

Research Article

Alternative Resource to Unresolved Case Investigations: A Case of The Criminal Investigation Resource Center at Russell Sage College

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Abstract:

In Capital Theory. It assessed proficiency across four domains: Supervisory Oversight, Team Management, Strategic Management, and Conflict Resolution. Descriptive results indicated generally high proficiency, with Strategic Management perceived as the most complex domain. Multivariate analyses (MANOVA) revealed that leadership training and education were significant predictors of leadership proficiency, whereas gender, age, rank, and tenure were not. Univariate and post hoc analyses revealed a cumulative "staircase effect," in which officers with two or more leadership courses scored higher on Supervisory Oversight ($F = 6.41, p < .001$) and Strategic Management ($F = 4.48, p = .004$). Academic credentials alone did not differentiate leadership dimensions ($p > .05$). The findings suggest that leadership is a developable competency forged through intentional pedagogical intervention rather than seniority, underscoring the need for multi-tiered development pathways and strategic leadership curricula to enhance leadership proficiency.

Keywords: Police Leadership, Leadership Proficiency, Skill-Based Approach, Human Capital Theory, Multi-Factor Analysis Remove Police Leadership, Leadership Proficiency, Skill-Based Approach, Human Capital Theory, Multi-Factor Analysis



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Introduction

Leadership, defined as the capacity to influence, guide and inspire groups toward shared objectives¹, is a key determinant of police effectiveness. Within police organizations, leadership quality influences organizational resilience, officer conduct, decision-making, and public relations. These responsibilities have become more demanding as police organizations face greater scrutiny, changing crime patterns, technological and social change, and heightened expectations for transparency, accountability, and professionalism.² In this complex environment, leadership proficiency—the integrated application of knowledge, skills, and behaviors to achieve institutional goals³—is vital for both organizational performance and public legitimacy. Understanding how such proficiency develops is therefore essential for advancing police leadership scholarship and reform.

The development of leadership proficiency is best understood through the Skill-Based Approach.⁴ Instead of treating leadership as an inherent trait, this approach views it as a set of developable capabilities.⁵ Katz identified three broad categories of skills required for effective management: technical skills (task-specific knowledge and expertise), human skills (interpersonal effectiveness and the capacity to work with others), and conceptual skills (the ability to understand the organization and its wider environment).⁶ Subsequent studies have supported the idea that leadership can be developed, emphasizing the role of learning, experience, and continued practice.⁷ Thus, leadership proficiency can be viewed as a developmental outcome influenced by opportunities to acquire, practise and refine relevant competences, not simply an attribute of position or a personality.

This perspective is particularly relevant to policing, where leadership responsibilities require a combination of technical, human, and conceptual skills. Supervisory Oversight relies heavily on technical knowledge and operational judgement, while Team Management, Conflict Resolution and Professional Growth depend more on human and interpersonal capabilities. Strategic Management places greater demands on conceptual skills, such as the capacity to interpret complex organizational environments, set priorities, coordinate resources and align operational decisions with institutional objectives.⁸ Police leadership research similarly highlights the importance of context, decision-making and management capabilities when officers operate in complex and high-pressure environments.⁹ From this perspective, professional development enables officers to progressively enhance and integrate their leadership capabilities as their responsibilities expand.¹⁰ However, opportunities to develop and exercise leadership are also shaped by demographic and organizational structures that influence police careers.

Gender constitutes one such factor. Globally, police leadership remains predominantly male in many jurisdictions, even where formal advancement systems are merit-based.¹¹ At the same time, organizational cultures and career structures often create different promotion experiences for women and men. Female officers frequently encounter gendered expectations and workplace barriers that constrain their progression to senior ranks and strategic responsibilities.¹² Although some studies associate women with transformational or adaptive

leadership approaches,¹³ evidence of consistent gender differences in actual leadership proficiency remains inconclusive.¹⁴ Gender may therefore influence leadership opportunities and experiences without necessarily determining proficiency itself. This observation highlights the need to examine gender alongside other career and developmental factors.

