

Driving police engagement through talent management: Evidence from Abu Dhabi



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Abstract This study examines the relationship between talent management practices and employee engagement, as well as the moderating role of business analytics and the subsequent impact on employee performance within the Abu Dhabi Police. Specifically, the research explores how talent attraction, retention, learning and development, and career management influence employee engagement, which in turn affects job performance. Drawing on social exchange theory, dynamic capability theory, and Aon Hewitt's employee engagement model, a quantitative research design was employed using a structured questionnaire distributed to senior officers across various departments. A total of 383 valid responses were analyzed using partial least squares structural equation modeling (PLS-SEM) via SmartPLS 3.3.9. The findings reveal that all four dimensions of talent management (talent attraction, talent retention, learning and development, and career management) have significant positive effects on employee engagement. Furthermore, employee engagement strongly and significantly influences employee performance, underscoring its pivotal role in organizational effectiveness. The results of the moderation analysis indicate that business analytics significantly strengthens the relationships between talent attraction, learning and development, and career management and employee engagement, with learning and development and talent attraction showing the strongest moderating effects, whereas the moderating effect on talent retention is statistically insignificant. The model explains 53.8% of the variance in employee engagement, indicating satisfactory predictive power. These findings contribute to the literature by integrating business analytics into the talent management–engagement–performance nexus, particularly within a public sector policing context. Practically, the results highlight the strategic importance of leveraging data-driven and analytics-enabled HRM practices to personalize talent management interventions, enhance perceived fairness, and improve engagement outcomes. Overall, the findings demonstrate that while business analytics enhances most talent management dimensions, its influence is not uniform across all practices, particularly in the case of talent retention. This study provides actionable insights for policymakers and HR leaders seeking to build agile, high-performing, and engaged workforces in dynamic environments.

Keywords: talent attraction, talent retention, learning and development, career management, employee engagement, employee performance

1. Introduction

Talent management has emerged as a strategic and essential process for organizations aiming to recruit, develop, and retain individuals with the skills required to meet both current and future demands (Kravariti & Johnston, 2020). Across various sectors, executives and human resource (HR) managers acknowledge the existence of talent gaps within their organizations, prompting greater emphasis on aligning talent management practices with organizational growth strategies (Collings & Mellahi, 2009; Hongal & Kinange, 2020). Talent management is now recognized as a critical driver of organizational performance, necessitating the continuous identification, nurturing, and retention of employees capable of contributing to long-term success (Kwon & Jang, 2022; Sembiring & Damayanti, 2023). A well-structured talent management system cultivates a positive organizational culture and sustainable competitive advantage (Almerri, 2023). As competition intensifies, prioritizing talent management strategies becomes a necessity rather than an option for organizations seeking to achieve their strategic objectives (Hadijah, 2024). The effectiveness of these strategies relies on clear and systematic procedures, as well as leadership philosophies that shape how HR managers perceive, define, and leverage talent to optimize performance (Yildiz & Esmer, 2023).

Talent attraction constitutes a fundamental component of talent management, encompassing strategic recruitment, employer branding, and the development of appealing employee value propositions to position organizations as employers of choice (Sembiring & Damayanti, 2023; Jaswal & Bhattacharya, 2022). Attracting talent that aligns with organizational values remains challenging, especially in competitive labor markets (McDonnell et al., 2017; Kwon & Jang, 2022; Nyberg et al., 2024). Beyond attraction, talent retention is equally essential, with strategies focusing on competitive compensation, flexible work



arrangements, leadership quality, and organizational reputation (Kumar, 2022; Mabaso & Mathebula, 2025). Demographic factors such as age and career stage further influence retention, with younger employees prioritizing career growth and older employees valuing job stability (Urme, 2023; Serhan et al., 2024). Learning and development (L&D) initiatives represent another critical pillar of talent management, fostering continuous improvement through structured training and skills enhancement programs (Shan & Wang, 2024; Al-Tit et al., 2022). Career management programs also play a pivotal role by aligning employee aspirations with organizational objectives, thereby supporting both engagement and retention (Aziedjo, 2024; Yildiz et al., 2024).

Employee engagement is a key outcome of effective talent management and a critical determinant of organizational productivity and job satisfaction (Hakro et al., 2022). Defined as the psychological state reflecting employees' emotional commitment to their organization and their willingness to exert discretionary effort (Turner, 2019), engagement is fostered through well-designed retention and development practices (Urme, 2023). Engaged employees demonstrate greater motivation, initiative, and collaboration, thereby contributing significantly to organizational success (Clack, 2021). In turn, job performance (measured by task accomplishment, goal achievement, and behavioral contributions) is influenced by both individual and organizational factors, with engagement playing a mediating role between talent management and performance outcomes (Anwar & Abdullah, 2021; Muttaqin & Saputro, 2023; Abdullahi et al., 2022).

Importantly, the effectiveness of these talent management practices increasingly depends on the organization's ability to leverage data-driven insights. Business analytics enables organizations to systematically collect, process, and interpret employee-related data, thereby reducing information asymmetry between management and employees. By minimizing this asymmetry, organizations can design more transparent, evidence-based, and equitable HR practices, which enhance employees' perceptions of fairness and trust. From a signaling theory perspective, data-driven HR decisions send credible signals to employees regarding organizational support, objectivity, and fairness, thereby strengthening employee engagement and commitment.

Moreover, business analytics has emerged as a powerful tool for enhancing talent management through data-driven decision-making (Badmus et al., 2024). Techniques such as predictive modeling and statistical analysis enable organizations to optimize talent strategies and improve operational performance (Niu et al., 2021; Lee et al., 2022). Beyond efficiency, analytics allows for the personalization of HR practices, such as by tailoring career development paths, training programs, and reward systems to individual employee needs and performance profiles. This personalization not only increases the effectiveness of HR interventions but also reduces perceptions of bias and inconsistency, which are often associated with traditional, standardized HR approaches.

Within this broader context, the Abu Dhabi Police represents a strategically significant public institution. As one of the most advanced law enforcement agencies globally, it plays a central role in the rapid development and urbanization of the UAE (Mazrouei, 2022). An organization's ability to attract, retain, and develop high-caliber talent is crucial for maintaining public safety and operational excellence (Zaitoun & Taib, 2024). Through the integration of modern technologies and business analytics, the Abu Dhabi Police continues to evolve its workforce strategies to meet emerging challenges (Sebire et al., 2025). However, the force faces pressing demographic and organizational challenges. The imminent retirement of a substantial portion of senior officers threatens to create a generational gap, potentially resulting in the loss of institutional knowledge, leadership, and experience (Alkaabi & Maghelal, 2023; Saifan, 2025). Such knowledge drain could significantly undermine an organization's ability to address future security challenges (Bennell et al., 2022). Consequently, strategic talent management frameworks that ensure workforce sustainability and operational continuity are urgently needed (Darko et al., 2024).

Current HRM approaches within the Abu Dhabi Police have been criticized for being overly traditional and having a process-oriented focus, having insufficient emphasis on local talent development, and lacking strategic integration with organizational goals (Segovia, 2024). Several challenges persist, including inadequate training, insufficient competencies, limited knowledge management systems, and the absence of structured frameworks to identify and address skills gaps (Al-Shamsi & Ahmad, 2024; Bennell et al., 2022). The retention of experienced officers and the development of future leaders are hindered by the lack of long-term workforce planning (Modise, 2023). Moreover, an overemphasis on general education rather than targeted talent strategies has resulted in underutilized human capital and reduced organizational agility (Segovia, 2024; Warganegara & Adam, 2023). Structural and cultural barriers further constrain the implementation of effective HRM and talent management practices (Wilson et al., 2023).

Theoretically, this study is grounded in dynamic capability theory (Teece et al., 1997), which posits that organizational performance is enhanced through the development of adaptive capabilities in changing environments. HRM practices, particularly talent management strategies, play a crucial role in the development of these capabilities (McDonnell et al., 2017; Harsch & Festing, 2020). In this context, business analytics can be conceptualized as a critical dynamic capability that enables organizations to sense workforce-related challenges, seize opportunities through data-driven decision-making, and reconfigure HR practices accordingly. By leveraging analytics, organizations can continuously adapt their talent management strategies on the basis of real-time insights, thereby improving alignment between employee needs and organizational objectives.

The integration of business analytics into talent management provides additional strategic value by enabling data-driven identification of skill gaps, monitoring engagement, and tailoring development strategies to evolving operational demands

(Pala, 2024). In this context, business analytics is conceptualized as a moderating factor that strengthens the link between talent management practices and employee engagement (Schaufeli, 2012; Niu et al., 2021; Kaewnaknaew et al., 2022). Thus, business analytics not only enhances the effectiveness of HR practices but also validates the application of dynamic capability theory by demonstrating how data-driven capabilities enable organizations to respond more effectively to internal and external changes. By leveraging analytics to personalize career development, the Abu Dhabi Police can enhance motivation, engagement, and performance outcomes.

This research addresses these critical gaps by evaluating the influence of talent management practices on employee engagement and examining the moderating role of business analytics within the Abu Dhabi Police. Specifically, it investigates how talent attraction, talent retention, learning and development, and career management influence employee engagement; how business analytics moderate these relationships; and how engagement subsequently impacts employee performance. This research has three primary objectives: (1) to examine the effects of talent management practices (talent attraction, talent retention, learning and development, and career management) on employee engagement within the Abu Dhabi Police; (2) to evaluate the moderating effect of business analytics on the relationship between talent management practices and employee engagement; and (3) to assess the relationship between employee engagement and employee performance. By addressing these objectives, this study contributes to both theory and practice, offering insights into how data-driven talent strategies can strengthen employee engagement and performance within a mission-critical public security organization.

