

The Effect of Organizational Culture on the Effectiveness of Employees' Administrative Performance in Iraqi Sports Federations: The Mediating Role of Job Satisfaction

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Article Info

Article type:

Original Research

How to cite this article:

Rahimizadeh, M., Najm Abdullah, S., & Shahbazi, M. (2027). The Effect of Organizational Culture on the Effectiveness of Employees' Administrative Performance in Iraqi Sports Federations: The Mediating Role of Job Satisfaction. *International Journal of Innovation Management and Organizational Behavior*, 7(2), 1-19.
<https://doi.org/10.61838/kman.ijimob.6270>



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ABSTRACT

Objective: This study aimed to investigate the effect of organizational culture on the effectiveness of employees' administrative performance in Iraqi sports federations and to determine the mediating role of job satisfaction in this relationship.

Methods and Materials: This applied, quantitative, cross-sectional, descriptive-correlational study was conducted among employees of Iraqi sports federations. A total of 350 valid questionnaires were included in the final analysis. Data were collected using the Denison Organizational Culture Questionnaire, an ACHIEVE-based administrative performance effectiveness questionnaire, and a 25-item Job Descriptive Index-based questionnaire. The instruments were scored on five-point Likert scales. Reliability and construct validity were assessed using Cronbach's alpha, composite reliability, average variance extracted, and measurement-model evaluation. Data were analyzed using SPSS and SmartPLS. Partial least squares structural equation modeling was employed to examine the measurement and structural models, and bootstrapping was used to test the significance of direct and indirect effects.

Findings: Organizational culture had a positive and statistically significant effect on administrative performance effectiveness ($\beta = 0.658$, $p < 0.001$). In contrast, the effect of organizational culture on job satisfaction was negative but not statistically significant ($\beta = -0.259$, $p = 0.153$), and the effect of job satisfaction on administrative performance effectiveness was also negative and nonsignificant ($\beta = -0.147$, $p = 0.279$). Accordingly, the mediating role of job satisfaction in the relationship between organizational culture and administrative performance effectiveness was not supported. The structural model explained 50.5% of the variance in administrative performance effectiveness ($R^2 = 0.505$), whereas organizational culture explained only 6.7% of the variance in job satisfaction ($R^2 = 0.067$).

Conclusion: Organizational culture was identified as a strong direct predictor of administrative performance effectiveness among employees of Iraqi sports federations. However, job satisfaction did not significantly explain or mediate this relationship.

Keywords: organizational culture, administrative performance effectiveness, job satisfaction, sports federations

1 Introduction

Organizations increasingly operate in environments characterized by rapid technological development, changing stakeholder expectations, resource constraints, intensified competition, and growing demands for accountability and efficiency. Under such conditions, organizational effectiveness depends not only on formal structures, policies, technologies, and financial resources but also on the behavioral and cultural characteristics that shape how employees interpret their roles and perform their responsibilities. Employees are the principal agents through whom organizational strategies are translated into operational outcomes, and their administrative performance can therefore determine the extent to which an organization achieves its objectives. Organizational behavior research has consequently emphasized the importance of understanding the individual and organizational factors that influence employee attitudes, motivation, commitment, satisfaction, and performance (Luthans et al., 2021; Robbins & Judge, 2023). Among these factors, organizational culture has emerged as a particularly important organizational-level construct because it provides employees with shared assumptions, values, behavioral expectations, and interpretive frameworks that influence everyday organizational activities (Abd Sharafat & Jafari, 2025; Williams, 2022).

Organizational culture generally refers to the collection of shared values, beliefs, norms, assumptions, symbols, and behavioral patterns through which members of an organization understand their environment and determine appropriate ways of acting within it. Culture provides an implicit framework for organizational behavior by influencing how employees communicate, solve problems, interact with managers and colleagues, respond to change, and interpret organizational priorities. Unlike formal rules, many cultural expectations operate informally and become embedded within routine organizational practices over time. Consequently, organizational culture can strengthen coordination and integration when shared values are compatible with organizational goals, but it may also constrain performance when cultural patterns are fragmented, resistant to change, or inconsistent with strategic requirements (Akpa et al., 2021; Williams, 2022). Contemporary organizational research therefore views culture not merely as a symbolic organizational attribute but as a strategic resource capable of influencing productivity, adaptability, innovation, employee behavior, and

organizational performance (Cherian et al., 2021; Graham et al., 2022).

A strong and constructive organizational culture may create an environment in which employees understand organizational objectives, recognize expectations regarding their roles, and coordinate their behaviors toward common goals. In such organizations, shared values can reduce ambiguity, facilitate internal communication, enhance cooperation, and support consistency in decision-making. Conversely, weak or fragmented cultures may produce conflicting expectations, interpersonal tension, poor communication, and uncertainty concerning responsibilities, potentially limiting organizational performance. Evidence from organizational settings has demonstrated that corporate culture is associated with employee attitudes, productivity, behavior, and performance, suggesting that the cultural context within which employees work can directly influence their individual and collective outcomes (Cherian et al., 2021). Similarly, empirical and review-based research has consistently identified organizational culture as a significant determinant of organizational and employee performance (Akpa et al., 2021; Anekwe & Igwe, 2025). Research conducted in developing-country contexts has also demonstrated that the relationship between corporate culture and organizational performance may remain substantial despite variation in institutional and organizational environments (Ghumie et al., 2023).

The importance of organizational culture becomes particularly evident when employee performance is considered. Job performance is a multidimensional concept involving the extent to which employees effectively fulfill their assigned responsibilities, achieve expected outputs, contribute to organizational objectives, and demonstrate behaviors conducive to organizational functioning. Employee performance is affected by individual competencies as well as contextual factors, including leadership, organizational support, motivation, role clarity, working conditions, and organizational systems. The evaluation of individual job performance therefore requires attention not only to results but also to the organizational and behavioral conditions that facilitate those results (Abbasi et al., 2021). Studies of organizational performance have accordingly emphasized that culture may affect employees by creating behavioral norms and expectations that influence motivation, coordination, decision-making, and willingness to exert effort (Abd Sharafat & Jafari, 2025; Ashayeri et al., 2023). When employees perceive their organization as coherent, participatory, adaptive, and strategically directed,

they may be better positioned to perform administrative duties accurately, efficiently, and consistently.

The Denison perspective provides a particularly useful conceptual framework for explaining the relationship between organizational culture and performance. From this perspective, organizational culture can be understood through major characteristics such as involvement, consistency, adaptability, and mission. Involvement concerns employee participation, empowerment, teamwork, and the development of organizational capabilities. Consistency reflects shared values, agreement, coordination, and organizational integration. Adaptability represents the organization's ability to respond effectively to environmental changes, learn, and adjust its practices. Mission refers to the existence of clear goals, strategic direction, and organizational vision. These dimensions collectively provide a cultural infrastructure capable of shaping organizational effectiveness. Research on organizational culture has demonstrated that creating a coherent cultural system is a complex process involving multiple interacting organizational elements rather than a single isolated practice (Khazaei et al., 2022). Furthermore, organizational culture has been linked with productivity and human resource efficiency, reinforcing the proposition that cultural arrangements can have practical consequences for employee outputs (Jafarzadeh, 2023).

The relationship between organizational culture and performance is especially relevant in sports organizations. Sports federations have distinct administrative characteristics because they operate at the intersection of public governance, professional sport, stakeholder coordination, financial administration, competition management, and athlete development. Their administrative staff must frequently coordinate across specialized units, respond to external regulations, manage limited resources, and work within organizational structures involving technical, administrative, and leadership functions. Such conditions make cooperation, shared goals, adaptability, and mission clarity particularly important. Research specifically examining sports organizations has demonstrated that organizational culture variables are important components of managerial and organizational functioning and may differ depending on organizational structure, leadership, and institutional environment (Samur, 2021). Studies within sport and youth organizations have further indicated that organizational culture is related to efficient performance management and productivity (Adinehloo et al., 2021; Reyhaninia & Zardoshtian, 2021). These findings suggest

that examining culture within sports federations can provide valuable insight into the organizational conditions associated with effective administrative performance.