Age, rank, and years of service (tenure) provide a related set of explanations, as they reflect accumulated occupational experience and progression through hierarchical structures. Differences across age groups may also correspond with different workplace and leadership preferences, such as attitudes towards participatory and hierarchical approaches.¹⁵ Traditionally, police career progression has been influenced by experience, seniority, and merit.¹⁶ Yet these indicators, particularly seniority and rank, should not automatically be equated with contemporary leadership competence. Research on police executive leadership instead points to the importance of identifiable and demonstrable leadership competencies.¹⁷ Additionally, while existing studies have examined age-related workplace preferences and the effects of ageing on police officers,¹⁸ there is less evidence establishing whether leadership proficiency develops primarily through accumulated career experience or through deliberate institutional development. This distinction shifts attention from what officers acquire through time and position to what may be developed through purposeful investment in education and training.

Human Capital Theory provides a complementary framework for examining such investment. It proposes that education and specialized skill development enhance individual capability and organizational performance.¹⁹ In policing, higher education has been linked to key attributes relevant to professional practice, including communication, critical thinking, and attitudes towards ethical or accountable policing.²⁰ Evidence that academic attainment alone translates directly into applied leadership proficiency, however, remains mixed.²¹ Leadership-specific training may offer a more direct developmental pathway by connecting knowledge with supervisory practice, decision-making, team coordination, and strategic problem-solving.²² Evidence from Kenya similarly underscores the value of systematic leadership-development training within the National Police Service, particularly as policing responsibilities and organizational demands evolve.²³ The distinction between general education and leadership-specific development therefore raises an important empirical question: is leadership proficiency more closely associated with academic credentials, accumulated career experience, or structured exposure to leadership training?

While demographic characteristics, education, career experience and training are crucial, these factors are frequently examined separately. Consequently, their combined influence on leadership proficiency remains underexplored, particularly in African policing contexts.²⁴ This gap is especially significant in Kenya, where persistent concerns about police integrity and accountability—coupled with periods of heightened public scrutiny and social and political unrest—have intensified demands for competent, ethical, and strategically capable police leadership.²⁵ Examining demographic and professional factors simultaneously therefore provides a clearer basis for determining whether perceived leadership proficiency is driven more by

personal characteristics and positional experience or by deliberate human-capital investment like formal education and targeted leadership training.

To address this gap, the present study focused on two key questions:

1. What is the level of leadership proficiency among police officers across the dimensions of Supervisory Oversight, Team Management, Strategic Management, and Conflict Resolution and Professional Growth?
2. To what extent does leadership proficiency differ according to demographic factors (gender and age) and professional characteristics (rank, years of service, education, and leadership training exposure)?

Methods

Research Design and Participants

This study employed a quantitative cross-sectional survey design, as it is appropriate for examining group differences and relationships among multiple variables at a single point in time.²⁶ The target population consisted of Kenyan police officers across the three management tiers: senior (Gazetted Officers [GO]: Assistant Superintendents of Police and above), middle (Members of the Inspectorate: Chief Inspectors and Inspectors), and lower (Non-Commissioned Officers [NCOs]: Senior Sergeants, Sergeants, and Corporals). A stratified sample of 395 was calculated using Yamane's (1967) formula and proportionately allocated across the tiers. Of the 395 sampled officers, 389 returned usable questionnaires, representing a response rate of 98.5 percent.

Instrument and Measures

Primary data were collected using an online questionnaire developed for the study from the theoretical framework and themes identified in the reviewed literature. The questionnaire had two key sections. Section A gathered information on two demographic variables (gender and age group) and five professional attributes: rank, years of service, highest level of education, highest leadership course attended, and number of leadership courses completed. Sixteen respondents did not report the number of leadership courses completed. Thus, analyses involving course count used 373 valid responses, with missing values left un-imputed.

