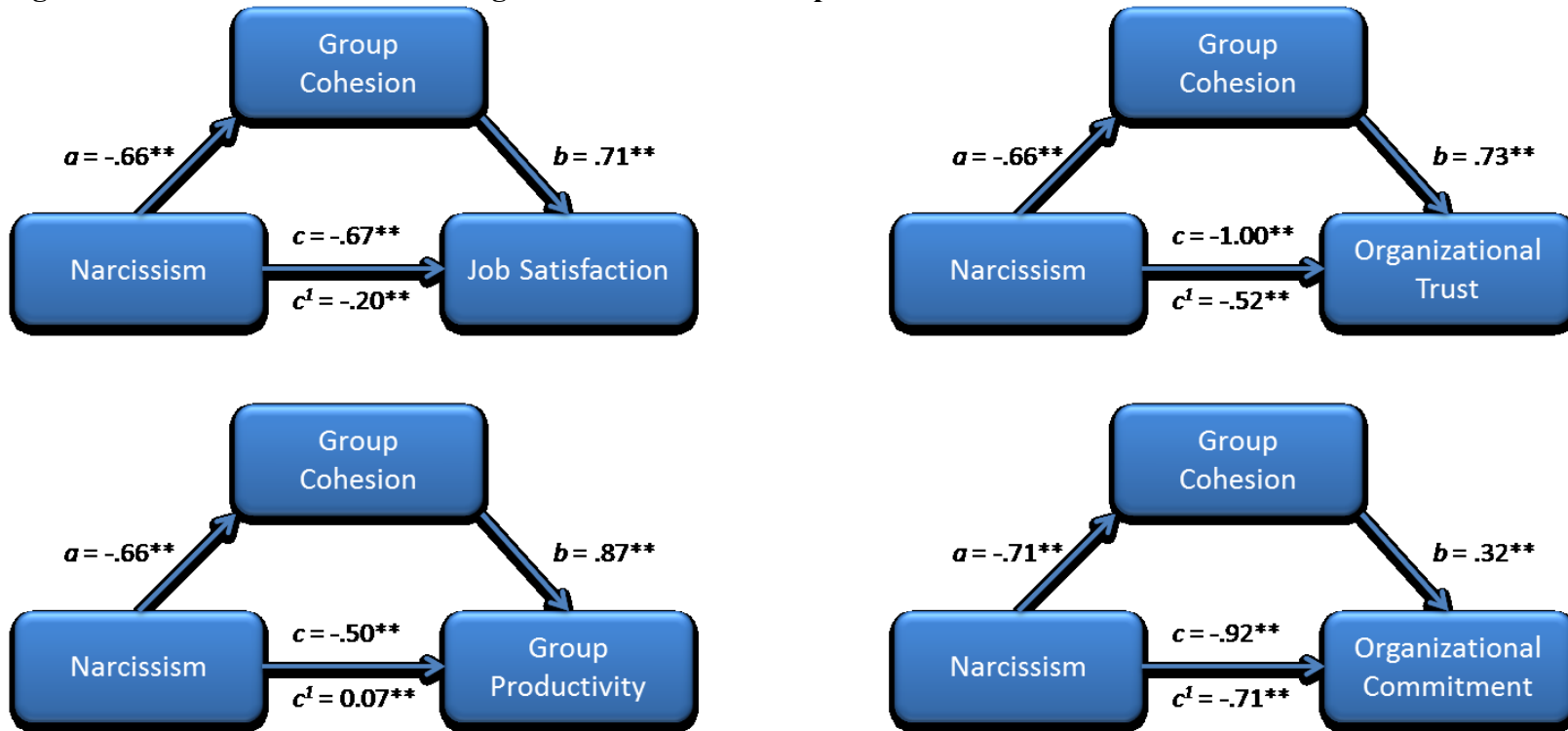
Figure 6: Results of Sobel Tests Using Unpredictability as the Independent Variable