Nevertheless, the influence of organizational culture on performance may not occur exclusively through a direct mechanism. Organizational culture also shapes employees' subjective experiences of work, including their perceptions of fairness, belonging, interpersonal relationships, managerial support, career prospects, and the meaningfulness of their responsibilities. These perceptions are closely connected with job satisfaction. Job satisfaction is commonly conceptualized as an employee's overall evaluative and emotional response to the job and its various dimensions, including the nature of work, compensation, promotion opportunities, supervision, and relationships with coworkers (Luthans et al., 2021; Robbins & Judge, 2023). It represents an important attitudinal outcome because employees continually evaluate whether their work experiences meet their professional, material, social, and psychological expectations. Although job satisfaction may be considered as a general attitude, it is often multidimensional, meaning that an employee may be satisfied with the work itself or coworkers while simultaneously expressing dissatisfaction with pay or promotion opportunities.

The determinants of job satisfaction are diverse. Compensation, job security, working conditions, interpersonal relationships, leadership behavior, recognition, autonomy, advancement opportunities, organizational justice, and opportunities for professional development can all affect how employees evaluate their jobs. Studies have continued to demonstrate meaningful variation in satisfaction across organizational and professional settings, indicating that job satisfaction cannot be assumed simply from employment status or organizational membership (Amozgar & Adel, 2025). In educational settings, for example, satisfaction has been associated with a range of institutional and occupational experiences, illustrating the importance of examining job satisfaction within the specific organizational context in which employees work (Bina & Mohammadi, 2025). These observations are highly relevant to sports federations, where employees may simultaneously experience commitment to organizational goals and dissatisfaction with particular employment conditions.

Organizational culture may be one of the important antecedents of job satisfaction because cultural values and practices shape many of the experiences upon which employees base their evaluations of work. Participatory

cultures may increase employees' sense of involvement and recognition; coherent cultures may improve predictability and interpersonal trust; adaptive cultures may support learning and innovation; and mission-oriented cultures may give greater meaning to employee roles. Research has demonstrated that organizational culture can influence both employee satisfaction and performance, supporting the proposition that employees' attitudes constitute one pathway through which organizational characteristics may affect workplace outcomes (Ispik et al., 2021). Similarly, empirical evidence has shown that organizational culture can influence employee performance through job satisfaction, indicating that satisfaction may serve as an intervening psychological mechanism between organizational context and behavioral outcomes (Umasangadji et al., 2022). This perspective is consistent with models in which favorable organizational conditions generate positive employee attitudes that subsequently encourage greater effort, commitment, and effectiveness.

At the same time, the organizational culture–job satisfaction relationship may be more complex than a straightforward positive association. Employees' satisfaction can be strongly influenced by tangible employment conditions that are only partially determined by organizational culture. Pay structures, promotion systems, employment security, workload, administrative regulations, and broader socioeconomic conditions may weaken the influence of culture on satisfaction. Consequently, employees may perceive an organization's cultural environment positively while remaining dissatisfied with certain extrinsic dimensions of employment. This distinction is important because it suggests that the influence of organizational culture on performance may remain direct even when culture does not strongly alter employees' overall satisfaction. Research comparing organizational factors has repeatedly shown that employee outcomes are produced through interacting individual and organizational mechanisms rather than through a single causal pathway (Luthans et al., 2021; Robbins & Judge, 2023).

Job satisfaction itself has frequently been investigated as an antecedent of employee performance. The underlying assumption is that employees who evaluate their jobs positively may demonstrate higher motivation, organizational attachment, persistence, cooperation, and willingness to exceed minimum performance requirements. Positive work attitudes may also reduce withdrawal behaviors and facilitate constructive interpersonal interactions. Empirical studies have reported associations

between job satisfaction and employee performance in various occupational groups (Mubarak et al., 2022). Research involving university employees and academics has similarly examined the relationship between satisfaction and performance, providing evidence that positive evaluations of work can be related to better employee outcomes (Bina & Mohammadi, 2025; Rahimi et al., 2025). In the sports industry specifically, a relationship between job satisfaction and job performance has also been reported, indicating that this association is relevant to sport-related organizational environments (Ertekin & Avunduk, 2021).

However, the strength and direction of the job satisfaction–performance relationship may depend on organizational context. High satisfaction does not automatically guarantee effective performance because employees' outputs also depend on competence, resources, organizational support, performance standards, managerial systems, and external constraints. Similarly, employees may maintain acceptable or even high performance despite moderate dissatisfaction because of professional responsibility, job requirements, organizational controls, or personal work values. Studies investigating job satisfaction and performance across industrial and organizational settings have therefore yielded context-dependent results (Bakhtiari Renani et al., 2024). Such variation highlights the need to test rather than assume the role of job satisfaction within specific organizational environments.

The possibility that job satisfaction mediates the relationship between organizational culture and employee performance integrates these theoretical perspectives. Under a mediation mechanism, organizational culture first affects employees' evaluations of their jobs, and these evaluations subsequently influence performance. A constructive culture may therefore enhance satisfaction by promoting supportive supervision, cooperation, participation, shared values, and meaningful organizational objectives, after which greater satisfaction contributes to stronger employee performance. Empirical findings have supported this mechanism in some contexts. Umasangadji et al. demonstrated the relevance of job satisfaction in transmitting the influence of organizational culture to performance (Umasangadji et al., 2022), while research examining organizational culture, job satisfaction, and employee performance has similarly emphasized the importance of indirect attitudinal pathways (Azmy & Wiadi, 2022). Tohidtalab and Farani also examined job satisfaction as a mediating factor in the relationship between organizational culture and employee

job performance, reinforcing the theoretical plausibility of this model (Tohidtalab & Farani, 2021).

Other studies indicate that organizational culture can influence performance through mediators other than job satisfaction. Organizational creativity and innovation, for example, have been identified as potential mechanisms connecting culture with productivity and effectiveness (Reyhaninia & Zardoshtian, 2021). Organizational creativity has likewise been investigated as an intervening variable between culture and organizational effectiveness (Kourad & Mehdinezhad, 2024). These findings imply that the pathways linking culture to performance are likely to be multifaceted and dependent on organizational conditions. Consequently, testing job satisfaction as a mediator in a specific organizational context is important because its mediating role cannot simply be generalized from findings obtained in different sectors, countries, or organizational structures.

The organizational context may also determine which aspects of culture exert the greatest influence. Evidence from field research shows that executives and employees often view culture as economically meaningful and closely connected to organizational value, but translating desirable cultural characteristics into consistent behavior can be challenging (Graham et al., 2022). Cultural patterns may also differ across organizational units and service environments, demonstrating that organizations operating under the same broad institutional structure can develop distinct internal cultural characteristics (Humphreys et al., 2022). This variability further supports the need for contextual investigations rather than assuming that relationships established in private-sector, educational, industrial, or Western organizational environments will operate identically within sports federations in Iraq.

A further consideration concerns the growing emphasis on employee perceptions as indicators of organizational effectiveness and service quality. Employees' evaluations of their work environments may influence how they respond to organizational demands, while perceptions of organizational services and institutional effectiveness can differ according to individual and contextual characteristics. Research on public satisfaction with organizational and community services has shown that satisfaction is shaped by multiple dimensions of perceived service quality and contextual experience (Xie et al., 2022). Although such studies address a different substantive setting, they underscore the broader principle that satisfaction is a multidimensional evaluative response shaped by environmental conditions rather than an

isolated personal characteristic. This perspective strengthens the rationale for considering job satisfaction alongside organizational culture when explaining employee performance.