Section B evaluated self-reported leadership proficiency across four dimensions: Supervisory Oversight, Team Management, Strategic Management, and Conflict Resolution and Professional Growth. Each domain comprised seven behavior-based items reflecting routine leadership practices in police supervision, coordination, decision-making, and professional development. Responses were recorded on a five-point Likert scale ranging from 1 (*Never*) to 5 (*Always*). For each domain, a subscale score was calculated as the mean of its seven constituent items, with higher scores indicating more frequent self-reported engagement in the leadership behaviours measured and, consequently, higher perceived proficiency within that domain.

The four continuous domain scores constituted the dependent variables. Seven categorical variables were specified as fixed factors: gender, age group, rank, years of service, highest level of education attained, highest leadership course attended, and number of leadership courses completed. Content validity, particularly the relevance and clarity of questionnaire items, was assessed through review by experienced police trainers and practitioners. Internal consistency coefficients for all four subscales met or exceeded the 0.70 criterion, supporting their use as composite measures in the subsequent analyses.

Data Collection and Ethics

Participation was voluntary, and respondents were informed of the purpose of the study before completing the questionnaire. Anonymity and confidentiality were maintained throughout data collection and analysis. The collected data were securely stored and treated as confidential. Formal institutional permission to conduct the study was obtained from the relevant police leadership before data collection commenced.

Data Analysis

Data were analyzed using SPSS. Means (M) and standard deviations (SD) were calculated to describe self-reported proficiency across the four leadership domains. A main-effects multivariate analysis of variance (MANOVA) was then used to determine whether the combined leadership-proficiency profile differed across the demographic and professional factors. MANOVA was appropriate because the analysis involved multiple related continuous dependent variables examined simultaneously across categorical factors.²⁷

Assumptions underlying MANOVA—including multivariate normality, homogeneity of variance-covariance matrices, independence of observations, and moderate intercorrelations among dependent variables—were assessed before conducting inferential analysis and found to be satisfied. Given the unequal group sizes, Pillai's Trace was used as the multivariate test statistic because of its relative robustness to departures from MANOVA assumptions.²⁸ Statistical significance was set at $p < .05$, and partial eta squared (ηp^2) was reported as the measure of effect size.

Where a significant multivariate result was identified, follow-up univariate analyses of variance (ANOVAs) were conducted for each leadership domain to identify the outcomes contributing to the overall multivariate difference.²⁹ For factors producing statistically significant univariate differences, Tukey's honestly significant difference (HSD) procedure was used for post hoc pairwise comparisons to determine which group means differed significantly.³⁰

Results

Descriptive Findings

The 389 officers who responded to the survey reported generally high levels of leadership proficiency across the four domains (Table 1). Team Management recorded the highest overall

mean ($M = 4.49$, $SD = 0.52$), followed by Conflict Resolution and Professional Growth ($M = 4.39$, $SD = 0.53$) and Supervisory Oversight ($M = 4.34$, $SD = 0.60$). Strategic Management had the lowest mean and greatest dispersion ($M = 4.28$, $SD = 0.64$), indicating comparatively greater variation in respondents' assessments of their strategic leadership behaviours.

Descriptive differences were evident across age, rank, and years of service, although patterns varied across leadership domains. Officers aged 40–59 reported higher mean scores than younger officers, while overestimates for those aged 60 years and above ($n = 3$) require caution. Across rank, NCOs had lower means ($M = 4.11$ – 4.36) than members of the Inspectorate ($M = 4.29$ – 4.51) and GOs ($M = 4.28$ – 4.50). A similar pattern emerged for tenure, with longer-serving officers reporting higher scores than those with shorter service; however, the subgroup with under five years of service was small ($n = 4$). These patterns were subsequently examined through multivariate analysis to determine whether the observed differences were statistically significant.