N = 2,541, ** $p < .01$

a = coefficient of the relationship between the independent variable (toxic leadership dimension) and the mediator (group cohesion)
 b = coefficient of the relationship between the mediator and dependent variable (job outcome)
 c = coefficient of the relationship between the IV and DV without the mediator
 c' = coefficient of the relationship between the IV and DV when the mediator is included

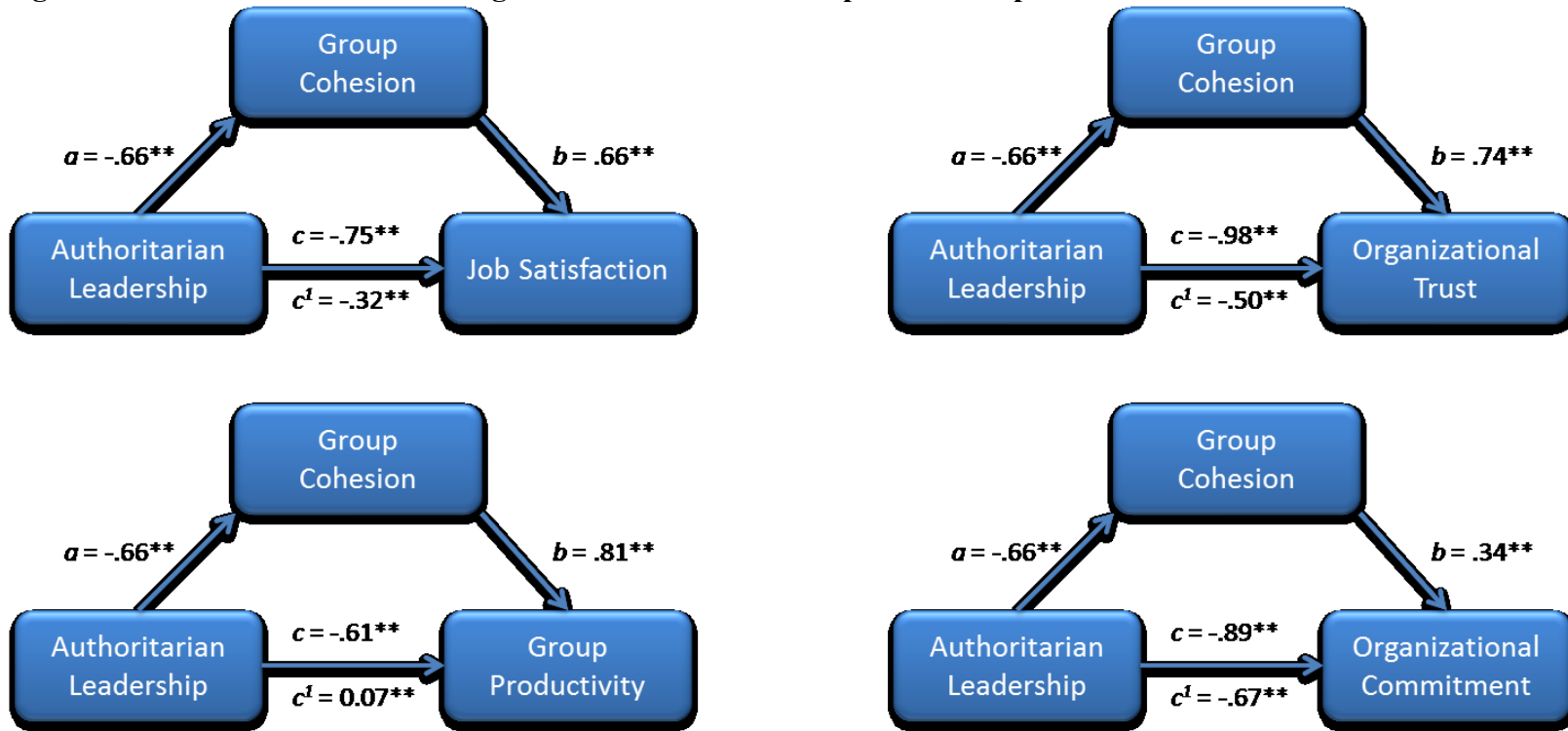
Figure 7: Results of Sobel Tests Using Narcissism as the Independent Variable