Recent research continues to reinforce the practical relevance of organizational culture and job satisfaction. Reviews of organizational culture emphasize its influence on organizational behavior and performance and identify culture as a managerial resource that can either facilitate or impede organizational objectives (Abd Sharafat & Jafari, 2025). Current empirical evidence has also linked organizational culture with productivity and employee performance in contemporary organizational environments (Anekwe & Igwe, 2025). Meanwhile, recent studies of employees and academic personnel continue to examine job satisfaction as an important predictor or correlate of job performance (Amozgar & Adel, 2025; Bina & Mohammadi, 2025; Rahimi et al., 2025). Collectively, these studies suggest that both organizational culture and job satisfaction remain central constructs in explaining employee effectiveness, but they also indicate that their relationships must be examined within the specific institutional settings in which employees operate.

In addition, effective organizational performance depends on the alignment between cultural characteristics and organizational systems. Organizational culture alone cannot substitute for appropriate structures, competent employees, adequate resources, or effective performance-management systems. Nevertheless, culture may facilitate the operation of these mechanisms by establishing shared expectations and behavioral norms. Studies of knowledge management, organizational culture, and efficient performance management have demonstrated the relevance of culture to the functioning of performance systems, particularly in sport-related administrative organizations (Adinehloo et al., 2021). Research on establishing organizational culture has likewise shown that cultural development involves a structured hierarchy of organizational factors that need to operate coherently (Khazaei et al., 2022). These observations are particularly pertinent for Iraqi sports federations, where administrative effectiveness requires coordination among different professional roles and alignment between operational activities and strategic sporting objectives.

Despite the growing literature, important gaps remain. Much of the available evidence regarding organizational culture, job satisfaction, and performance comes from corporate, educational, financial, industrial, or general

public-sector organizations. Although studies of sports organizations exist, comparatively less is known about how these variables interact within national sports federations, particularly in Iraq. Sports federations operate under distinctive governance, administrative, and institutional conditions, and their employees may be influenced by cultural, economic, regulatory, and managerial factors that differ from those present in conventional business organizations. Furthermore, previous evidence does not establish unequivocally whether organizational culture primarily affects performance directly or whether its effect is transmitted through employee attitudes such as job satisfaction. The simultaneous examination of direct and indirect relationships can therefore contribute to a more precise understanding of the mechanisms underlying administrative effectiveness in sports organizations.

The practical relevance of this issue is substantial. If organizational culture directly contributes to administrative performance, managers of sports federations may improve effectiveness by strengthening participation, internal coordination, adaptability, shared values, and clarity of mission. If job satisfaction also functions as a mediator, cultural interventions may need to be complemented by policies targeting employees' satisfaction with work, compensation, supervision, promotion, and coworker relationships. Conversely, if job satisfaction does not mediate the culture–performance relationship, managers may need to distinguish interventions aimed at strengthening organizational performance from those designed to improve employee satisfaction. Establishing the pattern of these relationships can therefore provide a more evidence-based foundation for human resource management and organizational development within sports federations.

Accordingly, the aim of the present study was to investigate the effect of organizational culture on the effectiveness of employees' administrative performance in Iraqi sports federations and to examine the mediating role of job satisfaction in this relationship.

2 Methods and Materials

This study employed a quantitative, applied, cross-sectional, descriptive-correlational research design to investigate the effect of organizational culture on the effectiveness of employees' administrative performance in Iraqi sports federations, with job satisfaction considered as a mediating variable. The study was applied in terms of purpose because its findings were intended to provide

practical evidence for improving organizational practices, employee satisfaction, and administrative performance within sports federations. It was descriptive-correlational in terms of research design because the variables were examined in their natural organizational setting without experimental manipulation, and the relationships among organizational culture, job satisfaction, and administrative performance effectiveness were analyzed quantitatively. Because the proposed conceptual model involved simultaneous direct and indirect relationships among latent constructs, partial least squares structural equation modeling (PLS-SEM) was employed to assess the measurement properties of the constructs and test the hypothesized structural relationships.

The statistical population consisted of employees working in sports federations in Iraq, including senior and middle-level managers, experts and specialists, and administrative employees involved in the planning, implementation, coordination, and administration of federation activities. Employees at different organizational levels were included because organizational culture, job satisfaction, and administrative performance are inherently related to employees' perceptions and experiences within their organizational environment. The population was heterogeneous in terms of age, gender, educational attainment, organizational position, and length of work experience. The required sample size was initially estimated using Cochran's formula for a large population at a 95% confidence level, with a proportion of .50 and a margin of error of .05, resulting in a required sample of approximately 384 participants. This sample size was also considered adequate for structural equation modeling and for estimating the proposed mediation model. Accordingly, the final study sample consisted of **384 employees from Iraqi sports federations**. Participants were selected using simple random sampling wherever a complete employee sampling frame was accessible, so that eligible members of the population had an equal probability of selection. The inclusion criteria were current employment in an Iraqi sports federation, involvement in administrative or managerial activities, sufficient familiarity with the organizational environment to evaluate the study variables, and willingness to participate. Questionnaires were distributed directly to eligible employees, and respondents were informed about the purpose of the study and the voluntary nature of their participation. Completed questionnaires were screened before analysis, and questionnaires with substantial missing

information or unusable response patterns were excluded from the analytical dataset.

Data were collected through a structured questionnaire consisting of four sections. The first section obtained demographic information, including age, gender, educational level, occupational position, and work experience. The remaining sections measured organizational culture, administrative performance effectiveness, and job satisfaction. Data collection was conducted in the field through the distribution of questionnaires among employees of the selected sports federations. Before the main administration, the questionnaire was reviewed for clarity, relevance, and appropriateness for the organizational and cultural context of Iraqi sports federations. Content validity was evaluated through expert review, whereas construct validity was subsequently assessed through analysis of the measurement model. Participation was voluntary, respondents were informed that their information would be treated confidentially, and the collected data were used exclusively for research purposes.

Denison Organizational Culture Questionnaire. Organizational culture was assessed using a questionnaire based on the Denison organizational culture model developed by Daniel Denison and subsequently operationalized in the Denison Organizational Culture Survey. The Denison model conceptualizes organizational culture through four major dimensions: involvement, consistency, adaptability, and mission. Involvement reflects employees' empowerment, participation in organizational activities, team orientation, and development of organizational capabilities. Consistency represents the existence of common values, agreement, coordination, and organizational integration. Adaptability concerns the organization's capacity to respond effectively to environmental changes, organizational learning, innovation, and changing stakeholder requirements. Mission refers to the existence of a clear organizational purpose, strategic direction, objectives, and long-term vision. The questionnaire version employed in the present study consisted of **36 items**, with items distributed across these four principal dimensions. Responses were recorded on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores represented a stronger and more favorable organizational culture, both for the individual dimensions and for the overall construct. The Denison model has been widely used in organizational and management research, and previous applications have provided evidence supporting its construct validity and

internal consistency. In the present study, the appropriateness of the measurement model was further evaluated through indicator loadings, internal consistency reliability, convergent validity, and discriminant validity before testing the structural relationships.

ACHIEVE Administrative Performance Effectiveness Questionnaire. The effectiveness of employees' administrative performance was assessed using a questionnaire based on the ACHIEVE performance model developed by Hersey and Goldsmith in 1980. The ACHIEVE framework conceptualizes effective employee performance as the result of seven interrelated dimensions: ability, clarity, help, incentive, evaluation, validity, and environment. Ability refers to the employee's knowledge, professional competencies, skills, and capability to perform assigned responsibilities. Clarity represents the employee's understanding of duties, responsibilities, performance expectations, and organizational objectives. Help refers to the organizational support, resources, facilities, information, and managerial assistance available for effective job performance. Incentive represents motivation and willingness to exert effort toward organizational goals. Evaluation concerns feedback regarding performance and the extent to which employees receive appropriate information about the quality and effectiveness of their work. Validity refers to the legitimacy, fairness, and appropriateness of managerial decisions and organizational practices affecting employees. Environment represents external and contextual factors that may facilitate or constrain effective job performance. The version used in this study contained **26 items** distributed across the seven ACHIEVE dimensions. Each item was scored on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating greater administrative performance effectiveness. The ACHIEVE-based questionnaire has been applied extensively in organizational and human resource studies, with previous research supporting its reliability and validity for evaluating the individual and organizational determinants of employee performance. Reliability and construct validity were reassessed in the present sample before structural model estimation.