Leadership proficiency also varied descriptively across educational categories, but no consistent gradient emerged with higher attainment. Officers with Bachelor's degrees recorded high means, particularly in Supervisory Oversight ($M = 4.41$) and Team Management ($M = 4.55$), whereas postgraduate qualifications were not consistently associated with higher scores. The primary-education subgroup was small ($n = 3$), limiting meaningful interpretation of its high mean. As a result, inferential testing was required to determine whether educational attainment significantly differentiated leadership proficiency.

More pronounced descriptive variation emerged across leadership-training categories. Officers without a leadership course had lower means and greater variability ($M = 3.94$ – 4.29 , $SD = 1.08$ – 1.26), whereas those who had completed Strategic Leadership recorded the highest means across all four domains ($M = 4.55$ – 4.69). Notably, course count showed a consistent stepwise progression or staircase pattern, with mean scores increasing from zero courses to three or more courses in Supervisory Oversight ($M = 4.17$ – 4.55), Team Management ($M = 4.33$ – 4.62), Strategic Management ($M = 3.90$ – 4.25), and Conflict Resolution and Professional Growth ($M = 4.20$ – 4.50). This descriptive trend suggests that, subject to inferential testing, greater cumulative exposure to leadership training was associated with progressively higher self-reported leadership proficiency.

Gender differences were minimal across the four domains. Female and male officers had comparable scores, with domain means ranging from 4.14 to 4.40 for females and 4.30 to 4.51 for males, indicating relatively similar leadership perceptions across groups. Officers who did not disclose their gender ($n = 7$) had slightly higher scores, particularly in Team Management ($M = 4.63$, $SD = 0.36$). However, this subgroup was too small to support meaningful interpretation.

Table 1: Means and Standard Deviations for Leadership Proficiency Subscales by Demographic and Professional Factors

Factor	Category	n	Supervisory Oversight (<i>M</i> (<i>SD</i>))	Team Mgt. (<i>M</i> (<i>SD</i>))	Strategic Mgt. (<i>M</i> (<i>SD</i>))	Conflict Resolution & Professional Growth (<i>M</i> (<i>SD</i>))
Gender	Female	64	4.21 (0.86)	4.40 (0.74)	4.14 (0.83)	4.23 (0.74)
	Male	318	4.37 (0.53)	4.51 (0.47)	4.30 (0.59)	4.42 (0.48)
	Declined	7	4.35 (0.40)	4.63 (0.36)	4.33 (0.75)	4.65 (0.22)
Age (Years)	20–29	15	4.10 (0.87)	4.19 (0.81)	3.52 (0.83)	4.00 (0.80)
	30–39	98	4.27 (0.82)	4.39 (0.71)	4.24 (0.76)	4.37 (0.72)
	40–49	194	4.35 (0.56)	4.49 (0.47)	4.26 (0.59)	4.39 (0.46)
	50–59	79	4.40 (0.46)	4.58 (0.43)	4.37 (0.64)	4.42 (0.53)
	60+	3	3.86 (0.20)	4.36 (0.10)	4.00 (0.24)	4.21 (0.10)
Rank	NCO	212	4.11 (0.80)	4.36 (0.57)	4.19 (0.74)	4.27 (0.60)
	Inspectorate	131	4.37 (0.57)	4.51 (0.51)	4.29 (0.64)	4.41 (0.54)
	GO	46	4.38 (0.50)	4.50 (0.51)	4.28 (0.57)	4.39 (0.46)
Years of Service (Tenure)	<5	4	3.14 (2.18)	3.50 (2.34)	3.23 (2.23)	3.39 (2.28)
	5–10	16	4.20 (0.89)	4.35 (0.69)	4.04 (0.71)	4.36 (0.62)
	11–15	61	4.29 (0.63)	4.43 (0.44)	4.20 (0.56)	4.32 (0.48)
	16–20	112	4.36 (0.53)	4.49 (0.44)	4.34 (0.51)	4.47 (0.40)
	>20	196	4.39 (0.51)	4.54 (0.47)	4.31 (0.65)	4.39 (0.52)
Education	Primary	3	4.24 (0.70)	4.90 (0.16)	4.90 (0.16)	4.86 (0.14)
	Secondary	201	4.28 (0.72)	4.46 (0.63)	4.27 (0.82)	4.33 (0.69)
	Certificate	19	4.21 (0.57)	4.48 (0.58)	4.19 (0.53)	4.52 (0.21)
	Diploma	38	4.41 (0.45)	4.47 (0.52)	4.25 (0.63)	4.26 (0.52)
	Bachelor's	98	4.41 (0.50)	4.55 (0.41)	4.35 (0.48)	4.47 (0.39)
	Postgraduate	30	4.27 (0.63)	4.39 (0.54)	4.11 (0.64)	4.31 (0.55)
Highest Course	None	107	3.94 (1.26)	4.29 (1.08)	4.05 (1.16)	4.06 (1.10)
	NCO Dev.	102	4.31 (0.62)	4.42 (0.52)	4.22 (0.66)	4.33 (0.55)
	Supervisory	120	4.36 (0.50)	4.50 (0.45)	4.27 (0.58)	4.41 (0.46)
	Senior Mgt.	39	4.30 (0.43)	4.48 (0.47)	4.30 (0.63)	4.36 (0.48)
	Strategic Ldship.	21	4.60 (0.56)	4.69 (0.45)	4.55 (0.45)	4.63 (0.35)
Course Count	0	107	4.17 (0.81)	4.33 (0.78)	3.90 (0.85)	4.20 (0.79)
	1	120	4.33 (0.79)	4.40 (0.81)	4.05 (0.83)	4.35 (0.82)
	2	111	4.42 (0.76)	4.55 (0.77)	4.18 (0.80)	4.45 (0.80)
	≥3	35	4.55 (0.70)	4.62 (0.75)	4.25 (0.78)	4.50 (0.75)
Total		389	4.34 (0.60)	4.49 (0.52)	4.28 (0.64)	4.39 (0.53)

