RESEARCH

Measuring the Relationship Between Leadership Styles and Destructive Leadership Behaviors Among Air Force Students Attending Army Command and General Staff College

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ABSTRACT

Background: The Air Force uses the full range of leadership model (transformational, transactional, and passive-avoidant leadership) to develop leaders. However, there has been less research at how the leadership styles in the full range of leadership model are related to destructive leadership behavior, evidenced by adverse administrative actions.

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Objective: Conduct a pilot study using the Multifactor Leadership Questionnaire and Destrudo-L in tandem, within a smaller population of Air Force Professional Military Education students, to determine if, and to what degree, a relationship existed between leadership styles and destructive leadership behaviors.
Methods: The MLQ-5X and Destrudo-L research instruments were used to collect data from a population sample of the Air Force field grade officers attending professional military education (n = 22). The MLQ-5X measured leadership styles, and the Destrudo-L measured destructive leadership behaviors.
Results: Linear regressions measured the relationships between leadership styles and destructive leadership behavior and all regressions found $p \leq 0.005$. Transformational leadership behaviors were negatively related to both passive ($B = -1.36$) and active ($B = -0.86$) destructive leadership behaviors. Transactional leadership behaviors were also negatively related to both passive ($B = -1.3$) and active ($B = -0.83$) destructive leadership behaviors. However, passive-avoidant leadership behaviors had a positive relationship with passive ($B = 1.21$) and active ($B = 0.68$) destructive leadership behaviors.
Conclusion: This pilot study found a relationship between leadership styles and destructive leadership behavior. However, the cross-sectional design, small population within a single officer rank, setting of a competitive in-residence Professional Military Education course, limit the generalizability of the findings.

Keywords: Leadership, Transformational Leadership, Destructive Leadership, Air Force, Quantitative

Introduction[1]

In April, Kendall et al. (2023) identified in their 2024 Posture Statement to Congress that the Active Component of the United States Air Force would miss recruiting goals by 10%, and the Air Guard and Reserve components by even greater margins (Kendall et al., 2023). Since then, the Secretary of the Air Force highlighted efforts to decrease bureaucracy and loosen requirements to boost recruiting efforts (Gordon, 2023); the Chief Master Sergeant of the Air Force released six priorities to improve talent retention across the enlisted force and the former Chief of Staff of the Air Force proposed solutions to recruiting challenges during his confirmation hearing to become the next Chairman of the Joint Chiefs of Staff (Garamone, 2023). Solving the recruitment and retention problem is key to fulfilling the priority of the National Defense Strategy's priority of "Building a resilient joint force" (U.S. Department of Defense, 2022).

Leadership directly impacts successful recruitment and retention of talent and will influence the Air Force's ability to overcome these two human relations management challenges. It has been found through research that transformational leadership increases employee retention through increased levels of organizational citizenship behavior and communication (Tian et al., 2020), improved job satisfaction and lower levels of departure intentions (Gan & Voon, 2021), increased organizational performance especially during times of high competitive advantage (Yamin, 2020), and

1 A version of this article was published previously as part of a master's thesis: Ramig (2023), "The relationship among rank, transformational leadership, and destructive leadership behavior," master's thesis, Command and General Staff College, Fort Leavenworth, Kansas.

increased innovation among Generation-Z employees resulting in decreased turnover (Gabriel et al., 2022). Research also found that transformational leadership was important in attracting talent, beyond other salary and benefit compensation (Mangisa et al., 2020).

While the United States Army maintains Army Doctrine Publication (ADP) 6-22 that defines, models, and details application of leadership (U.S. Army, 2019), the United States Air Force adopted the Full-Range of Leadership Model, which includes transformational, transactional, and passive-avoidant (also referred to as Laissez-Faire) leadership styles (Arenas et al., 2018; Stafford, 2010; United States Air Force, 2022). This model was developed in the mid-1980s (Avolio & Bass, 2004) as the transformational leadership era embraced more of an intrinsic approach as it evolved from the transactional era (Benmira & Agboola, 2021; Greenwood, 1996; Horner, 1997; King, 1990; Landis et al., 2014; Van Seters & Field, 1990).

The Air Force's leadership model focuses on the effective leadership behaviors, but it does not address the destructive leadership behaviors (DLBs), also called toxic leadership. These DLBs have been shown to negatively affect the organizational environment. Research shows that toxic leadership is related to lower work productivity (Rohayati, 2022), counterproductive behavior among subordinates (Gabriel, 2016), as well as increased intentions among employees to leave (Akca, 2017), due to increased burnout and emotional exhaustion (Gravili et al., 2022).