Job Descriptive Index. Job satisfaction, which constituted the mediating variable in the conceptual model, was measured using a **25-item version based on the Job Descriptive Index (JDI)** originally developed by Smith, Kendall, and Hulin in 1969. The JDI conceptualizes job satisfaction as a multidimensional construct involving

employees' evaluations of key aspects of their employment. The instrument employed in this study assessed five dimensions: the work itself, pay, opportunities for promotion, supervision, and coworkers. Satisfaction with the work itself represented the extent to which employees perceived their duties as meaningful, attractive, varied, and worthwhile. Pay satisfaction reflected employees' evaluations of the adequacy and fairness of financial compensation. Promotion satisfaction represented perceptions of opportunities for occupational development and career advancement. Satisfaction with supervision referred to employees' perceptions of the competence, fairness, supportiveness, and interpersonal conduct of their supervisors, whereas satisfaction with coworkers represented the perceived quality of interpersonal relationships, cooperation, and social interactions among organizational members. Five items were used to assess each dimension, producing a total of 25 items. Items were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with negatively worded items reverse-scored where applicable so that higher total scores consistently represented greater job satisfaction. The JDI and its adaptations have been widely employed in organizational research, and extensive previous evidence has supported the reliability and validity of its core dimensions. For the present study, the psychometric adequacy of the 25-item version was additionally examined within the measurement model.

The overall research questionnaire therefore included demographic questions followed by the three principal instruments measuring organizational culture, administrative performance effectiveness, and job satisfaction. All substantive items were scored using a common five-point Likert response format to facilitate administration and statistical analysis. Prior to hypothesis testing, the validity and reliability of the measurement instruments were evaluated. Content validity was assessed through expert review, while construct validity was examined within the PLS-SEM measurement model. Internal consistency was evaluated using Cronbach's alpha and composite reliability, with coefficients of .70 or higher regarded as acceptable. Convergent validity was examined through factor loadings and average variance extracted (AVE), with an AVE of at least .50 indicating adequate convergence. Discriminant validity was assessed using the heterotrait-monotrait ratio (HTMT), with values below the recommended threshold indicating empirical distinctiveness among organizational culture, job satisfaction, and administrative performance effectiveness.

The collected data were analyzed using SPSS and SmartPLS. SPSS was initially used for data coding, screening, and descriptive statistical analysis. The demographic characteristics of participants were summarized using frequencies and percentages, while continuous study variables were described using means and standard deviations. Prior to the main analyses, the dataset was screened for incomplete responses, coding errors, and unusual response patterns. Descriptive statistics were also examined to obtain an overall profile of organizational culture, job satisfaction, and administrative performance effectiveness among employees of Iraqi sports federations.

The hypotheses and conceptual model were subsequently evaluated using partial least squares structural equation modeling (PLS-SEM) in SmartPLS. The analysis was conducted in two stages consisting of evaluation of the measurement model followed by assessment of the structural model. In the measurement model, indicator reliability was examined through outer loadings, while internal consistency reliability was evaluated using Cronbach's alpha and composite reliability. Values of at least .70 were considered indicative of satisfactory internal consistency. Convergent validity was assessed using average variance extracted, and an AVE value of .50 or higher was considered acceptable. Discriminant validity was evaluated primarily using the HTMT criterion. Collinearity among predictor constructs was additionally examined using variance inflation factor (VIF) values to ensure that excessive multicollinearity did not distort the estimated structural relationships.

After confirmation of the adequacy of the measurement model, the structural model was evaluated to test the hypothesized relationships among organizational culture, job satisfaction, and administrative performance effectiveness. Standardized path coefficients were used to determine the magnitude and direction of the relationships. The explanatory power of the model was evaluated using the coefficient of determination (R^2) for the endogenous constructs, while effect sizes (f^2) were examined to determine the relative contribution of predictor constructs. Predictive relevance was assessed using Q^2 where applicable. Model fit was also considered using the standardized root mean square residual (SRMR), with values below .08 interpreted as indicative of satisfactory approximate model fit.

The statistical significance of the direct and indirect effects was determined through a nonparametric bootstrapping procedure with **5,000 resamples**. Bootstrapping generated standard errors, t statistics, p

values, and bias-corrected 95% confidence intervals for each hypothesized path. Statistical significance was established at $p < .05$. In particular, the mediating role of job satisfaction in the relationship between organizational culture and administrative performance effectiveness was tested by estimating the indirect effect of organizational culture on administrative performance effectiveness through job satisfaction. Mediation was considered statistically significant when the 95% bootstrap confidence interval for the indirect effect did not include zero. The direct effect of organizational culture on administrative performance effectiveness was then examined together with the indirect effect to determine whether the observed mediation pattern was consistent with partial or full mediation. This analytical approach permitted simultaneous evaluation of the measurement properties of the constructs, the direct influence of organizational culture on administrative performance, the effect of organizational culture on job satisfaction, the association between job satisfaction and administrative performance effectiveness, and the indirect mechanism through which organizational culture may enhance employees' administrative performance by improving their job satisfaction.

3 Findings and Results

Organizational culture was evaluated according to the Denison framework, encompassing involvement, consistency, adaptability, and mission. All four dimensions obtained mean scores above the theoretical midpoint. Adaptability had the highest mean score ($M = 4.10$, $SD = 0.65$), with 79% of respondents selecting agree or strongly agree, indicating a relatively high perceived capacity of the sports federations to respond to environmental changes and adapt organizationally. Involvement also received a high mean score ($M = 4.05$, $SD = 0.68$), with 74% favorable responses, suggesting considerable employee participation

and engagement. Mission had a mean of 3.95 ($SD = 0.70$), whereas consistency obtained the lowest mean among the organizational culture dimensions ($M = 3.80$, $SD = 0.75$). Consistency also had the largest proportion of neutral responses, at 20%, suggesting that internal coordination, integration, and shared organizational practices may be comparatively less developed than other aspects of organizational culture.

Job satisfaction was generally at a favorable level, although considerable variation was observed across its dimensions. Satisfaction with coworkers obtained the highest mean score ($M = 4.00$, $SD = 0.68$), with 76% of employees reporting favorable responses. Satisfaction with the nature of the work was also relatively high ($M = 3.95$, $SD = 0.70$), followed by supervision ($M = 3.90$, $SD = 0.72$). In contrast, satisfaction with pay and benefits ($M = 3.60$, $SD = 0.80$) and promotion opportunities ($M = 3.55$, $SD = 0.85$) was comparatively lower. For both of these dimensions, 18% of respondents expressed disagreement or strong disagreement. Thus, employees appeared more satisfied with the intrinsic and interpersonal dimensions of their jobs than with compensation and advancement-related aspects.

Administrative performance effectiveness was also evaluated positively. Employee ability obtained the highest mean score ($M = 4.20$, $SD = 0.60$), with 82% of respondents providing favorable responses, suggesting relatively high levels of perceived skills, knowledge, and professional competence. Clarity and environmental conditions each had a mean of 4.10, while validity obtained a mean of 4.05 and organizational support a mean of 4.00. Motivation had a mean of 3.90, whereas performance evaluation received the lowest mean score ($M = 3.85$, $SD = 0.78$) and the highest neutral-response percentage (20%). This pattern indicates that although employees generally assessed their administrative performance positively, the mechanisms used for performance appraisal and feedback may be less clearly established or consistently implemented.