Note. Dev. = Development; Mgt. = Management; Ldship. = Leadership

Multivariate Effects of Demographic and Professional Factors

A multivariate analysis of variance (MANOVA) was conducted to evaluate whether the observed demographic and professional differences were statistically significant across the combined leadership outcomes. The results are presented in Table 2.

Table 2: MANOVA Results for Demographic and Professional Factors on Leadership Proficiency

Factor	Pillai's Trace	F	df_{hyp}	df_{err}	p	Partial η^2
Gender	0.035	1.201	8.0	540.0	0.296	0.017
Age group	0.043	0.976	12.0	813.0	0.470	0.014
Rank	0.012	0.407	8.0	540.0	0.917	0.006
Years of Service	0.062	1.433	12.0	813.0	0.145	0.021
Education	0.128	1.803	20.0	1088.0	0.016	0.032
Highest Course	0.082	1.420	16.0	1088.0	0.124	0.020
Course Count	0.086	1.801	12.0	729.0	0.044	0.029

As presented in Table 2, education level and number of leadership courses completed were the only factors significantly associated with differences in the combined leadership proficiency outcomes. Education yielded Pillai's Trace = .128, $F(20, 1088) = 1.80$, $p = .016$, $\eta^2 = .032$, while course count yielded Pillai's Trace = .086, $F(12, 729) = 1.80$, $p = .044$, $\eta^2 = .029$. Gender, age, rank, years of service, and highest course completed were not statistically significant (all $ps > .05$). Therefore, statistically significant multivariate variance was confined to education and cumulative training exposure, necessitating follow-up univariate tests to evaluate specific domain differences.

Univariate Analyses

Follow-up univariate analyses were conducted for education and course count to identify the leadership domains contributing to their significant multivariate results. Table 3 presents the results for educational attainment.