In fact, until the 1990s, leadership theory in general focused primarily on the factors associated with effective leadership and implied that lacking such factors caused ineffective leadership (Ashforth, 1994). Between 1994 and 2007, researchers studied DLB and attempted to define and classify them independently (Ashforth, 1994; Namie & Namie, 2000; Tepper, 2000). Einarsen et al. (2007) provided a broader definition of DLB, which became the generally accepted definition:

> "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 the motivation, well-being or job satisfaction of subordinates."

Larsson et al. (2012) consolidated the context and definition of these researchers and developed the Destrudo-L to measure both active and passive forms of DLB within a military environment.

This knowledge gap prompted the design of a pilot study to determine if relationships between leadership styles and DLB within the Air Force could be measured. Field grade officers often fill several critical squadron roles, including squadron command, director of operations, and assistant directors of operations. Majors typically impact scores of Airmen under their immediate leadership. The Air Force Element at the Command and General Staff College (CGSOC; Fort Leavenworth, Kansas) cooperated with research, and provided access to its students, composed entirely of majors, as a research population. With this population sample in mind, the following research questions and hypotheses were developed:

> Research Question 1: If and to what degree is there a relationship between transformational leadership behaviors measured by the MLQ-5X and DLB measured by the Destrudo-L, as experienced by Air Force field grade officers (FGOs) attending CGSOC?
>
> Research Question 2: If and to what degree is there a relationship between transactional leadership behaviors measured by the MLQ-5X and DLB measured by the Destrudo-L, as experienced by Air Force FGOs attending CGSOC?
>
> Research Question 3: If and to what degree is there a relationship between passive avoidant leadership

(PAL) behaviors measured by the MLQ and DLB measured by the Destrudo-L, as experienced by Air Force FGOs attending CGSOC?

Hypothesis 1 (H1): There is a negative relationship between TL behaviors, as measured by the MLQ-5X, and DLB, as measured by the Destrudo-L, experienced by Air Force FGOs attending CGSOC.

Hypothesis 2 (H2): There is a negative relationship between transactional leadership behaviors, as measured by the MLQ-5X, and DLB, as measured by the Destrudo-L, experienced by Air Force FGOs attending CGSOC.

Hypothesis 3 (H3): There is a positive relationship between PAL behaviors, as measured by the MLQ-5X, and DLB, as measured by the Destrudo-L, experienced by Air Force FGOs attending CGSOC.

Method

This pilot study used a quantitative methodology with a cross-sectional design. A research instrument composed of the MLQ-5X, and Destrudo-L asked participants to measure, on a Likert scale, a series of leadership behaviors of their most recent direct supervisor. The MLQ-5X measured the nine elements of the Full Range of Leadership, which composed transformational, transactional, and passive-avoidant leadership styles (Avolio & Bass, 2004), while the Destrudo-L (included as Appendix A), measured five elements of DLB, which composed active and passive DLB (Larsson et al., 2012). Higher scores indicated respondents experienced a higher incidence of the behavior.

This study was designed and executed in accordance with the ethical principles established in the Belmont Report and was found to be institutional-review-board-exempt by the Director of Human Protection of the Command and General Staff College.

Results

Of the 73 FGOs attending the CGSOC in residence at Fort Leavenworth, Kansas for the 2022–2023 Academic Year, the overall participation rate was 30.1% (n = 22). Respondents were asked to answer five demographic questions (race, gender, previous supervisor's rank, previous supervisor's race, and previous supervisor's gender). Participant demographics revealed 72% were white (n = 16), 18% non-white (n = 4), and 9% preferred not to answer (n = 2). In addition, 95% of the participants indicated they were male (n = 21), while 5% preferred not to answer (n = 1). Among Air Force FGOs as a whole, 80% were white, 21% were non-white, 81% were male, and 19% were female. Based on these limited demographics, the sample was not found to be representative (some factors were representative and others were not in this pilot study) of all Air Force FGOs (Military One Source, 2021a, 2021b).

PSPP is a free statistical analysis software package provided by the GNU project, and was used to first analyze descriptive statistics. The Quality Assurance Office deidentified survey responses and provided the data with Likert scale responses represented numerically. Individual question responses were consolidated into the five domain scores in Figure 1, according to instructions from the original research (Avolio & Bass, 2004; Larsson et al., 2012). The mean scores, standard deviations, and variable ranges are presented in Table 1.