Table 1

Descriptive Statistics for the Study Variables and Their Dimensions

Construct/Dimension	Mean	SD	Agree/Strongly Agree (%)	Neutral (%)	Disagree/Strongly Disagree (%)
Organizational culture: Involvement	4.05	0.68	74	16	10
Organizational culture: Consistency	3.80	0.75	68	20	12
Organizational culture: Adaptability	4.10	0.65	79	11	10
Organizational culture: Mission	3.95	0.70	72	18	10
Job satisfaction: Nature of work	3.95	0.70	73	17	10
Job satisfaction: Pay and benefits	3.60	0.80	60	22	18
Job satisfaction: Promotion opportunities	3.55	0.85	58	24	18
Job satisfaction: Supervision	3.90	0.72	70	20	10

Job satisfaction: Coworkers	4.00	0.68	76	14	10
Administrative performance: Ability	4.20	0.60	82	10	8
Administrative performance: Clarity	4.10	0.65	78	12	10
Administrative performance: Organizational support	4.00	0.70	74	16	10
Administrative performance: Motivation	3.90	0.75	70	18	12
Administrative performance: Performance evaluation	3.85	0.78	68	20	12
Administrative performance: Validity	4.05	0.68	76	14	10
Administrative performance: Environment	4.10	0.66	79	11	10

At the overall construct level, administrative performance effectiveness had the highest mean score ($M = 4.12$, $SD = 0.68$), followed by organizational culture ($M = 3.98$, $SD = 0.72$) and job satisfaction ($M = 3.85$, $SD = 0.75$). All three means exceeded the theoretical midpoint of 3.00, demonstrating generally favorable perceptions of the studied constructs. Organizational culture scores ranged from 2.10 to 4.90, job satisfaction scores from 2.00 to 4.85, and administrative performance scores from 2.30 to 4.80. The relatively limited standard deviations, ranging from 0.68 to 0.75, indicated modest dispersion and a relatively high degree of similarity in respondents' perceptions.

Although job satisfaction remained above the theoretical midpoint, it was the lowest-rated of the three principal variables. This pattern was consistent with the dimension-level findings, particularly the comparatively low evaluations of compensation and promotion opportunities. By comparison, the high overall administrative performance score suggested that employees generally perceived themselves as capable of performing their responsibilities effectively despite less favorable evaluations of some aspects of job satisfaction.

Before evaluating the PLS-SEM model, the distributional properties of the data were examined using skewness and kurtosis statistics in SPSS. The skewness and kurtosis values for all principal variables were within acceptable ranges, indicating no substantial departure from normality. Although PLS-SEM does not require multivariate normality to the same extent as covariance-based structural equation modeling, this preliminary assessment indicated that the distributions did not contain severe irregularities.

Several negatively worded items in the job satisfaction scale were reverse-coded before the main statistical analyses. Reverse coding ensured that all items were scored in a common conceptual direction, such that higher values consistently represented greater job satisfaction. The corrected data were subsequently transferred to SmartPLS for measurement-model and structural-model evaluation.

Internal consistency was initially examined using Cronbach's alpha. Cronbach's alpha coefficients for all constructs exceeded .70, supporting satisfactory reliability. Construct validity was then assessed in SmartPLS using the measurement-model criteria.

The initial measurement model comprised organizational culture (OC), administrative performance effectiveness (PER), and job satisfaction (JS). Organizational culture was initially represented by 34 observed indicators coded OC1 through OC34. Administrative performance was represented in the structural measurement model by 10 indicators coded PER1 through PER10, while job satisfaction consisted of 25 indicators coded JS1 through JS25. The reverse-worded job satisfaction items were recoded before inclusion in the PLS model.

The initial PLS algorithm indicated that several indicators had insufficient outer loadings. Correspondingly, the initial average variance extracted (AVE) values were .203 for organizational culture, .290 for administrative performance, and .377 for job satisfaction, all below the recommended value of .50. Initial composite reliability values were .87 for organizational culture, .78 for administrative performance, and .69 for job satisfaction. Thus, although some composite reliability coefficients were acceptable, convergent validity was inadequate in the initial model.

A sequential indicator-refinement procedure was therefore performed. Indicators with outer loadings below .40 were removed first, and the model was re-estimated. Although composite reliability improved, the AVE values remained below the desired threshold. In the subsequent refinement stage, indicators with loadings below .60 were also removed where their exclusion improved measurement quality. After this process, all retained constructs achieved AVE values exceeding .50 and satisfactory composite reliability.

Table 2*Final Reliability and Convergent Validity of the Measurement Model*

Construct	AVE	Composite Reliability	Cronbach's Alpha	Convergent Validity	Reliability
Organizational Culture (OC)	0.506	0.891	> 0.70	Supported	Supported
Administrative Performance Effectiveness (PER)	0.551	0.830	> 0.70	Supported	Supported
Job Satisfaction (JS)	0.775	0.974	> 0.70	Supported	Supported

As shown in Table 2, the final AVE values were .506 for organizational culture, .551 for administrative performance effectiveness, and .775 for job satisfaction. All exceeded the .50 criterion, confirming adequate convergent validity. Composite reliability coefficients were .891, .830, and .974, respectively, and Cronbach's alpha exceeded .70 for every construct. Therefore, the final measurement model demonstrated satisfactory internal consistency reliability and convergent validity and was considered adequate for evaluation of the structural model.

Following confirmation of the measurement model, the structural model was evaluated to examine the hypothesized relationships among organizational culture, job satisfaction, and administrative performance effectiveness. SmartPLS was used to estimate the PLS structural model, while statistical significance was evaluated using the bootstrapping procedure. Relationships with *p* values below .05 were considered statistically significant at the 95% confidence level.

The path from organizational culture to administrative performance effectiveness was positive and statistically significant, with a standardized path coefficient of $\beta = .658$

and $p < .001$. The corresponding bootstrapped *t* statistic exceeded the critical value of 1.96. The magnitude of the coefficient indicated a relatively strong positive effect. Accordingly, stronger organizational culture was associated with greater administrative performance effectiveness among employees of Iraqi sports federations.

The path from organizational culture to job satisfaction was negative and statistically nonsignificant ($\beta = -.259$, $p = .153$). Its bootstrapped *t* statistic was below 1.96. Consequently, the hypothesis that organizational culture significantly predicted job satisfaction was not supported. Although the estimated coefficient suggested an inverse relationship within the estimated model, the absence of statistical significance means that the direction of this coefficient should not be interpreted as reliable evidence of a negative population relationship.

Similarly, the effect of job satisfaction on administrative performance effectiveness was negative but nonsignificant ($\beta = -.147$, $p = .279$), with a bootstrapped *t* statistic below 1.96. Thus, job satisfaction did not significantly predict administrative performance effectiveness in the estimated model.

Table 3*Structural Model Path Coefficients and Hypothesis Tests*

Structural Path	β	<i>p</i>	Effect Interpretation	Result
Organizational Culture → Administrative Performance Effectiveness	0.658	< 0.001	Positive, relatively strong	Supported
Organizational Culture → Job Satisfaction	-0.259	0.153	Negative, weak; nonsignificant	Not supported
Job Satisfaction → Administrative Performance Effectiveness	-0.147	0.279	Negative, weak; nonsignificant	Not supported

These findings demonstrate that organizational culture exerted a substantial direct influence on administrative performance effectiveness. Accordingly, greater involvement, organizational coordination, adaptability, shared values, strategic direction, and mission clarity were associated with better administrative performance. In contrast, organizational culture was not a statistically significant predictor of job satisfaction, suggesting that job satisfaction among employees may depend more heavily on other factors not incorporated into the proposed model, such

as compensation, advancement opportunities, employment conditions, job security, management practices, or individual expectations.

Similarly, the nonsignificant relationship between job satisfaction and administrative performance suggests that employees' effectiveness in administrative responsibilities was not primarily determined by their level of job satisfaction within this sample. Employees may continue to perform their administrative responsibilities effectively despite differences in satisfaction because performance is

also constrained or facilitated by organizational rules, competencies, professional obligations, managerial structures, and working procedures.