Table 3: Univariate ANOVA Results for Educational Attainment Across Leadership Proficiency Domains

Source	Dependent Variable	df	F	p	Partial η^2
Education	Supervisory Oversight	5	0.89	.487	.018
	Team Management	5	1.16	.331	.023
	Conflict Resolution & Professional Growth	5	0.77	.574	.016
	Strategic Management	5	0.59	.705	.012

Although educational attainment was significant at the multivariate level, none of the follow-up univariate tests was statistically significant (all p s > .05). Effect sizes were small across all four domains ($\eta^2 = .012-.023$). Thus, the significant multivariate result for education appears to reflect differences in the combined profile of leadership outcomes rather than a statistically significant difference in any individual leadership domain.

Table 4 presents the univariate analyses for the number of leadership courses completed.

Table 4: Univariate ANOVA Results for Number of Leadership Courses Attended and Leadership Proficiency Dimensions

Source	Dependent Variable	<i>df</i>	<i>F</i>	<i>p</i>	Partial η^2
Course Count	Supervisory Oversight	3	6.41	.001	.073
	Team Management	3	3.13	.027	.037
	Conflict Resolution & Professional Growth	3	2.07	.104	.025
	Strategic Management	3	4.48	.004	.052

Note. Course-count analyses based on 373 valid responses; 16 respondents did not report the number of leadership courses completed.

Course count significantly differentiated Supervisory Oversight ($F = 6.41$, $p = .001$, partial $\eta^2 = .073$), Strategic Management ($F = 4.48$, $p = .004$, partial $\eta^2 = .052$), and Team Management ($F = 3.13$, $p = .027$, partial $\eta^2 = .037$). Conflict Resolution and Professional Growth did not differ significantly by course count ($F = 2.07$, $p = .104$, partial $\eta^2 = .025$). Among the significant outcomes, the largest association was observed for Supervisory Oversight, followed by Strategic Management and Team Management.

Post Hoc Comparisons

Post hoc comparisons (Table 5) revealed a progressive increase in leadership proficiency with additional leadership training. Officers with no leadership training scored the lowest across all dimensions, particularly in Strategic Management ($M = 3.90$, $SD = 0.85$). Those who had completed two or more courses showed much higher proficiency in Supervisory Oversight, Team Management, and Strategic Management. Although Conflict Resolution and Professional Growth also showed an upward trend, the differences between groups were not statistically significant, suggesting smaller training effects in this domain.

Table 5: Leadership Proficiency Subscale Means, Standard Deviations, and Tukey HSD Post Hoc Comparisons by Courses Count

Courses Attended	Supervisory Oversight (<i>M</i> (<i>SD</i>))	Team Management (<i>M</i> (<i>SD</i>))	Strategic Management (<i>M</i> (<i>SD</i>))	Conflict Res. & Prof. Growth (<i>M</i> (<i>SD</i>))
None (n =107)	4.17 (0.81) ^a	4.33 (0.78) ^a	3.90 (0.85) ^a	4.20 (0.79) ^a

One (n = 120)	4.33 (0.79) ^{ab}	4.40 (0.81) ^a	4.05 (0.83) ^{ab}	4.35 (0.82) ^{ab}
Two (n = 111)	4.42 (0.76) ^b	4.55 (0.77) ^b	4.18 (0.80) ^b	4.45 (0.80) ^b
Three (n = 35)	4.55 (0.70) ^b	4.62 (0.75) ^b	4.25 (0.78) ^b	4.50 (0.75) ^b

Note: $n = 373$; Means sharing a superscript do not differ significantly ($p < .05$, Tukey HSD).