2. Literature Review

2.1. Talent Management Practices

Talent management has emerged as a pivotal strategic priority within contemporary human resource management (Kravariti & Johnston, 2020), particularly as organizations navigate the dual pressures of globalization and digital transformation. Beyond traditional recruitment and retention functions, talent management embodies an integrated and systematic approach to attracting, developing, engaging, and retaining individuals capable of driving organizational success (Urme, 2023). Within law enforcement institutions such as the Abu Dhabi Police, effective talent management is not merely an administrative necessity; it is a critical determinant of operational excellence, institutional resilience, and public trust (Al-Dhaafri & Alosani, 2022). The increasingly complex nature of policing, which requires advanced technological skills, strategic decision-making abilities, and adaptability, underscores the need for robust talent management systems that align individual capabilities with institutional objectives.

Talent management can be understood as a strategically planned and systematic process aimed at identifying, attracting, developing, retaining, and deploying individuals with high potential who are essential for meeting current and future organizational needs (Collings et al., 2019; Hongal & Kinange, 2020). It encompasses several interconnected practices, including talent attraction, retention, learning and development, and career management (Urme, 2023). Together, these practices create a coherent framework through which organizations can sustain their competitive advantage, enhance employee engagement, and ensure the continuous development of their workforce. For public sector organizations such as the Abu Dhabi Police, these practices are particularly critical given their direct impact on service delivery, operational readiness, and national security outcomes.

Talent attraction focuses on identifying, engaging, and recruiting individuals whose skills, values, and aspirations align with the organization's strategic goals (Yildiz & Esmer, 2023). Rather than simply filling vacancies, talent attraction involves positioning the organization as an employer of choice through employer branding, value propositions, and competitive incentives (Sembiring & Damayanti, 2023). Public institutions such as police forces face unique challenges in attracting talent capable of operating in high-stakes, accountability-driven environments (Hongal & Kinange, 2020). Employer branding has become a central mechanism for shaping external perceptions, ensuring cultural alignment, and attracting candidates who share the institution's mission (Itam et al., 2020). Furthermore, the integration of analytics and digital tools has transformed recruitment strategies, allowing organizations to use predictive algorithms to identify potential high performers, personalize candidate experiences, and optimize selection processes (Pala, 2024). In Abu Dhabi Police, effective talent attraction involves not only competitive compensation but also aligning recruitment strategies with modernization and workforce diversification goals (Sousa et al., 2023).

Talent retention refers to an organization's ability to retain high-performing and skilled employees over time, ensuring workforce stability and continuity (Urme, 2023). In policing contexts, where institutional knowledge, leadership continuity, and public trust are critical, talent retention becomes a strategic imperative. High turnover incurs significant costs not only financially but also through the loss of expertise, reduced morale, and service disruptions (Ndatshe et al., 2024). Effective retention strategies address both extrinsic factors (e.g., compensation and promotion opportunities) and intrinsic factors (e.g., meaningful work, psychological safety, and inclusion) (Aman-Ullah et al., 2022; Walker, 2024). Leadership development and succession planning constitute integral components of retention, as employees are more likely to remain in organizations that recognize their long-term potential and provide structured pathways for growth (Urme, 2023). Within Abu Dhabi Police,

embedding retention strategies within broader organizational development efforts is critical for building a loyal, engaged, and high-performing workforce capable of sustaining operational excellence in a rapidly changing environment.

Learning and development (L&D) represents another strategic pillar of talent management, emphasizing continuous learning, capability building, and adaptability to changing organizational contexts (McDonnell et al., 2017; Charokar & Dulloo, 2022; Shan & Wang, 2024). Rather than focusing solely on short-term technical training, L&D encompasses broader competencies such as leadership, communication, and strategic thinking, which are essential for navigating modern complexities (Day et al., 2021). Effective L&D programs enhance organizational agility by equipping employees with skills for both current roles and future opportunities (Milani et al., 2023). They also contribute to leadership pipeline development and succession planning, which is particularly relevant for mission-critical institutions such as police forces, where leadership effectiveness directly affects public trust and operational outcomes (Sousa et al., 2023; Eisenberg & Lee, 2020). Integrating L&D into organizational strategy ensures alignment between individual development and institutional goals, thus maximizing the return on investment and fostering a culture of continuous improvement (Mustafa & Lleshi, 2024; Shan & Wang, 2024).

Career management serves as the bridge between individual aspirations and organizational human resource strategies (Yildiz et al., 2024). It involves structured processes (such as mentoring, job rotation, career counseling, and promotion pathways) that enable employees to map their career trajectories in alignment with institutional needs (Aziedjo, 2024). Effective career management significantly enhances engagement by demonstrating organizational commitment to employee development, thereby fostering trust and loyalty (Nadeem et al., 2019). In contemporary public service contexts, including policing, career management must also address generational shifts and evolving workforce expectations, emphasizing adaptability, purposeful work, and leadership opportunities (Borg et al., 2021). Leadership support is critical, as managers who engage in coaching and developmental conversations amplify the impact of career programs (Susanto & Sawitri, 2022). For Abu Dhabi Police, integrating modern career management frameworks into its hierarchical structure can enhance engagement among younger, more dynamic segments of the workforce, ultimately strengthening institutional capability and continuity.

Collectively, these talent management practices (talent attraction, retention, learning and development, and career management) are widely recognized as central to employee engagement and organizational performance. However, despite growing theoretical and practical attention, empirical studies examining the relationship between these practices and employee engagement among Middle Eastern law enforcement agencies remain limited. Furthermore, the integration of business analytics into talent management represents an emerging strategic frontier, enabling more data-driven workforce decisions and more targeted employee engagement strategies. In the context of Abu Dhabi Police, this research examines how talent management practices shape employee engagement and, ultimately, performance outcomes. On the basis of the above discussion, the following hypotheses were developed:

H1: Talent attraction has a significant effect on employee engagement among police officers in Abu Dhabi.

H2: Talent retention has a significant effect on employee engagement among police officers in Abu Dhabi.

H3: Learning and development have a significant effect on employee engagement among police officers in Abu Dhabi.

H4: Career management has a significant effect on employee engagement among police officers in Abu Dhabi.

2.2. Employee Engagement

Employee engagement has emerged as a critical determinant of sustainable organizational performance and competitive advantage in today's rapidly evolving work environment (Schaufeli, 2012; Kerdpitak & Jermstittiparsert, 2020). Organizations are increasingly prioritizing engagement strategies to build a committed, resilient, and high-performing workforce that can adapt to shifting operational demands and strategic goals (Adriyanto, 2023). Conceptually, employee engagement refers to the psychological and emotional investment employees make in their work, characterized by enthusiasm, dedication, and absorption (Andrianto & Alsada, 2019). Unlike mere task compliance, engagement reflects a deeper connection between employees and their organization, influencing both behavioral patterns and organizational outcomes (Jabeen & Rahim, 2021). In high-demand environments such as law enforcement, engagement plays an especially critical role in ensuring that employees remain motivated, innovative, and aligned with organizational missions.

It is essential to distinguish employee engagement from related constructs such as motivation and job satisfaction (Saks et al., 2022). While motivation represents the internal drive that propels individuals toward achieving goals, engagement captures the vigor, dedication, and commitment with which employees perform their tasks (Lopez-Zafra et al., 2022; Saks, 2022). Motivation explains why employees act, whereas engagement reflects how they act through sustained energy, involvement, and persistence. Similarly, job satisfaction, which refers to an employee's level of contentment with work conditions (Kumari et al., 2022), is often mistakenly treated as equivalent to engagement. However, job satisfaction typically reflects a transactional and often short-term emotional response to workplace incentives or conditions (Chi et al., 2023). While valuable, satisfaction may lack the enduring behavioral commitment that defines true engagement. In this sense, job satisfaction represents only one facet of the broader engagement construct, and organizations aiming for sustained performance and innovation must cultivate engagement beyond satisfaction-based strategies.

Employee engagement plays a pivotal role in enhancing collaboration, adaptability, and organizational citizenship behaviors, all of which are essential for navigating complex work environments and driving strategic change (Kahn & Heaphy,

2013; Thakre & Mathew, 2020; Bah et al., 2024). Engaged employees are more willing to go beyond their formal job descriptions, contributing meaningfully to organizational objectives and supporting institutional learning and transformation. Engagement also fosters resilience, innovation, and a sense of shared purpose, qualities that are particularly important for police organizations, where operational excellence and public trust depend on the consistent commitment and professionalism of personnel.

The development of employee engagement is rooted in the reciprocal relationship between the organization and its employees. Organizations must create an environment that fosters meaningful work, trust, recognition, and opportunities for professional growth (Kahn & Heaphy, 2013; Dan, 2024). Empirical research highlights several antecedents of engagement, including trust in leadership, role clarity, autonomy in decision-making, supportive work environments, and access to learning and development opportunities (Decuyper & Schaufeli, 2020). These antecedents are closely aligned with talent management practices, suggesting that engagement is both an outcome of effective talent strategies (such as career development and succession planning) and a predictor of job performance and retention.