PSPP was then used to run separate linear regressions between the independent variables of transformational leadership, transactional leadership, and passive avoidant leadership, and the dependent variables of active and passive DLB. The results are presented in Table 2. All linear regressions produced statistically significant results ($p \leq 0.005$).

Figure 1

Research Methodology Visualization

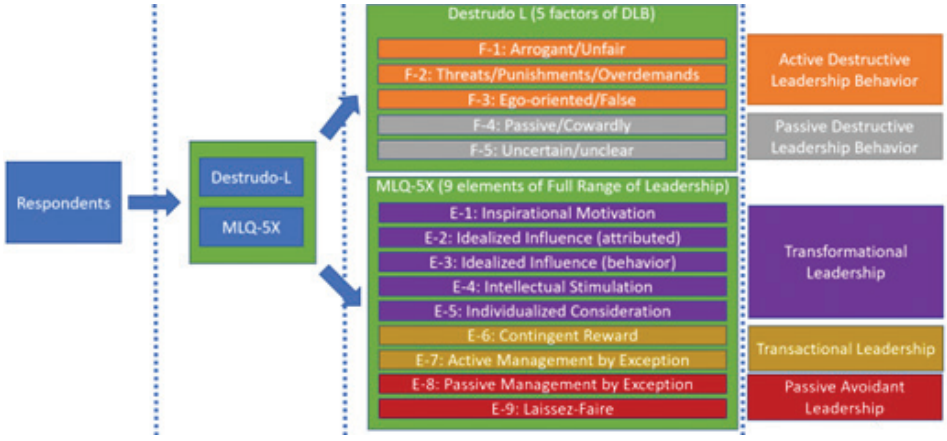

Table 1

Descriptive Statistics

Variable	*N*	Mean	Std dev	Range
Active DLB	22	1.64	0.95	3.50
Arrogant Unfair	22	1.81	1.30	5.00
Threats Punishments Overdemands	22	1.31	0.39	1.25
Ego Oriented False	22	1.82	1.34	4.50
Passive DLB	22	2.24	1.33	4.53
Passive Cowardly	22	2.35	1.42	4.80
Uncertain Unclear Messy	22	2.13	1.28	4.25
Transformational Leadership	22	2.57	0.88	3.45
Idealized Behaviors	22	2.22	0.89	3.50
Idealized Attributes	22	2.83	1.08	3.50
Inspirational Motivation	22	2.77	0.99	3.50
Intellectual Stimulation	22	2.51	0.99	3.75
Individual Consideration	22	2.55	1.00	3.50
Transactional Leadership	22	2.13	0.66	3.00
Contingent Reward	22	2.69	0.97	3.75
Active Management by Exception	22	1.56	0.77	3.00
Passive-Avoidant Leadership	22	1.12	0.97	3.13
Passive Management by Exception	22	1.23	0.94	3.25
Laissez Faire	22	1.01	1.10	3.75

Table 2

Linear Regression Tables Between Leadership Styles and Destructive Leadership Behaviors

	Unstandardized coefficients		Standardized coefficients	*t*	Sig	95% confidence interval for B	
	B	**Std Error**	**Beta**			**Lower bound**	**Upper bound**
Linear regression table between transformational leadership and active destructive leadership behavior							
(Constant)	3.86	0.39	0.00	9.82	0.000	3.04	4.68
Transformational Leadership	−0.86	0.14	-0.80	−5.94	0.000	-1.16	−0.56
Linear regression table between transformational leadership and passive destructive leadership behavior							
(Constant)	5.75	0.39	0.00	14.81	0.000	4.94	6.56
Transformational Leadership	-1.36	0.14	-0.91	-9.54	0.000	-1.66	-1.07
Linear regression table between transactional leadership and active destructive leadership behavior							
(Constant)	3.41	0.58	0.00	5.84	0.000	2.20	4.63
Transactional Leadership	-0.83	0.26	-0.58	-3.16	0.005	-1.38	-0.28
Linear regression table between transactional leadership and passive destructive leadership behavior							
(Constant)	5.00	0.77	0.00	6.51	0.000	3.40	6.60
Transactional Leadership	-1.30	0.35	-0.64	-3.75	0.001	-2.02	-0.58
Linear regression table between passive avoidant leadership and active destructive leadership behavior							
(Constant)	0.88	0.23	0.00	3.81	0.001	0.40	1.37
Passive Avoidant Leadership	0.68	0.16	0.69	4.30	0.000	0.35	1.01
Linear regression table between passive avoidant leadership and passive destructive leadership behavior							
(Constant)	0.89	0.21	0.00	4.13	0.000	0.44	1.34
Passive Avoidant Leadership	1.21	0.15	0.88	8.24	0.000	0.90	1.51