Discussion

The study provides a differentiated account of self-reported leadership proficiency among Kenyan police officers. Although proficiency ratings were generally high across all four domains, Strategic Management recorded the lowest mean and greatest variability. Descriptive differences associated with age, rank, and tenure did not translate into statistically significant multivariate differences when the leadership domains were evaluated jointly. Education and course count were the only significant multivariate factors, although education did not significantly differentiate any individual domain. Course count, by contrast, significantly differentiated Supervisory Oversight, Team Management, and Strategic Management. This pattern aligns with the Skill-Based Approach, which conceptualizes leadership capability as developable rather than fixed.³¹ It also aligns with the view that leadership proficiency may be enhanced through learning, experience and opportunities to apply relevant capabilities.³²

A consistent staircase pattern emerged across levels of leadership-course exposure, with self-reported proficiency increasing incrementally from no leadership course to three or more courses across all four domains. Univariate tests confirmed that course-count differences were statistically significant for Supervisory Oversight, Team Management, and Strategic Management, strengthening the observed positive association between cumulative leadership-training exposure and self-reported proficiency. Post hoc comparisons further established that officers who had completed two or more courses reported significantly higher proficiency than those with no training in the domains showing significant differences. This pattern is consistent with evidence that structured leadership development can strengthen leadership-related capabilities and performance, including within police organizations.³³ Previous research conducted in Kenya has similarly associated leadership-development training within the National Police Service with improved organizational and individual performance.³⁴ Nevertheless, the present findings do not establish that additional training caused the observed differences. The cross-sectional design precludes temporal or causal inference, and officers who participate in more leadership courses may differ systematically from those receiving less training on characteristics not measured in this study.

Strategic Management needs special attention. Its lower mean and greater dispersion indicate that officers have greater variation in their self-reported strategic leadership competencies. This domain was also significantly differentiated by course count, suggesting that variation in Strategic Management capabilities was associated with cumulative training exposure. This finding is consistent with the skills-based proposition that conceptual skills become increasingly important as leadership responsibilities extend beyond direct supervision.³⁵ Prior research shows that in complex environments, police leaders must effectively interpret changing conditions, set

priorities, coordinate resources, make high-stakes decisions, and align operational tasks with broader organizational objectives.³⁶ Given that institutional learning relies on tools that help staff acquire and share knowledge,³⁷ police organizations cannot just offer more training. Instead, they must design progressive leadership programmes that systematically build strategic analysis, evidence-based decision-making, strict accountability, and change management skills.

Effect size metrics further qualify the practical implications of the findings for course count. The association was largest for Supervisory Oversight ($\eta p^2 = .073$), followed by Strategic Management ($\eta p^2 = .052$) and Team Management ($\eta p^2 = .037$). While these moderate effect sizes indicate that training exposure accounts for only a portion of the variance in self-reported proficiency, their occurrence alongside non-significant multivariate results for rank and tenure provided a vital insight: advancement in rank and years of service alone cannot substitute for structured leadership development.³⁸ Policing research supports that police leaders must actively develop and demonstrate competencies relevant to their increasingly complex roles.³⁹ This interpretation is crucial for promotion and leadership development because longer experience can provide valuable institutional knowledge but cannot guarantee that an officer has mustered all competencies required for higher-level leadership or command.

Human Capital Theory provides a useful lens for distinguishing the education and leadership-training findings. Education significantly differentiated the four proficiency domains only when they were considered jointly. In contrast, course count was associated with specific supervisory, team-management, and strategic outcomes. This contrast suggests that these two pathways serve complementary rather than interchangeable developmental roles. While formal education may cultivate broader analytical, ethical and conceptual capabilities, practice-oriented leadership programmes can offer targeted opportunities to develop supervision, decision-making, coordination and strategic problem-solving.⁴⁰ This distinction is consistent with the core tenets of Human Capital Theory, which states that different forms of investment in knowledge and skills can enhance the overall productivity of an individual.⁴¹ In police settings, leadership education and structured development may therefore be most useful when formal knowledge is connected deliberately to the practical demands of leadership roles.⁴²