In addition, evolving workforce dynamics (characterized by greater emphasis on purpose-driven employment, hybrid work structures, and increasing employee autonomy) require organizations to adopt more strategic, continuous approaches to engagement (Adriyanto, 2023). This is particularly relevant in sectors such as policing, where job roles are complex, demanding, and embedded within broader societal expectations (Turner, 2019). Traditional short-term satisfaction metrics are no longer sufficient; organizations must invest in cultivating deeper, enduring forms of engagement that align individual growth with institutional excellence.

In conclusion, employee engagement is not a managerial buzzword but a multifaceted strategic construct that integrates effective, cognitive, and behavioral dimensions. Distinguishing it clearly from motivation and job satisfaction is essential for both theoretical precision and practical implementation. For organizations seeking to enhance performance, foster innovation, and retain top talent, nurturing engagement has become indispensable. In the context of law enforcement, where employee performance directly influences public trust, service quality, and operational effectiveness, engagement takes on added strategic significance. By embedding employee engagement within the broader talent management framework, institutions such as the Abu Dhabi Police can more effectively align individual aspirations with organizational missions, thereby strengthening both organizational performance outcomes and broader societal impact.

2.3. *Business Analytics as a Moderator*

The rise of business analytics has fundamentally reshaped how organizations design, implement, and evaluate human resource strategies (Chatterjee et al., 2024). In the context of talent management, business analytics (defined as the systematic analysis of workforce-related data to inform strategic decisions) has emerged as a powerful enabler of employee engagement initiatives (Kaewnaknaew et al., 2022). By transforming talent-related information into actionable insights, business analytics enables organizations to align their HR strategies more closely with both employee needs and organizational objectives (Tomar & Gaur, 2020). This capability is particularly crucial in complex, high-stakes environments such as law enforcement, where employee engagement directly influences operational effectiveness, public trust, and institutional resilience.

Business analytics encompasses a continuum of analytical techniques: descriptive analytics, which summarizes past and current patterns; predictive analytics, which forecasts future outcomes; and prescriptive analytics, which recommends optimal decisions (Liu et al., 2023). When applied to human capital data, this analytical toolkit empowers HR managers to understand workforce dynamics, anticipate engagement risks, and implement targeted interventions (Elugbaju et al., 2024). This approach is especially valuable in police organizations, where timely and precise responses to emerging workforce challenges are essential.

Within the talent management–engagement nexus, business analytics plays a critical moderating role, enhancing the strength and quality of the relationship between talent management practices and employee engagement. Traditional talent management strategies that are not guided by robust analytics risk being generic, misaligned, or insufficiently responsive to employee realities (Jibril et al., 2024). In contrast, analytics-supported strategies are data informed, tailored to specific workforce needs, and adaptive to real-time developments, thereby increasing their potential to cultivate authentic engagement. For example, in police organizations such as those in Abu Dhabi, career progression systems are often governed by rigid hierarchies and standardized procedures (Zaitoun & Taib, 2024). By leveraging analytics, these systems can be reevaluated on the basis of performance metrics, training outcomes, and engagement survey data, leading to more transparent and equitable career management practices. Such reforms reinforce perceptions of organizational justice as a critical antecedent of engagement (De-Arteaga et al., 2022) while ensuring that promotions and development opportunities are strategically aligned with both individual and organizational goals.

Similarly, business analytics allows HR leaders to evaluate the effectiveness of learning and development programs with greater precision. By identifying which training initiatives have the greatest impact on competency development and engagement, resources can be allocated more strategically to maximize developmental returns (Falletta & Combs, 2023). Furthermore, analytics facilitates the creation of continuous feedback loops that sustain engagement beyond traditional, infrequent performance appraisals. Real-time dashboards and engagement monitoring tools enable organizations to track

employee sentiments, developmental participation, and early signs of disengagement, allowing HR teams to intervene proactively (Kahn, 1990; Badmus et al., 2024). This agile, data-driven approach is particularly relevant in policing environments, where stress, workload, and operational pressure can rapidly undermine engagement if left unaddressed (Bhanumathi & Hemavathi, 2025).

Another important contribution of business analytics lies in strengthening the strategic alignment between employee engagement and broader organizational objectives. When HR teams can demonstrate, through data, that investments in talent management translate into higher levels of engagement, they enhance organizational accountability and strategic clarity (Son et al., 2020). Business analytics also functions as a catalyst for cultural transformation by promoting evidence-based decision-making, transparency, and cross-functional collaboration. While some scholars use the term “talent analytics” to describe the HR-specific subset of these tools, the broader domain of business analytics encompasses technologies that link workforce metrics to financial, operational, and strategic data (Kaewnaknaew et al., 2022). This integrative capacity is especially valuable in public sector organizations such as the Abu Dhabi Police, where justifying HR initiatives requires demonstrating their contribution to organizational effectiveness and societal outcomes.

In summary, business analytics serves as a moderating mechanism that amplifies the impact of talent management practices on employee engagement. By embedding analytics into talent processes, organizations can design more precise, responsive, and impactful engagement strategies. For law enforcement agencies such as the Abu Dhabi Police, the thoughtful application of business analytics is not merely advantageous but essential for cultivating a resilient, engaged, and high-performing workforce capable of meeting evolving security and service challenges. On the basis of the above discussion, the following hypotheses were developed:

H5: Business analytics positively moderate the relationship between talent attraction and employee engagement among police officers in Abu Dhabi.

H6: Business analytics positively moderate the relationship between talent retention and employee engagement among police officers in Abu Dhabi.

H7: Business analytics positively moderate the relationship between learning and development and employee engagement among police officers in Abu Dhabi.

H8: Business analytics positively moderate the relationship between career management and employee engagement among police officers in Abu Dhabi.

2.4. Employee Performance

Employee performance remains a cornerstone of organizational effectiveness, influencing both short-term operational efficiency and long-term strategic success (Natsir et al., 2024). In public service institutions such as the Abu Dhabi Police, where expectations regarding accountability, service quality, and professionalism are particularly high, sustaining a high level of performance among personnel is essential (Sebire et al., 2025). Performance management systems are therefore designed not only to measure outcomes but also to actively enhance employee contributions by aligning individual performance with organizational objectives (Awan et al., 2020). Within the broader framework of human resource management, employee performance is closely linked to talent management practices and employee engagement, two central constructs in this study.

In accordance with the configurational approach to strategic human resource management, employee performance is optimized when organizations implement synergistic bundles of HR practices rather than isolated interventions. This perspective underscores the strategic importance of talent management, which involves the acquisition, development, and retention of skilled employees whose performance is vital for achieving institutional objectives. Like many modern public sector organizations, the Abu Dhabi Police increasingly faces the challenge of designing sophisticated talent management frameworks to address complex operational demands and evolving security threats (Sebire et al., 2025). These frameworks must integrate talent attraction, retention, learning and development, and career management with broader engagement strategies to ensure sustained performance improvements.

Importantly, employee performance is not solely determined by individual skills or training; it is also shaped by the degree to which employees are psychologically and emotionally engaged with their roles and organizational mission (Obuobisa-Darko, 2020). Engaged employees are more likely to display discretionary effort, organizational citizenship behavior, and resilience in the face of challenges, all of which significantly enhance performance outcomes (Malik, 2024). Employee engagement therefore functions as a mediating or facilitating construct in the talent management–performance relationship (Abdullahi et al., 2022). Employees who are effectively managed through talent-oriented strategies (such as structured career development, participatory decision-making, and performance-based rewards) tend to exhibit higher levels of engagement and, subsequently, achieve better performance (Oseghale et al., 2020).

The integration of business analytics further strengthens performance outcomes by enabling evidence-based decision-making. Predictive analytics can forecast employee turnover or identify training needs on the basis of historical performance data, whereas prescriptive analytics can recommend targeted interventions to optimize workforce utilization (John & Hajam, 2024). Within the Abu Dhabi Police, analytics can identify high-potential employees, monitor engagement levels, and tailor development programs, thereby enhancing the impact of talent management initiatives on performance. Research has

demonstrated that well-designed talent management systems, supported by analytical capabilities, facilitate more robust performance evaluation, talent mobility, and succession planning (Samuel & Isa, 2024). In policing contexts, where performance relates not only to task execution but also to public perception, interdepartmental coordination, and emergency responsiveness, analytics can greatly improve managerial effectiveness (Patil & Priya, 2024).

Training and development also play crucial roles in shaping performance. Continuous learning initiatives enhance employees' technical and interpersonal competences, foster innovation, and support professional growth (Younas & Waseem Bari, 2020). Employees who perceive their organization as investing in their career development exhibit higher levels of engagement and perform more effectively (Saks et al., 2022). This is particularly relevant for the Abu Dhabi Police, where operational success depends on both technical proficiency and human interaction capabilities. Additionally, motivation and reward systems are central to performance enhancement. When employees feel valued, recognized, and rewarded in alignment with transparent performance metrics, they are more likely to exceed expectations and internalize performance-oriented values (Steinbach et al., 2017). In addition to extrinsic rewards, fostering intrinsic motivation through meaningful work and autonomy remains critical for sustaining high performance over time.

The public sector, however, faces unique challenges (including bureaucratic structures, limited resources, and heightened public accountability), which can constrain performance management systems. For the Abu Dhabi Police, developing integrative performance frameworks that align human resource policies with broader community security objectives is imperative (Neyroud et al., 2023). Embedding engagement strategies within data-driven talent management systems can bridge the gap between strategic intent and operational outcomes, ensuring that employees are both well equipped and highly motivated to deliver on organizational goals (Conte & Siano, 2023).

