



Administrative Creativity and Its Role in Decision-Making among Elite League Handball Club Coaches from the Players' Perspective

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Abstract

Objectives: This study aimed to develop two scales for measuring administrative creativity and decision-making among coaches of Iraqi Elite Handball League clubs, identify their levels, and examine the role of administrative creativity in supporting coaches' decision-making.

Materials and Methods: This study used a descriptive survey design with a correlational approach. The population consisted of 196 players from Iraqi Elite Handball League clubs during the 2024–2025 season. The sample was divided into an exploratory sample of 14 players, a scale-construction sample of 112 players, and an application sample of 70 players. Two scales were developed: the Administrative Creativity Scale and the Decision-Making Scale. Validity was examined through expert judgment, item discrimination, and internal consistency, while reliability was assessed using Cronbach's alpha. Data were analyzed using SPSS and Microsoft Excel.

Results: The final Administrative Creativity Scale consisted of 80 items across seven domains, while the Decision-Making Scale consisted of 56 items across five domains. The administrative creativity level was moderate, with a mean score of 267.814, while the decision-making level was high, with a mean score of 203.85. Most coaches were perceived to have moderate administrative creativity and high decision-making ability.

Conclusions: The two developed scales were valid and reliable for measuring administrative creativity and decision-making among elite handball coaches. Administrative creativity appears to support decision-making by helping coaches generate alternatives, adapt to match situations, and select appropriate solutions under competitive pressure.

Keywords: administrative creativity; decision-making; handball coaches; elite league; players' perspective.

Introduction

Sports coaching is not limited to technical instruction or physical preparation (Hackfort & Tenenbaum, 2006; Young et al., 2015). In modern competitive sport, coaches are also required to manage people, solve problems, respond to unexpected situations, and make decisions under pressure (Bean & Forneris, 2017; Loturco et al., 2024). This is especially important in handball, where match situations change quickly and the coach's decision may directly influence the rhythm, strategy, and final result of the game.

Administrative creativity refers to the coach's ability to generate new ideas, adapt to different situations, manage available resources, and find practical solutions to problems (Bell, 2025; Loturco et al., 2024; Weston et al., 2011). In team sports, this ability is important because coaches often face unstable match conditions, player fatigue, tactical changes, injuries, and pressure from opponents. A creative coach is more likely to respond flexibly rather than depend only on routine instructions.

Decision-making is also central to coaching effectiveness. Coaches must identify problems, gather relevant information, evaluate alternatives, choose the most suitable solution, and follow up the decision during training or competition. Previous research confirms that decision-making is a fundamental element in sport, especially in open and dynamic team games where coaches and athletes often act under time pressure. Recent research on coaching decision-making also emphasizes that coaches' decisions are shaped by context, experience, available information, and the competitive environment.

In handball, the need for fast and accurate decisions becomes even more important because offensive and defensive transitions occur rapidly. Studies on handball coaching have shown that coaches' decision and planning styles are influenced by personal and contextual factors such as experience, age, and competitive level (E. Balaji & K. Murugavel, 2013; Silva et al., 2025). Therefore, studying administrative creativity and decision-making among elite handball coaches is important for improving coaching quality and team performance (Vealey, 2024; Weston et al., 2011; Winkler et al., 2023).

This study aimed to develop two measurement scales for administrative creativity and decision-making, identify the level of both variables among coaches of elite handball league clubs, and examine the role of administrative creativity in supporting decision-making.

Materials and Methods

Explain the research design, participants or samples, research instruments, data collection procedures, research implementation, and data analysis techniques used in the study (Sugiyono, 2012).

Study Design

This study used a descriptive survey design with a correlational approach. This design was selected because the study aimed to develop two measurement scales and describe the levels of administrative creativity and decision-making among elite handball coaches from the players' perspective.

Study Participants

The research population consisted of 196 players from Iraqi Elite Handball League clubs during the 2024–2025 season. The sample was divided into three groups. The exploratory sample consisted of 14 players, representing 7.14% of the population. The scale-construction sample consisted of 112 players, representing 57.14%. The final application sample consisted of 70 players, representing 35.71%.

Study Organization

The study was conducted during the 2024–2025 sports season. The researcher developed two scales: the Administrative Creativity Scale and the Decision-Making Scale. The Administrative Creativity Scale initially included 105 items distributed across seven domains: originality, fluency, mental flexibility, sensitivity to problems, ability to adapt and connect, maintaining direction, and risk-taking. After item analysis, the final scale consisted of 80 items.

The Decision-Making Scale initially included 65 items distributed across five domains: identifying and diagnosing the problem, collecting data and information, generating alternative solutions, selecting the appropriate solution, and implementing and monitoring the decision. After item analysis, the final scale consisted of 56 items.

Both scales used a five-point response format: always, often, sometimes, rarely, and never. Positive and negative items were scored according to the prepared scoring key.

Statistical Analysis

Data were analyzed using SPSS and Microsoft Excel. The statistical procedures included percentage, arithmetic mean, standard deviation, hypothetical mean, standard error, skewness coefficient, chi-square test, Pearson correlation coefficient, independent samples t-test, Cronbach’s alpha, and standard scores.

Results

Validity of the Administrative Creativity Scale

The expert validation results showed that all seven proposed domains of administrative creativity were accepted. These domains were originality, fluency, mental flexibility, sensitivity to problems, ability to adapt and connect, maintaining direction, and risk-taking.