The coefficient of determination indicated that organizational culture and job satisfaction jointly explained 50.5% of the variance in administrative performance effectiveness ($R^2 = .505$). This result represents a substantial proportion of explained variance and indicates that the structural model possessed meaningful explanatory power for employees' administrative performance. In particular, given the strong direct path between organizational culture and administrative performance, organizational culture constituted the principal explanatory variable in the model.

By contrast, organizational culture explained only 6.7% of the variance in job satisfaction ($R^2 = .067$). The comparatively low R^2 for job satisfaction was consistent with the nonsignificant organizational culture-to-job satisfaction path and suggested that most variation in employees' job satisfaction was associated with factors outside the proposed model.

The proposed mediating role of job satisfaction was evaluated within the structural model using bootstrapping. The hypothesized mediation mechanism required organizational culture to be associated with job satisfaction and job satisfaction, in turn, to contribute to administrative

performance effectiveness. However, the organizational culture-to-job satisfaction path was nonsignificant ($\beta = -.259$, $p = .153$), and the job satisfaction-to-administrative performance path was also nonsignificant ($\beta = -.147$, $p = .279$). The bootstrapping results therefore provided no evidence supporting a statistically significant indirect effect through job satisfaction.

Consequently, job satisfaction did not function as a significant mediator between organizational culture and administrative performance effectiveness. The results instead indicated that organizational culture influenced administrative performance primarily through a direct pathway. Thus, improvements in organizational culture appeared to be associated directly with improvements in employees' administrative performance rather than operating through changes in employees' job satisfaction.

This pattern is particularly notable when considered alongside the descriptive findings. Although the overall level of job satisfaction was relatively favorable, satisfaction with pay and benefits and opportunities for promotion was lower than satisfaction with coworkers, supervision, and the nature of work. Such variation may have weakened the capacity of overall job satisfaction to operate as a systematic intermediary between organizational culture and performance.

Table 4

Overall Structural Model Results and Research Hypotheses

Hypothesis/Endogenous Construct	β / R^2	p	Decision/Interpretation
Organizational culture has a significant effect on administrative performance effectiveness	$\beta = 0.658$	< 0.001	Supported
Organizational culture has a significant effect on job satisfaction	$\beta = -0.259$	0.153	Not supported
Job satisfaction has a significant effect on administrative performance effectiveness	$\beta = -0.147$	0.279	Not supported
Job satisfaction mediates the relationship between organizational culture and administrative performance effectiveness	—	> 0.05	Not supported
Explained variance in administrative performance effectiveness	$R^2 = 0.505$	—	50.5% of variance explained
Explained variance in job satisfaction	$R^2 = 0.067$	—	6.7% of variance explained

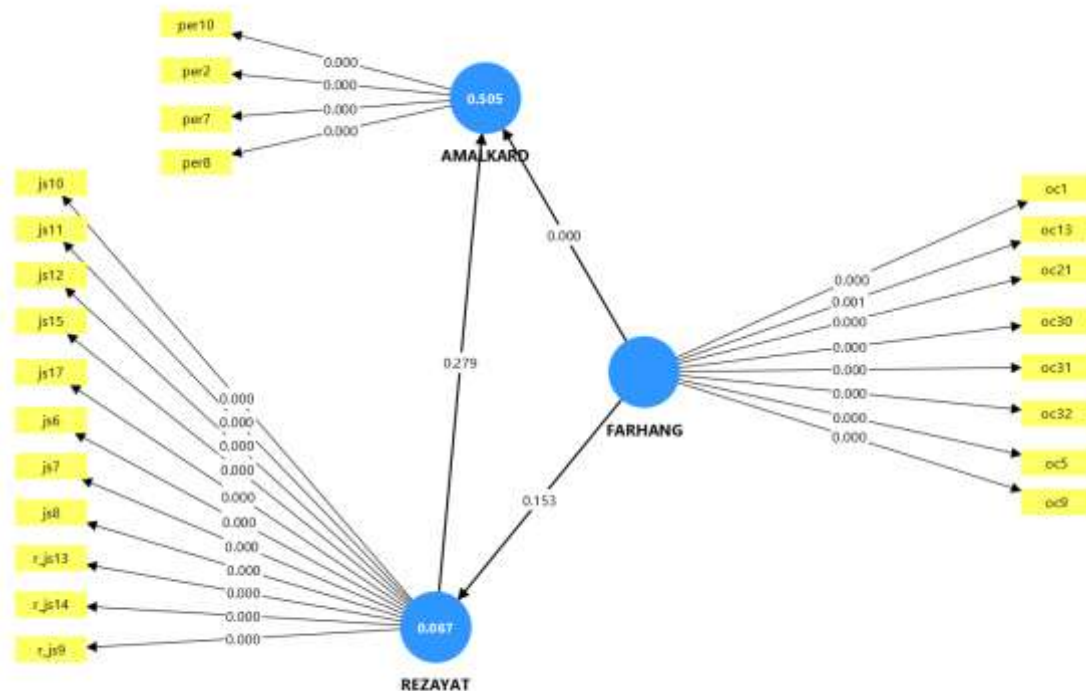
Overall, the structural model demonstrated meaningful explanatory capacity for administrative performance effectiveness but relatively weak explanatory capacity for job satisfaction. The central empirical finding was the significant positive direct effect of organizational culture on administrative performance effectiveness ($\beta = .658$, $p < .001$). Neither the effect of organizational culture on job satisfaction nor the effect of job satisfaction on administrative performance was statistically significant.

Consequently, the proposed mediating role of job satisfaction was not supported. These results indicate that within Iraqi sports federations, organizational culture is more closely associated with employees' administrative effectiveness through a direct mechanism than through job satisfaction. Organizational characteristics such as involvement, internal coordination, adaptability, mission orientation, shared organizational values, and clarity of

strategic direction therefore appear particularly relevant to explaining effective administrative performance.

Figure 1

Final PLS-SEM Structural Model Showing the Relationships Among Organizational Culture, Job Satisfaction, and Administrative Performance Effectiveness



AMALKARD = Performance; FARHANG= Culture; REZAYAT = Satisfaction

4 Discussion

The present study examined the effect of organizational culture on the effectiveness of employees' administrative performance in Iraqi sports federations and assessed whether job satisfaction mediated this relationship. The findings showed that organizational culture had a positive, relatively strong, and statistically significant direct effect on administrative performance effectiveness ($\beta = 0.658$, $p < 0.001$). In contrast, organizational culture did not significantly predict job satisfaction ($\beta = -0.259$, $p = 0.153$), and job satisfaction did not significantly predict administrative performance effectiveness ($\beta = -0.147$, $p = 0.279$). Consequently, the mediating role of job satisfaction was not supported. In addition, the structural model explained 50.5% of the variance in administrative performance effectiveness, whereas organizational culture explained only 6.7% of the variance in job satisfaction. These results indicate that organizational culture represents

a major organizational determinant of administrative effectiveness in Iraqi sports federations, whereas job satisfaction does not appear to constitute a substantial explanatory mechanism linking culture to performance in this particular context.

The most important finding was the significant positive effect of organizational culture on administrative performance effectiveness. This result suggests that employees working in sports federations tend to perform their administrative duties more effectively when organizational values, expectations, behavioral norms, strategic direction, and internal coordination are clearly established. The magnitude of the path coefficient indicates that organizational culture is not merely a peripheral contextual factor but rather an important component of the environment within which administrative performance is produced. A culture characterized by participation, consistency, adaptability, and mission orientation can reduce ambiguity, improve coordination, facilitate cooperation, and provide employees with clearer expectations regarding

appropriate behavior. These mechanisms can contribute directly to higher levels of efficiency, role fulfillment, and administrative effectiveness.