In conclusion, employee performance in the Abu Dhabi Police is shaped by the interaction of three key elements: talent management practices, which provide a structural and developmental foundation; employee engagement, which fuels emotional and cognitive commitment; and business analytics, which enhances decision-making precision and strategic alignment. Together, these factors create a performance-oriented environment in which employees are both empowered and accountable, enabling the organization to meet its evolving security and service needs effectively. On the basis of the above discussion, the following hypothesis was developed:

H9: Employee engagement has a significant positive effect on employee performance among police officers in Abu Dhabi.

2.5. Underpinning Theories

This study is grounded in social exchange theory (SET), which provides a robust foundation for understanding the reciprocal dynamics between organizations and employees in relationships that are central to talent management, engagement, and performance (Chernyak-Hai & Rabenu, 2018). SET posits that employment is based on reciprocal exchanges, where employees contribute their time, skills, and efforts in return for tangible and intangible rewards provided by the organization. The quality and perceived fairness of these exchanges strongly influence employee attitudes and behaviors, including engagement, commitment, and performance (Yin, 2018). High-performance human resource practices, which are consistent with SET, foster a work environment characterized by trust, respect, and recognition (Zhang & Jia, 2010). When employees perceive that organizational rewards and opportunities are proportional to their contributions, they reciprocate with greater loyalty, effort, and engagement (Khan et al., 2024). With respect to the Abu Dhabi Police, where employee commitment is crucial for effective service delivery and public trust, SET emphasizes the importance of talent investments (such as training, career development, and recognition) in signaling organizational support and eliciting reciprocal commitment (Ling et al., 2014). Moreover, business analytics strengthen this exchange by aligning talent management initiatives with employee needs and aspirations through data-driven insights, thereby reinforcing fairness and psychological contracts (Cao et al., 2022). By integrating SET with analytical tools, organizations can design equitable, transparent, and responsive HR practices that deepen engagement and drive superior performance outcomes.

To complement SET, dynamic capability theory (DCT) provides a strategic perspective on how organizations sense, seize, and reconfigure their resources to maintain competitiveness in rapidly changing environments (Teece et al., 1997; Teece, 2007). Dynamic capabilities encompass the skills, routines, and processes that enable organizations to adapt continuously through opportunity sensing, strategic investment, and resource realignment (Teece, 2018). In this context, business analytics plays a pivotal role by generating insights that enhance organizational agility, allowing institutions such as the Abu Dhabi Police to anticipate workforce challenges, optimize talent strategies, and respond proactively to evolving operational demands (Conboy et al., 2020; Majhi et al., 2023). Talent management can itself be conceptualized as a dynamic capability, as it involves the continuous assessment, development, and redeployment of human capital to align with changing strategic objectives (Harsch & Festing, 2020; Kongrode et al., 2023). By integrating business analytics into talent management processes, organizations can more effectively reconfigure their workforce, identify skill gaps, and tailor development initiatives. For public sector entities operating in volatile environments, such as law enforcement agencies, this alignment ensures not only operational efficiency but also organizational resilience and strategic renewal.

Finally, Aon Hewitt's Employee Engagement Model offers a behavioral and psychological lens for understanding how employee attitudes translate into organizational performance. Aon Hewitt defines engagement as a multidimensional construct comprising cognitive, emotional, and behavioral components, operationalized through the "Say, Stay, Strive" framework (Hewitt, 2012). Engaged employees speak positively about their organization, display a strong sense of belonging, and exert discretionary effort toward achieving organizational goals (Azzahra & Putranto, 2023). Key organizational drivers of engagement include effective communication, enabling infrastructure, diversity and inclusion, employee value propositions, and meaningful work environments (Bello et al., 2024). These factors shape employees' psychological attachment and behavioral commitment, leading to improved retention, productivity, customer satisfaction, and organizational performance (Kwon & Park, 2019; Al-Harthy & Yusof, 2022). Within the Abu Dhabi Police, where job roles are demanding and publicly visible, applying this model helps us understand how engagement functions as a bridge between talent management practices and performance outcomes. By focusing on drivers that influence employees' willingness to "say, stay, and strive," organizations can cultivate deeper engagement, strengthen their human capital base, and sustain performance in complex operational contexts.

2.6. Research Model

The conceptual framework of this study is designed to investigate the interrelationships among talent management practices, business analytics, employee engagement, and employee performance within the Abu Dhabi Police Force. Specifically, the model integrates four core talent management dimensions (talent attraction, talent retention, learning and development, and career management) as independent variables expected to directly and positively influence employee engagement, which functions as the first dependent variable. Employee engagement is conceptualized as a multidimensional construct encompassing cognitive, emotional, and behavioral commitment to the organization and is hypothesized to be significantly shaped by effective talent management initiatives. To strengthen this linkage, business analytics is introduced as a moderating variable, reflecting its role in enhancing the effectiveness of talent management strategies through data-driven decision-making. The integration of business analytics addresses inconsistencies in prior studies by examining how analytical capabilities can optimize HR practices and amplify engagement outcomes. Furthermore, the model explores the direct relationship between employee engagement and employee performance, positioning engagement as a key driver of productivity, job satisfaction, and organizational commitment within the policing context. By embedding business analytics within this structure, the framework provides a comprehensive lens through which to understand how talent management practices influence engagement and, in turn, how engagement drives employee performance. This integrated model not only fills a critical gap in the literature but also offers practical insights for strategic human resource management in complex public sector environments. This conceptual framework is illustrated in Figure 1, depicting the hypothesized relationships between the variables and highlighting the moderating role of business analytics in strengthening the talent management–engagement link.

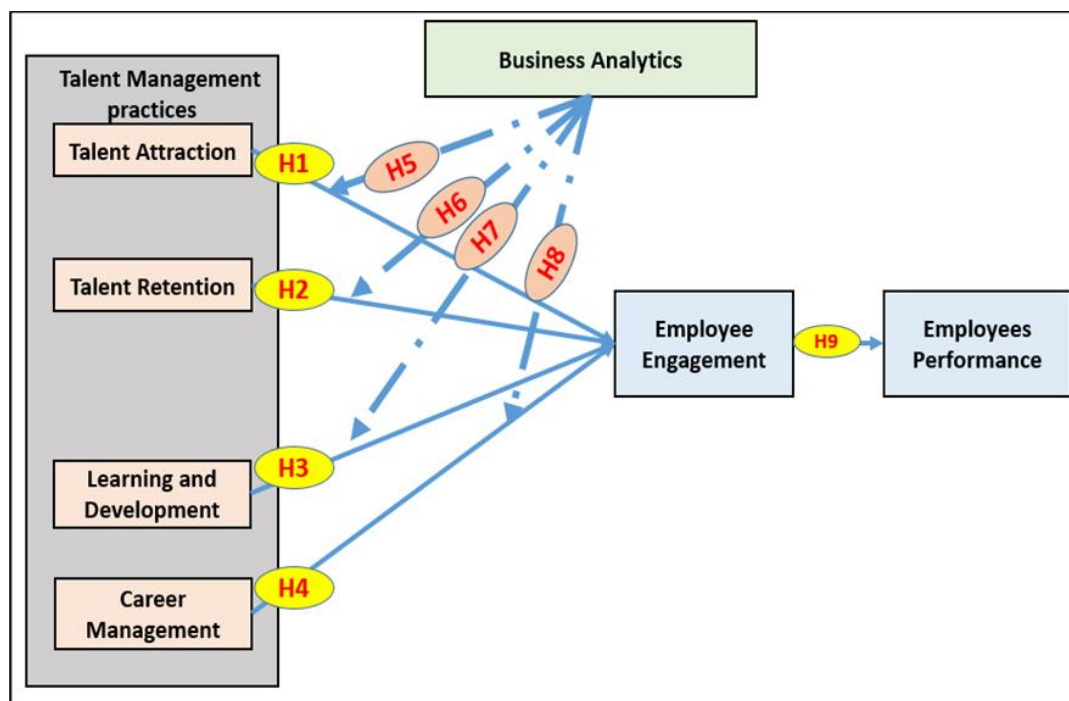


Figure 1 Research Model and Hypotheses.

3. Materials and Methods

This study adopted a quantitative research design, employing a structured questionnaire administered in a cross-sectional manner to examine the relationship between talent management practices and employee engagement, with a particular focus on the moderating role of business analytics and its implications for employee performance in the Abu Dhabi Police Force. The target population included senior police officers currently serving within the organization and occupying leadership positions such as Lieutenant General, Brigadier, Lieutenant Colonel, and Captain. These individuals were selected because of their dual involvement in both strategic decision-making and the operational oversight of human resource management and organizational performance. According to internal records and prior estimates, the Abu Dhabi Police employs approximately 48,500 personnel, of which senior officers represent approximately 20%, yielding a population size of approximately 9,700 individuals (Mansoori, 2015). To determine the minimum recommended sample size, this study relied on the Krejcie and Morgan (1970) sample size determination table, which indicated a requirement of approximately 370 respondents for a population of this size at a 95% confidence level and a 5% margin of error. To ensure sufficient responses, the targeted sample size was increased beyond this minimum threshold. A purposive sampling technique was employed, which intentionally targeted respondents on the basis of their professional ranks and relevance to the study constructs, thereby ensuring that participants possessed substantive knowledge of talent management practices, employee engagement, and performance management systems (Campbell et al., 2020).