Discussion

With the cooperation of the Air Force Element at the Army Command and General Staff College, this pilot study sought to determine if relationships between leadership styles and DLB within the Air Force could be measured. H1, which predicted transformational leadership would have a negative relationship with DLB was supported by a linear regression relationship between transformational leadership and active DLB ($B = -0.86$) and passive DLB ($B = -1.36$). H2, which predicted transactional leadership would have a negative relationship with DLB was also supported by a linear regression relationship between transactional leadership, active DLB ($B = -0.83$), and passive DLB ($B = -1.30$). Lastly H3, which predicted a positive relationship between passive avoidant leadership and DLB was also supported by a linear regression relationship between passive avoidant leadership and active DLB ($B = 0.68$) and passive DLB ($B = 1.21$).

Conclusion

This pilot study found evidence of relationships between three leadership styles and two forms of DLB. However, the pilot study had a small sample size, which impacted its generalizability and quality of the data being analyzed. A low population sample does not immediately disqualify results, as Jenkins and Quintana-Ascencio (2020) found that regression provides accurate estimates when the variance is low in populations as small as $n = 8$, and Ospina and Marmoleio-Ramos (2019) identified a coefficient of variance under 1.0 as low variance. However, while this data did have a population larger than eight ($n = 22$) and all the coefficients of variance were under 0.866, this research would greatly benefit from significant expansion to provide generalizability across a larger population of the Air Force.

This pilot study used a cross-sectional design, which only collected data at one point in time from a very narrow population of Air Force officers. Furthermore, the survey asked participants to rate the leadership behaviors of their previous supervisors. While the survey was anonymous and individual protections were outlined in an informed consent document, there is still a potential for social desirability bias affecting responses. Future research utilizing a longitudinal approach across a larger and more generalizable population would better assess longer term trends of leadership behavior across the Air Force and address these limitations. The results of a longitudinal study would also provide quantitative data that could be used to determine whether leadership behaviors are related to recruitment and retention trends across different career fields or service components.

Despite these limitations, this pilot study provided initial evidence that leadership styles are related to DLB within the Air Force. As the Air Force seeks to decrease DLB, there should be a focus on how leadership styles are being developed in leaders. Future research could also impact pre-commissioning sources (Air Force Academy, Air Force Reserve Officer Training Corps, and Officer Training School), Technical Schools, and other developmental opportunities.

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Appendix A: English Adaption of the Destrudo-L

Destrudo-L Survey

Adapted to English with permission of Dr. Gerry Larsson

Directions: With regards to your previous supervisor, mark how much you agree with the following statements

	Do not agree at all					Fully agree
1. Makes subordinates feel stupid	○	○	○	○	○	○
2. Behaves arrogantly	○	○	○	○	○	○
3. Treats subordinates differently/inconsistently	○	○	○	○	○	○
4. Is unpleasant	○	○	○	○	○	○
5. Shows violent tendencies	○	○	○	○	○	○
6. Punishes subordinates for making mistakes or failing to meet goals	○	○	○	○	○	○
7. Uses threats to get his/her way	○	○	○	○	○	○
8. Has unreasonable demands	○	○	○	○	○	○
9. Takes credit for subordinates work	○	○	○	○	○	○
10. Places personal needs above the group's	○	○	○	○	○	○
11. Does not trust his/her subordinates	○	○	○	○	○	○
12. Does not keep promises/agreements	○	○	○	○	○	○
13. Is non-confrontational	○	○	○	○	○	○
14. Is absent/missing around subordinates	○	○	○	○	○	○
15. Does not display an active interest in work	○	○	○	○	○	○
16. Does not take charge of things	○	○	○	○	○	○
17. Shows insecurity in his/her role	○	○	○	○	○	○
18. Is bad at structuring/planning	○	○	○	○	○	○
19. Gives unclear instructions	○	○	○	○	○	○
20. Is often/easily confused about work	○	○	○	○	○	○