This finding is consistent with the broader organizational literature. Akpa et al. emphasized that organizational culture is closely related to organizational performance because shared assumptions and norms provide a framework that guides employee behavior toward organizational objectives (Akpa et al., 2021). Similarly, Cherian et al. reported that corporate culture influences employees' attitudes, productivity, performance, and workplace behavior, indicating that cultural characteristics have practical consequences for organizational outcomes (Cherian et al., 2021). Recent evidence from the financial sector has also shown that organizational culture can significantly influence employee productivity and performance (Anekwe & Igwe, 2025). The present findings therefore support the proposition that a constructive and coherent organizational culture contributes to improved employee performance across different organizational settings.

The current result is also aligned with studies conducted in contexts that are more closely related to public administration and sports organizations. Ashayeri et al. found that organizational culture was associated with employees' job performance in national organizations, suggesting that organizational values and norms can shape the quality of employees' work behavior (Ashayeri et al., 2023). Adinehloo et al. similarly identified a meaningful relationship between organizational culture and efficient performance management within a sport and youth organization, highlighting the relevance of culture in administrative and sports-related institutional settings (Adinehloo et al., 2021). Reyhaninia and Zardoshtian likewise demonstrated that organizational culture contributes to productivity in the Ministry of Sport and Youth, although their findings also emphasized the role of creativity and innovation as intermediary mechanisms (Reyhaninia & Zardoshtian, 2021). These studies collectively reinforce the present conclusion that sports organizations may benefit substantially from cultural conditions that facilitate coordination, shared purpose, and employee participation.

The descriptive findings of the present study provide further insight into why organizational culture had such a strong direct relationship with performance. Among the cultural dimensions, adaptability obtained the highest mean, followed closely by involvement. This pattern suggests that employees generally perceived the federations as capable of

responding to environmental changes while also offering a reasonable degree of employee engagement. In sports organizations, adaptability may be particularly important because administrative personnel must respond to regulatory changes, competition schedules, stakeholder demands, financial pressures, and evolving institutional priorities. Samur emphasized that organizational culture in sports organizations is shaped by characteristics specific to the sport environment and that these cultural variables can affect organizational functioning (Samur, 2021). The high adaptability score observed in this study may therefore represent an important explanation for the strong direct link between culture and administrative effectiveness.

The comparatively lower score for consistency also deserves attention. Although still above the theoretical midpoint, consistency had the lowest mean among the cultural dimensions and the largest proportion of neutral responses. This may indicate that internal agreement, coordination, and integration across departments are not equally strong throughout Iraqi sports federations. Khazaei et al. showed that establishing an effective organizational culture involves a structured configuration of multiple interdependent organizational elements rather than isolated practices (Khazaei et al., 2022). Likewise, Jafarzadeh reported a relationship between organizational culture and human resource productivity, indicating that the internal coherence of organizational values and practices may influence employees' productive behavior (Jafarzadeh, 2023). Thus, strengthening internal consistency may further enhance the already positive contribution of organizational culture to administrative performance.

The second major finding was that organizational culture did not significantly predict job satisfaction. Although the estimated coefficient was negative, the relationship was statistically nonsignificant; therefore, the negative direction should not be interpreted as evidence that stronger organizational culture reduces job satisfaction. Rather, the result indicates that variation in organizational culture did not reliably explain variation in job satisfaction among the surveyed employees. This finding differs from studies that have identified organizational culture as an important predictor of satisfaction. Ispik et al. reported that organizational culture played an important role in both employee satisfaction and performance (Ispik et al., 2021), while Umasangadji et al. found that organizational culture influenced employee performance through job satisfaction (Umasangadji et al., 2022). Tohidtalab and Farani also examined job satisfaction as an intermediary mechanism

linking organizational culture with job performance (Tohidtalab & Farani, 2021).

One possible explanation for this discrepancy is the multidimensional nature of job satisfaction. The descriptive findings showed that employees were relatively satisfied with coworkers, the nature of the work, and supervision but less satisfied with pay and benefits and opportunities for promotion. This suggests that satisfaction in Iraqi sports federations may depend more strongly on structural and economic conditions than on organizational culture alone. A favorable cultural environment may create participation, teamwork, and clarity, but it cannot necessarily compensate for dissatisfaction associated with financial rewards, limited career advancement, or employment conditions. Amozgar found that job satisfaction among university lecturers varied according to multiple aspects of occupational experience, demonstrating that satisfaction is shaped by several interrelated employment conditions rather than a single organizational factor (Amozgar & Adel, 2025). Similarly, Robbins and Judge emphasize that employee satisfaction reflects evaluations of multiple job characteristics, including compensation, supervision, advancement, and the work itself (Robbins & Judge, 2023). The low R^2 value of 0.067 for job satisfaction in the present model supports this interpretation, indicating that most of the variance in job satisfaction was explained by factors outside organizational culture.

The third major finding was that job satisfaction did not significantly affect administrative performance effectiveness. Although the descriptive level of job satisfaction was generally favorable, individual differences in satisfaction did not translate into statistically significant differences in administrative effectiveness. This finding contrasts with studies reporting positive relationships between satisfaction and performance. Rahimi et al. found an association between job satisfaction and job performance among administrative employees at Kabul University (Rahimi et al., 2025), while Bina and Mohammadi similarly investigated a positive relationship between these constructs among university professors (Bina & Mohammadi, 2025). Ertekin and Avunduk also reported a relationship between job satisfaction and job performance in the sports industry (Ertekin & Avunduk, 2021), and Mubarak et al. likewise identified job satisfaction as an important correlate of employee performance (Mubarak et al., 2022). Bakhtiari Renani et al. further highlighted the relationship between job satisfaction and job performance in an organizational employee sample (Bakhtiari Renani et al., 2024).

Nevertheless, the absence of a significant relationship in the current study is theoretically plausible. Employee performance is determined by more than satisfaction alone. Ability, role clarity, organizational support, motivation, performance evaluation, validity of organizational decisions, and environmental conditions can all directly affect performance. The high descriptive score for administrative performance, particularly the very high score for employee ability, suggests that employees may have continued to perform effectively because of professional competence, experience, organizational requirements, or formal administrative systems, even when they were less satisfied with certain aspects of their jobs. Abbasi et al. emphasized that individual job performance is multidimensional and influenced by a range of personal and organizational determinants (Abbasi et al., 2021). Luthans et al. similarly argue that employee behavior and performance emerge from the interaction of attitudes, competencies, contextual factors, motivation, and organizational systems rather than from job satisfaction in isolation (Luthans et al., 2021).

Another possible explanation concerns the administrative characteristics of sports federations. Employees may operate within formal rules, hierarchical expectations, standardized administrative procedures, and professional obligations that maintain performance even when attitudes toward pay or promotion are less favorable. In such environments, compliance with administrative responsibilities may be influenced more strongly by organizational structure, leadership requirements, professional norms, and institutional accountability than by personal satisfaction. Graham et al. showed that corporate culture can shape organizational behavior and outcomes through shared norms and behavioral expectations that operate independently of individual preferences (Graham et al., 2022). Ghumiem et al. likewise demonstrated that culture can influence organizational performance across developing-country settings, suggesting that cultural mechanisms may operate directly through organizational coordination and behavioral alignment (Ghumiem et al., 2023). This may explain why culture remained a significant predictor of performance even though satisfaction did not.

The nonsignificant mediating effect of job satisfaction follows directly from these results. Because organizational culture did not significantly predict job satisfaction and job satisfaction did not significantly predict administrative performance, the indirect pathway through job satisfaction was not supported. Thus, the influence of organizational culture on administrative performance appears to operate

mainly through a direct mechanism in Iraqi sports federations. This differs from studies such as Umasangadji et al., who reported that job satisfaction transmitted part of the effect of organizational culture on performance (Umasangadji et al., 2022), and Azmy and Wiadi, who emphasized indirect relationships among organizational culture, job satisfaction-related mechanisms, organizational commitment, and employee performance (Azmy & Wiadi, 2022). The contrast highlights the importance of organizational context when evaluating mediation models.