The questionnaire development process followed a rigorous multistep procedure to establish both content validity and measurement reliability. Initially, the instrument was designed in English, reviewed by academic experts and Abu Dhabi Police HR specialists, and subsequently piloted with a group of 30 respondents to assess clarity and contextual relevance. On the basis of pilot feedback, revisions were made, and only items meeting reliability thresholds were retained. The final instrument consisted of 66 items across eight sections: demographic information and talent attraction (8 items) adapted from Lyria (2015); talent retention (7 items) from Lyria (2015); learning and development (8 items) from Lyria (2015); career management (10 items) from Lyria (2015); employee engagement (11 items) adapted from Van Allen (2013) and Crnogaj & Rozman (2017); employee performance (11 items) adapted from Koopmans et al. (2014); and business analytics (5 items) adapted from Ashrafi et al. (2019). All the constructs were measured using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), which is consistent with established practices in organizational behavior and HRM research (Taherdoost, 2019; Sekaran & Bougie, 2016). Data collection was conducted electronically through official Abu Dhabi Police internal communication systems, including secure email and messaging platforms. Participants were provided with an introductory note outlining the research purpose, assuring confidentiality, and emphasizing voluntary participation. A four-week data collection period was scheduled, with reminder notifications sent to maximize response rates and ensure representation across relevant units.

For data analysis, this study employed partial least squares structural equation modeling (PLS-SEM) using SmartPLS 3.3.9 software. PLS-SEM was selected because of its suitability for predictive research objectives, robustness in handling complex models, and flexibility with small to medium sample sizes (Hair et al., 2022). The analysis proceeded in two stages. First, the measurement model assessment examined indicator reliability, internal consistency (Cronbach's alpha and composite reliability), convergent validity (average variance extracted), and discriminant validity (Fornell–Larcker criterion). Second, the structural model assessment evaluated path coefficients, effect sizes (f^2), and explained variance (R^2). Bootstrapping procedures with 5,000 resamples were used to assess the statistical significance of the hypothesized relationships. Additionally, moderation analysis was performed to assess the conditional role of business analytics in the relationship between talent management practices (talent attraction, retention, learning and development, and career management) and employee engagement. Following the guidelines of Baron and Kenny (1986), as well as the methodological recommendations of Hair et al. (2019) and Ramayah et al. (2018), interaction terms were created, and their significance was tested through PLS-SEM bootstrapping. This allowed the study to determine whether business analytics strengthened or weakened the effect of core talent management practices on engagement. This comprehensive methodological framework ensures both the statistical rigor and practical relevance of the study findings, offering empirically grounded insights into how talent management practices, business analytics, and employee engagement collectively shape performance outcomes in the policing sector of the UAE.

4. Results

The data collection process initially yielded 455 responses from senior officers within the Abu Dhabi Police Force. To ensure the accuracy and reliability of the dataset, a systematic data screening and cleaning procedure was performed prior to analysis. In the first stage, 56 cases (12.31%) were removed because of incompleteness and inconsistencies, including missing responses on key constructs (such as talent management practices, employee engagement, and business analytics), straight-lining patterns, contradictory answers, and other signs of careless responses. The remaining data were then subjected to univariate outlier detection using Z scores and multivariate analysis through Mahalanobis D^2 statistics to identify anomalous cases. This step led to the exclusion of 16 additional cases (3.52%) that exhibited extreme or illogical values, thereby minimizing the risk of statistical distortion. Following these procedures, a final sample of 383 valid responses was retained, representing 84.18% of the initial dataset. This rigorous multistep cleaning process enhanced the dataset's validity, reliability, and

representativeness, ensuring that subsequent statistical analyses were grounded in high-quality data, thereby strengthening the credibility and generalizability of the study's findings regarding the role of talent management practices and business analytics in shaping employee engagement and performance within the Abu Dhabi Police. The survey was conducted from early June to the end of October 2024, and statistical analysis was used to identify errors in all the constructs during the data-gathering period.

4.1. Demographics of the Respondents

The demographic profile of the respondents provides valuable contextual insight into the composition of the sample and its relevance to the study's objectives. As shown in Table 1, the majority of the respondents were male (80.2%), reflecting the gender composition typical of police organizations in the UAE, where operational and leadership positions are predominantly occupied by men. However, the presence of female officers (19.8%) indicates increasing gender diversity within the Abu Dhabi Police, which may have implications for evolving talent management strategies and engagement initiatives that are more inclusive. In terms of age distribution, the largest groups were those aged 31–40 years (35.8%) and 41–50 years (33.7%), suggesting that most participants are in their mid-career and leadership stages, when professional development, engagement, and performance expectations are at their peak. Educationally, a significant majority hold bachelor's degrees (77.3%), followed by master's degrees (18.0%), which indicates a well-educated workforce capable of engaging with modern HR practices and business analytics systems. This high level of education supports the study's focus on strategic talent management and data-driven engagement approaches.

With respect to professional positions, Captains constitute 60.3% of the respondents, followed by Lt Colonels (23.8%) and Brigadiers (14.4%), with a smaller proportion of Lt Generals (1.6%). This distribution aligns with the study's purposive sampling strategy, targeting senior officers involved in both operational and strategic decision-making who are most likely to influence and experience talent management practices. The income levels indicate that most respondents fall within the 20,000–30,000 AED monthly income bracket (43.4% combined), which is consistent with the findings for mid- to senior-level officers and may influence their engagement and retention expectations. In terms of experience, the largest segment of respondents has 15–20 years of service (43.3%), followed by 20–25 years (25.8%), highlighting a highly experienced workforce with substantial institutional knowledge and leadership exposure. This demographic structure is particularly significant for the study because it reflects a group of officers who are both recipients and drivers of talent management policies. Their perspectives are therefore critical in evaluating how talent attraction, retention, learning and development, and career management practices influence employee engagement and performance and how business analytics can moderate these relationships within the Abu Dhabi Police context.

4.2. The Measurement Model: Outer Model

Assessing the loading score of each measurement item is essential to ensure that every construct is adequately represented by its corresponding indicators. According to Hair et al. (2022), a loading value of 0.708 or higher is considered strong and indicates that the item contributes meaningfully to the construct. Items with loadings less than 0.40 are deemed weak and are typically eliminated from the model. For loadings between 0.40 and 0.708, the decision to retain or remove the item depends on the researcher's analytical judgment and the item's theoretical relevance. In line with Hair et al. (2022), factor loadings, composite reliability (CR), and average variance extracted (AVE) were employed to assess the convergent validity of the measurement model. As presented in Table 2 and illustrated in Figure 2, the majority of indicator loadings surpassed the 0.708 benchmark, while items falling below this threshold were excluded from further analysis. Moreover, the CR values for all the constructs exceeded 0.70, and the AVE values were above 0.50, indicating satisfactory convergent validity. Finally, discriminant validity was verified using the Fornell–Larcker criterion (Fornell & Larcker, 1981), confirming that the constructs were empirically distinct and appropriately measured.

The discriminant validity was calculated by taking the square root of the AVE across all the factors. These values exceeded the correlation between model factors, demonstrating that discriminant validity had been achieved (Hair et al., 2020; Fornell & Larcker, 1981) (see Table 3).

As shown in Tables 2 and 3, the results of the reliability, convergent validity, and discriminant validity tests for the measurement model are statistically acceptable. The study outcomes provide empirical evidence for the proposed model.

4.3. Evaluation of the Structural: Inner Model

Given that this study relies on the statistical evaluation of the structural model, it is essential to examine the relationships, effects, and explanatory power among the variables. To achieve this goal, the partial least squares structural equation modeling (PLS-SEM) technique was employed, following the systematic procedures outlined by Hair et al. (2019), as the model is reflective in nature. The assessment involved several key steps: first, evaluating the R^2 values to determine the model's explanatory power; second, applying f^2 effect size analysis to examine the contribution of each latent construct to the overall R^2 ; and third, testing the significance of structural path coefficients using a bootstrapping procedure. Additionally,

moderation analysis was conducted to investigate the moderating role of business analytics in the relationship between talent management practices (i.e., talent attraction, talent retention, learning and development, and career management) and employee engagement. This analysis aimed to determine whether the presence of strong business analytics capabilities amplifies or conditions the strength of these relationships, thereby offering deeper insights into the strategic role of data-driven decision-making within the Abu Dhabi Police context.

Table 1 Respondents' profiles.

Demographic Variable	Category	Frequency	Percentage
Gender	Male	307	80.2
	Female	76	19.8
Age	18 - 24 Years	12	3.1
	25 - 30 Years	76	19.8
	31 - 40 Years	137	35.8
	41 - 50 Years	129	33.7
	51 - 60 Years	22	5.7
	Above 60 Years	7	1.8
Qualification	Diploma	1	0.3
	Bachelor	296	77.3
	Master	69	18.0
	PhD	7	1.8
	Other	10	2.6
Position	Captain	231	60.3
	Lt Colonel	91	23.8
	Brigadier	55	14.4
	Lt General	6	1.6
	10K-15K	21	5.5
Income (United Arab Emirates Dirham)	15K-20K	69	18.0
	20K-25K	93	24.3
	25K-30K	73	19.1
	30K-35K	60	15.7
	35K-40K	37	9.7
	40K-45K	16	4.2
	45K-50K	9	2.3
	Above 50K	5	1.3
Experience	5-10 Years	27	7.0
	10-15 Years	58	15.1
	15-20 Years	166	43.3
	20-25 Years	99	25.8
	25-30 Years	27	7.0
	Above 30 Years	6	1.6

4.3.1. Assessing the Predictive Power of the Research Model

The coefficient of determination (R^2) serves as a key indicator of the predictive power of a structural model by measuring the proportion of variance in the endogenous (dependent) variable that is explained by the exogenous (independent) variables. In general, higher R^2 values indicate stronger predictive accuracy of the model. However, the interpretation of R^2 must consider the model's complexity and the disciplinary context (Hair et al., 2022). According to Cohen (1988), R^2 values of 0.26, 0.13, and 0.02 represent substantial, moderate, and weak predictive power, respectively. Additionally, an R^2 value of 0.10 or higher is typically considered acceptable for indicating adequate explanatory capacity in behavioral and organizational research.