The relationship between educational attainment and leadership proficiency requires nuanced interpretation. Officers with Bachelor's degrees recorded high means in several domains, while postgraduate qualifications were not consistently associated with higher scores. However, none of these domain-level differences was statistically significant. The findings therefore do not support the conclusion that a Bachelor's degree is more strongly associated with leadership proficiency than postgraduate education. Instead, academic credentials alone proved insufficient to differentiate applied leadership competencies in this sample. While prior research has associated higher education with positive professional attributes, this does not guarantee that academic attainment automatically translates into applied leadership capability.⁴³ From a skills-based perspective, conceptual knowledge may become more relevant to leadership practice when it is integrated with contextualized learning, practical feedback and deliberate

opportunities to exercise leadership in operational settings.⁴⁴ Research on police leadership education similarly underscores this need to connect formal learning with perceived competence and real-world demands of command roles.⁴⁵

The non-significant findings for gender, age, rank, and years of service also require careful interpretation. These findings do not imply that these characteristics are universally unrelated to leadership. Instead, they indicate that these factors did not significantly differentiate the combined self-reported leadership outcomes within this sample. The gender result is particularly important because previous research has documented gendered career structures and barriers within policing while also showing that evidence concerning gender and leadership characteristics is complex.⁴⁶ The present findings therefore distinguish access to leadership opportunities from perceived proficiency. Demographic and organizational structures may heavily influence who gets promoted or obtains leadership experience. However, they do not automatically indicate an officer's self-reported leadership capability.

Similarly, the absence of significant multivariate differences by rank and tenure suggests that seniority and positional advancement should not, on their own, be treated as proxies for leadership readiness. While Kenyan research has identified experience, promotion criteria and institutional processes as important features of police career progression, competency-oriented research emphasizes the specific capabilities required to perform leadership roles effectively.⁴⁷ The present findings reinforce this distinction by showing that rank and years of service do not independently differentiate the combined proficiency profile once the factors considered in this study are considered jointly. This finding supports the need for greater attention to demonstrated leadership competencies alongside conventional indicators of career progression.

Leadership development should therefore be understood as a continuing process rather than an outcome automatically conferred by rank, tenure or academic qualification. Evidence from police leadership research highlights the value of deliberate development, contextualized learning and opportunities to translate knowledge into leadership practice.⁴⁸ For the National Police Service, the present findings point to the critical need for progressive leadership-development pathways that build capabilities across career stages. Specifically, programmes must emphasize increasing strategic and conceptual competencies as officers move into higher commands. This progressive framework reflects the observed association between cumulative training exposure and proficiency, without making the unsupported inference that training alone caused the differences observed in this study.

Several limitations qualify these interpretations. First, the cross-sectional design establishes associations rather than causal effects. Second, leadership proficiency was measured through self-report and may therefore reflect differences in self-perception rather than actual behaviour. Third, some demographic categories were very small—particularly the oldest age group and officers who did not disclose gender—which limit the stability of comparisons involving those groups. Fourth, while the study measured the number and highest level of leadership courses completed, it did not independently assess programme quality, duration, curriculum,

instructional method or the organizational conditions affecting transfer of learning. As such, future research should employ longitudinal designs and incorporate objective behavioural indicators, supervisor or subordinate assessments, and multi-source (360-degree) feedback measures. Additionally, future research should examine how programme design, coaching, mentoring and opportunities for workplace application influence the transfer of leadership learning into observable individual, team and organizational outcomes.

Conclusion

The findings indicate that leadership proficiency among Kenyan police officers is more strongly associated with deliberate developmental exposure than with demographic characteristics, rank or length of service. Most notably, cumulative leadership-training exposure was associated with higher self-reported proficiency in Supervisory Oversight, Team Management and Strategic Management. Conversely, Strategic Management emerged as the comparatively weakest and most variable domain. These findings support a progressive, competency-based approach to police leadership development, one that strengthens leadership capabilities across career stages rather than assuming that proficiency develops automatically through seniority or positional advancement.

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