Table 1. Accepted Domains of the Administrative Creativity Scale

Domain	Expert Agreement	Significance	Decision
Originality	13/13	Significant	Accepted
Fluency	13/13	Significant	Accepted
Mental flexibility	13/13	Significant	Accepted
Sensitivity to problems	13/13	Significant	Accepted
Ability to adapt and connect	13/13	Significant	Accepted
Maintaining direction	13/13	Significant	Accepted
Risk-taking	13/13	Significant	Accepted

Validity of the Decision-Making Scale

The accepted domains of the Decision-Making Scale were identifying and diagnosing the problem, collecting data and information, generating alternatives, choosing the appropriate solution, and implementing and monitoring the decision.

Table 2. Accepted Domains of the Decision-Making Scale

Domain	Expert Agreement	Significance	Decision
Identifying and diagnosing the problem	13/13	Significant	Accepted
Collecting data and information	13/13	Significant	Accepted
Generating alternatives	13/13	Significant	Accepted
Choosing the appropriate solution	13/13	Significant	Accepted
Implementing and monitoring the decision	13/13	Significant	Accepted

Reliability of the Scales

The reliability coefficients were high. Cronbach’s alpha was 0.997 for the Administrative Creativity Scale and 0.989 for the Decision-Making Scale. These values indicate strong internal consistency.

Table 3. Reliability Coefficients of the Two Scales

Scale	Number of Items	Cronbach's Alpha	Interpretation
Administrative Creativity Scal	80	0.997	Highreliability
Decision-Making Scale	56	0.989	High reliability

Level of Administrative Creativity

The results showed that administrative creativity among elite handball coaches was at a moderate level. The mean score was 267.814, which was higher than the hypothetical mean of 240.

Table 4. Statistical Indicators of Administrative Creativity

Scale	Sample	Mean	Hypothetical Mean	Standard Deviation	Level
Administrative creativity	70	267.814	240	40.884	Moderate

Table 5. Distribution of Administrative Creativity Levels

Level	Frequency	Percentage
Very high	10	14.28%
High	12	17.14%
Moderate	42	60.00%
Low	4	5.71%
Very low	2	2.85%

Level of Decision-Making

The results showed that decision-making among elite handball coaches was at a high level. The mean score was 203.85, which was higher than the hypothetical mean of 168.

Table 6. Statistical Indicators of Decision-Making

Scale	Sample	Mean	Hypothetical Mean	Standard Deviation	Level
Decision-making	70	203.85	168	29.545	High

Table 7. Distribution of Decision-Making Levels

Level	Frequency	Percentage
Very high	12	17.14%
High	34	48.75%
Moderate	13	18.57%
Low	11	15.71%
Very low	0	0.00%

Discussion

The findings showed that administrative creativity among elite handball coaches was at a moderate level. This indicates that coaches possess a reasonable ability to generate ideas, adapt to situations, and respond to problems, but this ability is not yet fully developed across all coaches. In competitive handball, moderate creativity may allow coaches to manage routine and familiar situations, but more complex match scenarios require higher levels of originality, flexibility, and risk-taking (E. Balaji & K. Murugavel, 2013; Sunawa et al., 2018).

This finding is important because creativity in sport is closely related to flexible tactical thinking and the ability to respond to unpredictable situations. Research on tactical creativity in team sports emphasizes that creative behavior develops through diversification, deliberate practice, deliberate play, and representative game situations. In this study, the moderate level of administrative creativity suggests that coaches may need more structured professional development programs that encourage creative problem-solving, flexible planning, and adaptive leadership.

The results also showed that coaches achieved a high level of decision-making. This means that players generally perceived their coaches as capable of identifying problems, collecting relevant information, selecting suitable alternatives, and implementing decisions during training and competition. This result is consistent with research showing that decision-making is one of the defining features of coaching expertise, especially in high-performance team sports.

The high level of decision-making may be explained by the competitive nature of elite handball. Coaches are required to make quick tactical adjustments, rotate players, respond to defensive pressure, and control the rhythm of the match. A recent conceptual framework also explains that coaches' decision-making is not an isolated mental process but is shaped by the sport environment, team context, available information, and previous experience.

Although administrative creativity was only moderate, it still appears to play an important role in supporting decision-making. Creative coaches are more able to produce alternatives, avoid rigid responses, and adjust decisions according to the match situation. This is relevant to decision-making in dynamic team sports, where coaches and players often make choices under limited time and uncertain conditions.

The findings also suggest that coaches who show stronger creativity may be better prepared to deal with unexpected match problems. For example, when the team faces tactical pressure, player fatigue, or sudden changes in the opponent's strategy, the coach must not only make a decision quickly but also choose a solution that is suitable for the situation. Studies on handball decision-making indicate that decision and planning styles are influenced by coach-related factors and the competitive characteristics of the team.

Overall, the results confirm that administrative creativity and decision-making are complementary qualities in coaching. Decision-making provides direction, while administrative creativity enriches the alternatives available to the coach. Therefore, developing creativity among coaches may improve the quality of their decisions and strengthen team performance in competitive handball (Dello Iacono et al., 2017; Hermassi et al., 2021; Silva et al., 2025).

Conclusions

The Administrative Creativity Scale and Decision-Making Scale developed in this study showed strong validity and reliability indicators. The final Administrative Creativity Scale consisted of 80 items across seven domains, while the final Decision-Making Scale consisted of 56 items across five domains.

The level of administrative creativity among elite handball coaches was moderate, while the level of decision-making was high. These findings indicate that coaches generally have good decision-making ability, but their administrative creativity still requires further development. Administrative creativity appears to support decision-making by helping coaches generate alternatives, adapt to complex situations, and select appropriate solutions during training and competition.

Recommendations

The developed scales can be used by sports federations, clubs, and researchers to evaluate administrative creativity and decision-making among handball coaches. Coaching education programs should include specific content on creative thinking, tactical flexibility, problem-solving, and decision-making under pressure. Future studies should apply these scales in other sports and examine the relationship between administrative creativity, decision-making, leadership style, and team performance.

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