As presented in Table 4, the R^2 value for employee engagement is 0.538, reflecting a satisfactory level of predictive power. These results indicate that the set of talent management practices (i.e., talent attraction, talent retention, learning and development, and career management), along with the moderating effect of business analytics, collectively explain 53.8% of the variance in employee engagement. This substantial level of explained variance suggests that the model demonstrates strong predictive capability, highlighting the central role of talent management strategies and data-driven practices in shaping employee engagement within the Abu Dhabi Police.

4.3.2. Research Model Effective f^2

The effect size (f^2) is a crucial metric in PLS-SEM that evaluates the relative contribution of each exogenous construct to the R^2 value of the endogenous variable, thereby indicating the practical significance of individual predictors (Cohen, 1988; Hair et al., 2020). While R^2 assesses the overall explanatory power of the model, f^2 provides more granular insights by showing

how the removal of each predictor affects the model's predictive accuracy. According to Cohen's (1988) guidelines, f^2 values of 0.02, 0.15, and 0.35 correspond to small, medium, and large effects, respectively.

Table 2 Measurement Model Output.

Constructs	Items	Loading	AVE	CR
CM	Career Management Item 1	0.570*	0.630	0.944
	Career Management Item 2	0.748		
	Career Management Item 3	0.793		
	Career Management Item 4	0.777		
	Career Management Item 5	0.856		
	Career Management Item 6	0.897		
	Career Management Item 7	0.849		
	Career Management Item 8	0.730		
	Career Management Item 9	0.799		
	Career Management Item 10	0.870		
EE	Employee Engagement Item 1	0.715	0.583	0.938
	Employee Engagement Item 2	0.716		
	Employee Engagement Item 3	0.759		
	Employee Engagement Item 4	0.760		
	Employee Engagement Item 5	0.734		
	Employee Engagement Item 6	0.646*		
	Employee Engagement Item 7	0.761		
	Employee Engagement Item 8	0.753		
	Employee Engagement Item 9	0.840		
	Employee Engagement Item 10	0.937		
EP	Employee Engagement Item 11	0.737	0.553	0.931
	Employees Performance Item 1	0.744		
	Employees Performance Item 2	0.815		
	Employees Performance Item 3	0.761		
	Employees Performance Item 4	0.830		
	Employees Performance Item 5	0.750		
	Employees Performance Item 6	0.723		
	Employees Performance Item 7	0.605*		
	Employees Performance Item 8	0.770		
	Employees Performance Item 9	0.769		
LD	Employees Performance Item 10	0.784	0.668	0.942
	Employees Performance Item 11	0.588*		
	Learning and Development Item 1	0.786		
	Learning and Development Item 2	0.810		
	Learning and Development Item 3	0.793		
	Learning and Development Item 4	0.813		
	Learning and Development Item 5	0.841		
	Learning and Development Item 6	0.858		
	Learning and Development Item 7	0.828		
	Learning and Development Item 8	0.807		
TA	Talent Attraction Item 1	0.793	0.663	0.940
	Talent Attraction Item 2	0.775		
	Talent Attraction Item 3	0.830		
	Talent Attraction Item 4	0.822		
	Talent Attraction Item 5	0.827		
	Talent Attraction Item 6	0.823		
	Talent Attraction Item 7	0.835		
	Talent Attraction Item 8	0.806		
TR	Talent Retention Item 1	0.775	0.646	0.927
	Talent Retention Item 2	0.852		
	Talent Retention Item 3	0.783		
	Talent Retention Item 4	0.800		
	Talent Retention Item 5	0.844		
	Talent Retention Item 6	0.805		
	Talent Retention Item 7	0.762		

Note: TA=Talent Attraction, TR =Talent Retention, LD = Learning and Development, CM = Career Management, EE =Employee Engagement, EP = Employee Performance, BA = Business Analytics. * Items were deleted because of poor loading).

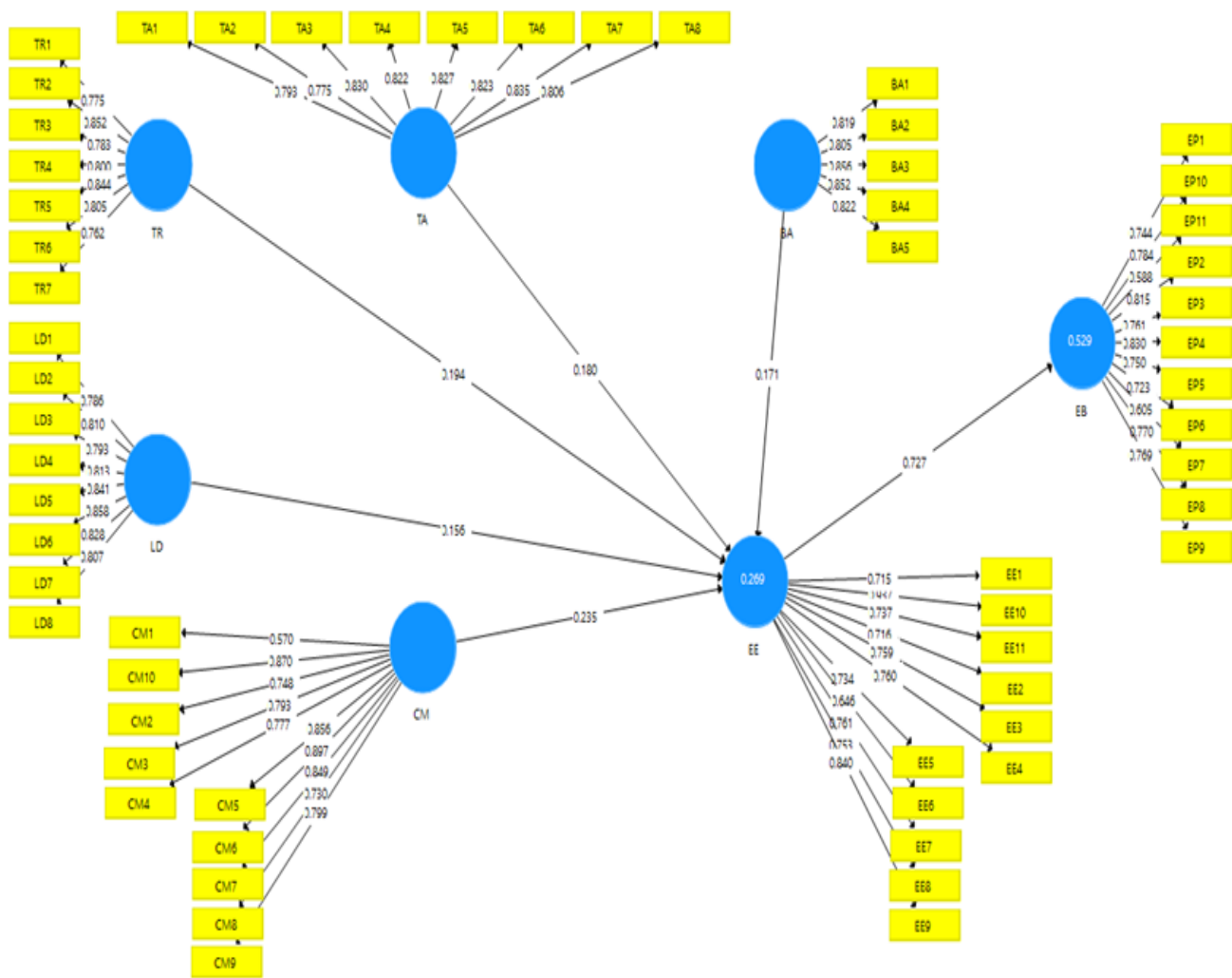


Figure 2 Measurement Model.

Table 3 Discriminant validity of the Fornell–Larcker criterion.

	CM	EP	EE	LD	TA	TR
CM	0.818					
EP	0.390	0.778				
EE	0.311	0.733	0.774			
LD	0.097	0.278	0.256	0.818		
TA	0.134	0.357	0.281	0.059	0.814	
TR	0.147	0.428	0.339	0.270	0.173	0.804

Note: TA=Talent Attraction, TR =Talent Retention, LD = Learning and Development, CM = Career Management, EE =Employee Engagement, EP = Employee Performance, BA = Business Analytics.

Table 4 Predictive Relevance Based on R².

	Predictive Power	
	R ² value	Status
Employee engagement	0.538	Satisfactory

As shown in Table 5, all four talent management practices—career management ($f^2 = 0.071$), learning and development ($f^2 = 0.032$), talent attraction ($f^2 = 0.051$), and talent retention ($f^2 = 0.061$)—exhibit medium effect sizes on employee engagement. These results indicate that each of these practices makes a meaningful and practically relevant contribution to explaining variations in employee engagement levels among Abu Dhabi Police officers. In particular, career management has the strongest relative effect, followed by talent retention, talent attraction, and learning and development. Although none of the constructs reach the “large” effect threshold, their collective impact reflects a balanced and multidimensional influence on engagement, reinforcing the importance of adopting a comprehensive talent management strategy to foster a committed and high-performing workforce.