The absence of mediation does not mean that job satisfaction is unimportant. Instead, it indicates that satisfaction did not explain how organizational culture influenced performance in this particular sample. Other mediating mechanisms may be more relevant. Kourad and Mehdinezhad showed that organizational creativity can mediate the relationship between culture and organizational effectiveness (Kourad & Mehdinezhad, 2024), while Reyhaninia and Zardoshtian identified creativity and innovation as mechanisms through which culture may influence productivity in a sports-related organizational context (Reyhaninia & Zardoshtian, 2021). Organizational commitment, psychological empowerment, role clarity, knowledge sharing, and work engagement may similarly provide alternative explanatory pathways. The present findings therefore point toward a more direct performance-oriented function of culture while leaving open the possibility that other psychological or organizational variables mediate its effects.

The model's explanatory power further supports the central importance of organizational culture. The model explained 50.5% of the variance in administrative performance effectiveness, which indicates that the included predictors accounted for a substantial proportion of performance differences. Given that job satisfaction had a nonsignificant path, a large portion of this explanatory power can reasonably be attributed to organizational culture. This is consistent with the view that culture functions as an organizational resource by shaping employee expectations, behavioral norms, coordination, and strategic alignment (Abd Sharafat & Jafari, 2025; Williams, 2022). Humphreys et al. also demonstrated that organizational cultures can form distinguishable patterns associated with different organizational practices and environments (Humphreys et al., 2022). The present findings extend this general perspective to Iraqi sports federations by showing that cultural conditions are closely associated with employees' administrative effectiveness.

Overall, the findings indicate that organizational culture is a more powerful predictor of administrative performance effectiveness than job satisfaction in Iraqi sports federations. The strong direct relationship suggests that performance may be enhanced when employees operate within a coherent system of shared values, participation, adaptability, coordination, and mission clarity. At the same time, the weak explanatory power for job satisfaction suggests that satisfaction is shaped by other occupational conditions, especially those related to compensation and advancement. This interpretation is also consistent with evidence showing that employee satisfaction depends on multiple organizational and service-related experiences rather than a single contextual factor (Xie et al., 2022). Accordingly, organizational culture should be viewed as an important direct foundation of administrative effectiveness, whereas job satisfaction should be addressed as a distinct managerial outcome influenced by a broader set of employment conditions.

Several limitations should be considered when interpreting the findings. First, the cross-sectional design prevents definitive conclusions regarding temporal or causal relationships among organizational culture, job satisfaction, and administrative performance effectiveness. Second, the study relied on self-report questionnaires, which may be affected by common-method variance, socially desirable responding, or individual differences in perception. Third, the study was restricted to employees of Iraqi sports federations; therefore, the results may not be directly generalizable to private companies, educational institutions, other public organizations, or sports organizations operating in different national and institutional environments. Fourth, the final measurement model required the removal of several indicators with inadequate factor loadings, which improved psychometric quality but may have reduced the breadth of the original constructs. Finally, the model incorporated only organizational culture and job satisfaction as predictors of administrative performance and therefore did not account for other potentially important variables such as leadership style, organizational commitment, compensation satisfaction, work engagement, psychological empowerment, organizational justice, or perceived organizational support.

Future studies should employ longitudinal designs to determine whether changes in organizational culture precede changes in administrative performance and employee attitudes over time. Replication in different sports organizations, government agencies, private organizations,

and different geographical regions of Iraq would also help determine the generalizability of the findings. Future researchers may examine alternative mediating variables such as organizational commitment, work engagement, psychological empowerment, creativity, innovation, role clarity, or knowledge sharing, given that job satisfaction did not explain the culture–performance relationship in the current model. It would also be useful to investigate the dimensions of job satisfaction separately rather than relying solely on an overall construct, because pay, promotion, supervision, coworkers, and the nature of work may show different relationships with culture and performance. Multi-group analyses based on gender, organizational position, work experience, federation type, or educational level may further reveal whether structural relationships differ across employee groups. Future research should also consider combining self-report measures with supervisor ratings or objective administrative performance indicators.

Managers of Iraqi sports federations should prioritize the systematic development of organizational culture as a central mechanism for improving administrative effectiveness. Particular attention should be paid to strengthening employee involvement in decision-making, clarifying organizational missions and strategic objectives, improving coordination between departments, and maintaining organizational adaptability in response to changing sporting and administrative requirements. Because consistency received a comparatively lower evaluation, managers should establish clearer procedures, shared operational standards, and stronger mechanisms for interdepartmental communication and cooperation. At the same time, job satisfaction should not be neglected simply because it did not significantly predict performance in the present model. The comparatively lower satisfaction with pay, benefits, and promotion opportunities indicates that human resource policies concerning compensation, career development, fairness, and advancement require targeted improvement. Managers should therefore treat organizational culture and job satisfaction as related but distinct areas of intervention: culture should be strengthened to support effective performance, while employment conditions should be improved to promote employee satisfaction, retention, morale, and long-term organizational stability.

5 Conclusion

Overall, the findings suggest that an effective crisis management training system for Iranian air traffic control should be conceived as an integrated capability-development framework. It should prepare personnel not only for recognizable emergencies but also for uncertain and emerging threats. The increasing complexity of low-altitude and mixed airspace (Chen et al., 2025; Raziq et al., 2025), the need for adaptive conflict resolution (Renkhoff et al., 2025), the importance of controller-driven safety adaptation (Gyles & Bearman, 2025), the growing role of digital technologies (Ignjatović et al., 2024; Kabra et al., 2024), and the necessity of organizational resilience in aviation crises (Cook et al., 2024; Taylor, 2026) all reinforce the central conclusion of this study: crisis management training in air traffic control must simultaneously address operational, technological, human, organizational, and learning dimensions.

This study has several limitations that should be considered when interpreting its findings. First, the study was conducted among air traffic control personnel from Mehrabad Airport Control Tower, Tehran Approach Control Unit, and the national Area Control Center, and although these units represent important components of the Iranian air traffic control system, the sample may not fully represent personnel working in all airports, regional facilities, military-civil coordination environments, or geographically dispersed operational contexts. Second, the study relied on a researcher-made questionnaire and self-reported responses; therefore, responses may have been influenced by individual perceptions, organizational expectations, or socially desirable judgments. Third, the cross-sectional design captured participants' assessments at a single point in time and did not determine whether the proposed training model improves actual crisis performance over time. Finally, the statistical validation focused primarily on the structural adequacy of the model and did not include direct behavioral measures obtained from simulated or real crisis events.

Future studies should test the model in broader and more diverse samples of air traffic control personnel across different airports, control towers, approach units, and regional control centers to assess the stability and generalizability of its structure. Longitudinal research is recommended to determine whether implementation of the training model produces sustained improvements in crisis preparedness, decision-making, communication, resilience, and safety performance. Experimental and quasi-

experimental studies could compare personnel receiving model-based training with those receiving conventional training and evaluate outcomes through standardized simulation scenarios. Future research should also integrate objective indicators such as response time, conflict-resolution accuracy, workload, communication errors, recovery time, and performance under degraded technological conditions. Cross-national comparisons could further determine which components are universal and which require adaptation to regulatory, technological, and organizational conditions in different aviation systems.

In practice, aviation authorities and air navigation service organizations should use the validated model as a framework for developing an integrated and recurrent crisis-management training program for air traffic control personnel. Training should combine high-fidelity simulation, severe-weather scenarios, communication breakdowns, navigation-system failures, cyber incidents, emerging airspace conflicts, traffic overload, and multi-agency emergency coordination. Special attention should be given to intelligent data analysis, digital-system resilience, human resource management, adaptive decision-making, and crisis communication because these components showed strong empirical importance in the model. Training should also be extended to supervisors and managers so that operational responses are supported by clear command structures and resource-allocation procedures. Finally, each exercise should be followed by structured evaluation and feedback, with identified weaknesses translated into revised procedures, updated scenarios, and subsequent training cycles so that crisis preparedness becomes a continuous organizational capability rather than an episodic training activity.

Authors' Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethical Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

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