N = 2,541, $** p < .01$

a = coefficient of the relationship between the independent variable (toxic leadership dimension) and the mediator (group cohesion)
 b = coefficient of the relationship between the mediator and dependent variable (job outcome)
 c = coefficient of the relationship between the IV and DV without the mediator
 c' = coefficient of the relationship between the IV and DV when the mediator is included

Figure 8: Results of Sobel Tests Using Authoritarian Leadership as the Independent Variable



N = 2,541, ** $p < .01$

a = coefficient of the relationship between the independent variable (toxic leadership dimension) and the mediator (group cohesion)
 b = coefficient of the relationship between the mediator and dependent variable (job outcome)
 c = coefficient of the relationship between the IV and DV without the mediator
 c' = coefficient of the relationship between the IV and DV when the mediator is included

Appendix A: Scales and Measures

This section lists the scale items included in the proposed investigation. All items were rated on a 5-point Likert scale response format, with answers ranging between 1 = “Strongly Disagree” to 5 = “Strongly Agree.”

Shortened Version of the Schmidt (2008) Toxic Leadership Scale

All items begin with the phrase “My current supervisor...”

Self-Promotion ($\alpha = .85$):

1. Drastically changes his/her demeanor when his/her supervisor is present
2. Will only offer assistance to people who can help him/her get ahead
3. Accepts credit for successes that do not belong to him/her

Abusive Supervision ($\alpha = .79$):

4. Holds subordinates responsible for things outside their job descriptions
5. Publicly belittles subordinates
6. Reminds subordinates of their past mistakes and failures

Unpredictability ($\alpha = .85$):

7. Allows his/her current mood to define the climate of the workplace
8. Expresses anger at subordinates for unknown reasons
9. Varies in his/her degree of approachability

Narcissism ($\alpha = .81$):

10. Has a sense of personal entitlement
11. Thinks that he/she is more capable than others
12. Believes that he/she is an extraordinary person

Authoritarian Leadership ($\alpha = .84$):

13. Controls how subordinates complete their tasks
14. Does not permit subordinates to approach goals in new ways
15. Determines all decisions in the unit whether they are important or not

Scales for Mediator and Outcome Variables

Work Group Cohesion ($\alpha = .92$):

1. My work group works well together as a team
2. Members of my work group pull together to get the job done
3. Members of my work group really care about each other
4. Members of my work group trust each other

Organizational Commitment ($\alpha = .84$):

1. I find that my values and the organization's values are very similar
2. I am proud to tell others that I am part of this organization
3. There is not too much to be gained by sticking with this organization until retirement (assuming I could do so if I wanted to) (reverse-coded)
4. Often, I find it difficult to agree with the policies of this organization on important matters relating to its people (reverse-coded)
5. Becoming a part of this organization was definitely not in my best interests (reverse-coded)

Organizational Trust ($\alpha = .87$):

1. The values of this organization reflect the values of its members
2. This organization is loyal to its members
3. This organization is proud of its people

Work Group Productivity ($\alpha = .90$):

1. The amount of output of my work group is very high
2. The quality of output of my work group is very high
3. When high-priority work arises, such as short deadlines, crash programs, and schedule changes, the people in my work group do an outstanding job in handling these situations
4. My work group's performance in comparison to similar work groups is very high

Job Satisfaction ($\alpha = .86$):

All items begin with the question "How satisfied are you with:"

1. The chance to help people and improve their welfare through the performance of my job
2. My amount of effort compared to the effort of my co-workers
3. The recognition and pride my family has in the work I do
4. The chance to acquire valuable skills in my job that prepares me to future opportunities
5. My job as a whole

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