Table 5 Effective size f^2 .

	Employee Engagement	
	f^2 value	Status
Career Management	0.071	medium
Learning and Development	0.032	medium
Talent Attraction	0.051	medium
Talent Retention	0.061	medium

4.3.3. Path Coefficients of the Research Model Relationships

The structural model's hypothesized relationships were tested through path coefficient analysis, which examines the strength and direction of the associations between the latent variables in the model. Path coefficients represent standardized regression weights, indicating how strongly an independent variable influences a dependent variable. To evaluate the significance of these relationships, T statistics and P values were computed using a bootstrapping procedure with 5,000 resamples, following the guidelines proposed by Hair et al. (2020). A T value greater than 1.96 and a P value less than 0.05 indicate that the relationship is statistically significant at the 5% level.

As presented in Table 6, the results confirm that all the hypothesized relationships are statistically significant ($p < 0.05$). Specifically, career management (CM) has a significant and positive effect on employee engagement (EE) ($\beta = 0.235$, $T = 5.220$), indicating that effective career development initiatives substantially increase officers' engagement levels. Learning and development (LD) also has a significant positive relationship with EE ($\beta = 0.160$, $T = 3.564$), underscoring the importance of continuous training and skills development in fostering engagement.

Similarly, talent attraction (TA) ($\beta = 0.201$, $T = 4.525$) and talent retention (TR) ($\beta = 0.226$, $T = 4.906$) both significantly influence employee engagement, suggesting that both recruitment strategies and retention practices play essential roles in sustaining a motivated and committed police workforce. Among these, career management has the highest path coefficient, followed closely by talent retention, highlighting its relative importance in shaping engagement outcomes.

Finally, the model reveals a strong and highly significant relationship between employee engagement and employee performance (EE $\rightarrow$ EP) ($\beta = 0.733$, $T = 27.299$). These findings indicate that increased engagement among Abu Dhabi Police officers strongly translates into enhanced job performance, supporting the theoretical expectation that engaged employees are more productive, committed, and aligned with organizational goals.

Table 6 Path coefficient assessment.

Relationship	Std. Beta	Std. Error	T value	Status
CM $\rightarrow$ EE	0.235	0.045	5.220	Supported
EE $\rightarrow$ EP	0.733	0.027	27.299	Supported
LD $\rightarrow$ EE	0.160	0.045	3.564	Supported
TA $\rightarrow$ EE	0.201	0.044	4.525	Supported
TR $\rightarrow$ EE	0.226	0.046	4.906	Supported

Note: TA=Talent Attraction, TR =Talent Retention, LD = Learning and Development, CM = Career Management, EE = Employee Engagement, EP = Employee Performance, BA = Business Analytics.

Overall, these findings provide robust empirical support for the proposed conceptual framework. They confirm that talent management practices are key drivers of employee engagement, which, in turn, significantly enhances employee performance. This finding reinforces the strategic importance of integrating talent attraction, retention, learning, and career development practices into the human resource policies of the Abu Dhabi Police to cultivate a high-performing and engaged workforce.

4.3.4. Moderation Analysis

To further examine the conditional relationships within the research model, a moderation analysis was conducted to assess the moderating role of business analytics (BA) on the relationships between talent management practices (talent attraction, talent retention, learning and development, and career management) and employee engagement. Moderation occurs when the strength or direction of the relationship between an independent and a dependent variable depends on the level of a third variable (the moderator). Following the guidelines of Baron and Kenny (1986) and Hair et al. (2017), interaction terms between BA and each of the four talent management practices were created and tested using the bootstrapping procedure in SmartPLS with 5,000 resamples to determine their statistical significance.

The results, presented in Table 7, reveal that Business Analytics significantly moderates three out of the four relationships. Specifically, the interaction effect between Talent Attraction and Business Analytics (TA $\times$ BA) on Employee Engagement is positive and significant ($\beta = 0.246$, $T = 4.988$), indicating that higher levels of BA capability strengthen the positive effect of talent attraction practices on employee engagement. Similarly, the moderating effects of learning and development $\times$ BA ($\beta = 0.254$, $T = 4.865$) and career management $\times$ BA ($\beta = 0.232$, $T = 4.786$) are both significant, demonstrating

that organizations with strong business analytics capabilities can amplify the impact of training, development, and career advancement initiatives on employee engagement. These findings highlight that the integration of data-driven decision-making and analytical tools can enhance the effectiveness of talent management strategies, particularly in the context of engaging employees.

However, the moderating effect of Talent Retention $\times$ BA ($\beta = -0.061$, $T = 1.278$) on employee engagement was found to be nonsignificant, suggesting that the influence of talent retention practices on engagement does not vary significantly on the basis of the level of business analytics capabilities. This may indicate that retention strategies within the Abu Dhabi Police are shaped more by institutional policies and cultural factors than by data-driven mechanisms or that BA tools are not yet fully leveraged in retention-related decision-making processes.

Table 7 Moderation Assessment of Business Analytics (BA).

Relationship	Path Coefficient	Standard Deviation	t-Statistics	Status
TA * BA $\rightarrow$ EE	0.246	0.049	4.988	Significant
TR * BA $\rightarrow$ EE	-0.061	0.048	1.278	Non-Significant
LD * BA $\rightarrow$ EE	0.254	0.048	4.865	Significant
CM * BA $\rightarrow$ EE	0.232	0.045	4.786	Significant

Note: TA=Talent Attraction, TR =Talent Retention, LD = Learning and Development, CM = Career Management, EE = Employee Engagement, EP = Employee Performance, BA = Business Analytics.

Overall, the moderation analysis underscores the strategic value of business analytics in enhancing the relationship between talent management practices and employee engagement. By embedding analytical capabilities into talent attraction, learning and development, and career management processes, the Abu Dhabi Police can more effectively engage its workforce. These results also suggest areas for improvement, particularly in aligning retention strategies with analytics, to fully maximize the moderating benefits of BA across all aspects of talent management.

5. Discussion

The primary objective of this study was to examine the influence of talent management practices (specifically, talent attraction, talent retention, learning and development, and career management) on employee engagement and, subsequently, on employee performance within the context of the Abu Dhabi Police. Additionally, the study explored the moderating role of business analytics (BA) in strengthening these relationships. The findings provide strong empirical support for most of the hypothesized relationships and offer significant theoretical and practical contributions to the talent management and public sector organizational performance literature.

The results revealed that all four dimensions of talent management practices have a positive and significant effect on employee engagement, with career management emerging as the strongest predictor ($\beta = 0.235$, $t = 5.220$), followed by talent retention ($\beta = 0.226$, $t = 4.906$), talent attraction ($\beta = 0.201$, $t = 4.525$), and learning and development ($\beta = 0.160$, $t = 3.564$). These findings are consistent with those of previous studies that emphasize that career development opportunities, targeted attraction strategies, and continuous learning environments are key drivers of engagement and commitment among employees (Van Allen, 2013; Koopmans et al., 2014; Crnogaj & Rozman, 2017; Collings et al., 2019). For police organizations, where hierarchical structures and high-performance expectations prevail, effective career management signals fairness, recognition, and growth, thereby fostering greater employee commitment and motivation. These findings also reinforce the argument that structured career pathways act as a form of organizational signaling, indicating long-term investment in employees, which enhances perceived fairness and strengthens engagement.

Furthermore, the R^2 value of 0.538 for employee engagement indicates that the four talent management dimensions collectively explain 53.8% of the variance in engagement, representing moderate to substantial predictive power (Cohen, 1988; Hair et al., 2019). These findings highlight that well-structured and strategically aligned talent practices significantly shape how officers experience and engage with their work. In a policing context, where engagement is closely tied to operational effectiveness, these insights underscore the importance of investing in strategic HR practices.

In addition, the relationship between employee engagement and employee performance was found to be strong and significant ($\beta = 0.733$, $t = 27.299$). This aligns with employee engagement theory (Aon Hewitt, 2012; Kwon & Park, 2019), which suggests that cognitively, emotionally, and behaviorally engaged employees are more likely to exhibit superior performance through discretionary effort, organizational citizenship behavior, and enhanced service quality. Within Abu Dhabi Police, greater engagement translates to improved discipline, operational efficiency, and public trust, which are key elements of policing effectiveness.

The study also assessed effect sizes (f^2) to understand the relative importance of each talent management dimension on employee engagement. All four variables demonstrated medium effect sizes (ranging from 0.032 to 0.071), further reinforcing their practical significance. Among them, career management had the highest f^2 value (0.071), highlighting its central role in driving engagement. This aligns with the principles of social exchange theory (SET) (Chernyak-Hai & Rabenu,

2018; Yin, 2018), which posits that when organizations invest in employees' career growth, employees reciprocate with higher levels of loyalty and engagement.

A key contribution of this study lies in its examination of business analytics as a moderator. The moderation analysis revealed that BA significantly strengthened the relationships between talent attraction, learning and development, and career management and employee engagement. Specifically, BA enhanced the effectiveness of talent attraction ($\beta = 0.246$, $t = 4.988$), learning and development ($\beta = 0.254$, $t = 4.865$), and career management ($\beta = 0.232$, $t = 4.786$) in driving engagement. These findings support the notion that data-driven HR strategies enable organizations to tailor initiatives, predict workforce needs, and respond dynamically to engagement challenges (Tomar & Gaur, 2020; Liu et al., 2023; Elugbaju et al., 2024; Bhanumathi & Hemavathi, 2025). By integrating analytics, the Abu Dhabi Police can identify which programs are most impactful, allocate resources effectively, and personalize engagement strategies for different officer segments. This finding reinforces the role of business analytics in reducing information asymmetry and enabling more transparent and equitable HR decision-making, which further strengthens employee trust and engagement.

However, the moderating effect of BA on the relationship between talent retention and employee engagement was not statistically significant ($\beta = -0.061$, $t = 1.278$), which requires a more in-depth analytical interpretation. One plausible explanation is that although the Abu Dhabi Police has adopted business analytics in certain HR functions, these systems may not yet be sufficiently advanced or specifically configured for predictive turnover analytics. In particular, the limited use of tools such as turnover risk forecasting, retention probability modeling, and employee sentiment analytics may restrict the ability of BA to meaningfully influence retention-related decisions.

Alternatively, these findings may reflect the inherently rigid and institutionalized nature of retention practices within policing organizations. Retention strategies in the Abu Dhabi Police are likely governed by hierarchical structures, rank-based promotion systems, and formalized administrative procedures, which limit the flexibility required for analytics-driven interventions. In such contexts, even when analytical insights are available, their practical implementation may be constrained by organizational rules and established protocols.

From a dynamic capability theory perspective, this suggests that while an organization possesses analytical capabilities, it may lack the necessary organizational agility to reconfigure retention strategies on the basis of these insights. In other words, the ability to generate data does not automatically translate into the ability to act upon it, particularly in highly institutionalized public sector environments.

Furthermore, these results highlight important organizational and political implications. Retention decisions within the Abu Dhabi Police may be influenced not only by data-driven insights but also by institutional factors such as seniority systems, national workforce policies (e.g., Emiratization), and internal administrative or political structures. These constraints may limit the effectiveness of analytics-driven approaches, creating tension between data-based decision-making and institutional governance. Therefore, the nonsignificant moderating effect of BA on retention should be interpreted not as a limitation of analytics itself but as an indication of the complexity of aligning data-driven capabilities with rigid organizational systems. This highlights the need for further development of predictive analytics tools alongside increased organizational flexibility to fully leverage business analytics in retention strategies.

These findings collectively align with dynamic capability theory (Teece et al., 1997; Teece, 2007; Wilden et al., 2013), which emphasizes the importance of organizations sensing opportunities, seizing them, and reconfiguring resources to sustain performance in dynamic environments. The incorporation of BA enhances these dynamic capabilities by enabling real-time sensing and evidence-based reconfiguration of talent strategies (Majhi et al., 2023; O'Neil & Brabazon, 2019). In the rapidly evolving security environment of Abu Dhabi, this agility is particularly critical.

From a practical standpoint, the results offer clear implications for strategic HR management in the policing sector. First, career management, learning and development, and attraction strategies should remain strategic priorities, as they strongly influence engagement and performance. Second, investing in BA capabilities is essential for moving from traditional, policy-driven HR approaches toward evidence-based, adaptive systems. Third, specific attention should be given to developing predictive turnover analytics tools and integrating them into retention strategies to enhance their effectiveness. Additionally, retention policies should be aligned with analytical insights through more flexible and data-driven decision-making mechanisms.

From a theoretical perspective, this study contributes by integrating social exchange theory, dynamic capability theory, and employee engagement theory into a single framework that explains how talent management practices influence engagement and performance and how business analytics acts as a strategic moderator in this relationship. Importantly, the study extends dynamic capability theory by demonstrating that the effectiveness of analytical capabilities is contingent not only on data availability but also on the organization's ability to operationalize and act upon these insights. This integrative approach provides a richer understanding of talent management dynamics within complex public sector organizations.

5.1. Contributions, Implications, and Future Research

This study makes important contributions to theory, methodology, and practice by deepening the understanding of how talent management practices, employee engagement, and business analytics interact to shape employee performance within

the Abu Dhabi Police. Theoretically, the research integrates three key frameworks (social exchange theory (SET), dynamic capability theory, and Aon Hewitt's employee engagement theory) into a single, cohesive model. Previous studies have often examined talent management and employee engagement separately, neglecting the enabling role of business analytics. By positioning talent attraction, talent retention, learning and development, and career management as antecedents of employee engagement and introducing business analytics as a moderating variable, this study provides a more nuanced explanation of how strategic human resource practices influence engagement and performance outcomes. In line with SET, the findings highlight how reciprocal exchanges between employees and the organization (such as investment in training, fair treatment, and recognition) enhance engagement and commitment. The integration of dynamic capability theory explains how data-driven talent strategies help organizations sense and respond to workforce challenges, while Aon Hewitt's "Say, Stay, Strive" framework reinforces the role of engagement as a behavioral and attitudinal driver of performance in hierarchical public institutions such as the police.

Methodologically, the study contributes by applying partial least squares structural equation modeling (PLS-SEM), which allows for the simultaneous assessment of multiple direct and moderating relationships in reflective measurement models. Rigorous data screening, validity checks, and reliability testing were carried out to ensure data quality. Furthermore, moderation analysis using interaction terms in SmartPLS, following the guidelines of Baron and Kenny (1986) and Ramayah et al. (2018), demonstrates a systematic way to test how technological capabilities, such as business analytics, condition the strength of HR-related relationships. This methodological approach advances organizational research by integrating technology as a contextual moderator, which remains underexplored in human resource management and public sector studies.

From a practical perspective, the findings provide valuable insights for human resource practitioners and policymakers in the Abu Dhabi Police and similar public organizations. The significant effects of career management, learning and development, talent attraction, and talent retention on employee engagement highlight the importance of designing integrated HR strategies that foster employee commitment and motivation. Engaged employees were shown to significantly enhance performance, confirming that engagement acts as a critical mechanism through which talent practices translate into operational outcomes. Moreover, the results of the moderation analysis reveal that business analytics significantly strengthen the relationships among talent attraction, learning and development, career management, and employee engagement. This underscores the strategic importance of embedding data analytics in HR decision-making processes, such as using predictive models to identify engagement risk, optimize career pathways, and tailor learning initiatives. However, the nonsignificant moderation effect for talent retention suggests that current retention strategies may require further modernization through analytics-driven tools, such as turnover risk modeling and employee sentiment tracking.

Future research could extend this study by employing longitudinal designs to examine causal relationships over time or by incorporating qualitative methods to capture deeper insights into employee experiences. Additionally, exploring other moderating variables, such as leadership styles, organizational culture, or digital transformation, could provide further understanding of the factors that strengthen or weaken the talent–engagement–performance relationship. In conclusion, this research provides a valuable foundation for both scholars and practitioners seeking to enhance organizational performance through strategic talent management and data-driven decision-making in the policing sector.

Overall, this research contributes to the academic literature by integrating multiple theoretical perspectives to explain the talent–engagement–performance nexus, employing advanced analytical methods to test complex moderation effects, and offering evidence-based recommendations for enhancing organizational performance through data-informed talent strategies. For practitioners, the findings emphasize the need to align HR practices with technological capabilities to build a more engaged and high-performing workforce. In the context of the Abu Dhabi Police, where operational excellence and public trust are paramount, these insights provide a strategic roadmap for leveraging talent management and analytics to drive sustainable organizational success.

6. Conclusions

This study examined the influence of talent management practices (talent attraction, talent retention, learning and development, and career management) on employee engagement, the moderating role of business analytics, and the subsequent impact on employee performance within the Abu Dhabi Police.

The findings demonstrate that talent management practices play a critical role in shaping employee engagement, with all four dimensions contributing positively. Among these, career management emerged as the most influential factor, highlighting the importance of structured career development and clear advancement pathways in fostering employee commitment. Furthermore, employee engagement was found to significantly enhance employee performance, reinforcing its central role as a key mechanism through which talent management practices translate into improved organizational outcomes.

With respect to the moderating role, business analytics was found to strengthen the relationships among talent attraction, learning and development, and career management with employee engagement. This suggests that the integration of data-driven approaches enables organizations to design more targeted, responsive, and effective human resource practices. However, business analytics did not have a significant moderating effect on talent retention, indicating that retention-related practices may be influenced by structural or institutional factors that are less responsive to analytical interventions.

Overall, the study highlights the strategic importance of aligning talent management practices with data-driven capabilities to enhance employee engagement and performance. These findings underscore that while business analytics can serve as a valuable enabler of more effective HR practices, its impact may vary depending on the nature of the talent management dimension. These findings provide a clear foundation for strengthening workforce strategies within complex public sector organizations such as the Abu Dhabi Police.

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7. Declarations

7.1. Ethical considerations

This study followed established ethical standards for research involving human participants. Approval was obtained from the Abu Dhabi Police to conduct the survey, and informed consent was secured from all the respondents. Participation was voluntary, with the right to withdraw at any stage. Confidentiality and anonymity were strictly maintained, as no personally identifiable information was collected, and all the data were stored securely and used solely for academic purposes. This study was conducted in compliance with the ethical guidelines of Universiti Malaysia Sarawak and received approval from the university's ethics committee.

7.2. Use of artificial intelligence (AI)

The authors declare that the generative artificial intelligence (AI) tool Grammarly was used exclusively for language editing and/or grammatical improvement. The use of AI did not influence the scientific content, study design, data analysis, data interpretation, results, or conclusions of the manuscript. Full responsibility for the content remains with the authors.

7.3. Conflict of Interest

The authors declare no conflicts of interest.

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