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A Thematic Model of Effective Coaching Skills Training for Sports Coaches in Tehran Province: A Qualitative Study

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ABSTRACT

Coach education is often treated mainly as technical instruction, although coaches also require communication, leadership, emotional self-regulation, reflective learning, ethical judgment, and contextual awareness. This qualitative study developed a thematic model of effective coaching skills training for sports coaches in Tehran Province. Semi-structured interviews were conducted with 15 participants, including active coaches, sport education and sport management specialists, and academic experts in coach development. Participants were selected through purposive and snowball sampling until data adequacy was judged to have been reached. Data were analysed using a codebook-oriented thematic analysis informed by Braun and Clarke's six-phase procedure. The analysis generated eight themes: specialist and scientific coaching knowledge, communication and interpersonal skills, leadership and team-management competencies, emotional intelligence and self-regulation, experiential learning and reflection, career-path management and professional development, technology and innovative educational approaches, and contextual, cultural, and organizational factors. The model should be interpreted as a conceptual organization of interview-derived themes rather than as a tested causal model. The findings suggest that coach education in this context should move beyond short technical courses and include structured, continuous, reflective, ethically informed, and context-sensitive professional development. Potential implications for athlete-supportive practice and sport governance are discussed cautiously because athlete outcomes and governance effectiveness were not directly measured.

Keywords: Coach education; effective coaching skills; qualitative research; thematic analysis; professional development; Tehran Province

Introduction

Sports coaching has increasingly been conceptualized as a complex educational, relational, and organizational practice rather than as a narrow process of transmitting technical skills. In contemporary sport systems, coaches are expected to design training sessions, teach sport-specific techniques, guide tactical decision-making, manage competitive pressure, communicate with athletes and families, maintain ethical standards, and contribute to the psychological and social development of athletes. These expectations make coach education a governance issue as much as a pedagogical issue. When sport organizations train coaches only in technical or tactical content, they risk leaving critical determinants of athlete well-

being underdeveloped, including communication quality, conflict management, emotional climate, fairness, safety, and the capacity to adapt coaching behaviours to different cultural and organizational contexts. The relevance of coaching to athlete well-being is well established in the sport-coaching literature. Côté and Gilbert (2009) defined coaching effectiveness as the consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, confidence, connection, and character in a specific coaching context (Côté & Gilbert, 2009). This integrative definition is important because it reframes coaching expertise as a combination of knowledge domains rather than a single technical attribute. It also places athlete outcomes at the centre of coaching effectiveness. A coach who understands periodisation and tactics but cannot provide constructive feedback, regulate anger, establish role clarity, or create a climate of respect may produce a sport environment that is technically active but developmentally weak. Conversely, a coach who integrates scientific knowledge with interpersonal sensitivity and reflective practice is more likely to produce sustainable learning and healthier participation.

The coach-athlete relationship is a central mechanism through which coaching affects performance, motivation, and psychological safety. Jowett (2017) argued that coaching effectiveness has the coach-athlete relationship at its heart (Jowett, 2017). The relational dimension is particularly relevant for youth, developing, and semi-professional athletes, for whom sport is not only a performance context but also a site of identity formation, social learning, and emotional exposure. Athletes often interpret feedback, selection decisions, role assignments, and training intensity through the interpersonal climate created by the coach. Poorly delivered feedback may be experienced as humiliation; unclear expectations may create anxiety; perceived unfairness may weaken trust; and uncontrolled anger may normalize fear-based learning. These relational patterns are not minor behavioural details. They are core elements of sport-health governance because they influence whether organized sport becomes a setting for positive development or a setting in which preventable distress and disengagement occur. Coach education has also been examined through the lens of adult learning and professional development. Knowles et al. (2015) emphasized that adult learners benefit from practical relevance, experiential engagement, and the opportunity to connect learning with real professional problems (Knowles et al., 2015). In sport, this means that effective coach education cannot rely only on isolated lectures or short certificate courses. Coaches need repeated cycles of practice, observation, reflection, feedback, mentoring, and evaluation. Research on coach learning has similarly shown that coaches develop through formal, non-formal, and informal learning sources, including workshops, mentorship, peer exchange, reflective writing, and experience in training and competition contexts (Nelson et al., 2006; Werthner & Trudel, 2006). Therefore, a sustainable model of coach education should identify what coaches need to learn and how these capacities can be developed within the realities of their work environments.

A governance-oriented perspective adds a further layer. Sport organizations and public authorities are responsible not only for competition structures but also for the conditions under which coaching labour is trained, evaluated, supported, and ethically regulated. The International Sport Coaching Framework identifies coaches as central actors in athlete and sport-system development and encourages coherent coach-development systems rather than fragmented training events (International Council for Coaching et al., 2013). In Tehran Province, this issue is practically relevant because coaches work across clubs, schools, sport boards, public facilities, and competitive teams, often under resource constraints, administrative pressure, and diverse cultural expectations. These local conditions make Tehran Province an appropriate setting for examining which coaching competencies should be prioritized in a context-sensitive coach education model.

The present study directly reports a qualitative model-building investigation of effective coaching skills training for sports coaches in Tehran Province. Its contribution is not the claim that the identified competencies are entirely new in global coach education literature; rather, the study organizes these competencies into a locally relevant thematic model and clarifies how technical, interpersonal, intrapersonal, technological, ethical, and organizational dimensions should be considered together in coach-development planning. The research question was: What dimensions and components of effective coaching skills training can be identified from the perspectives of coaches and sport experts in Tehran Province, and how can these dimensions be organized into a qualitative thematic model?

The psychological rationale for this approach is also supported by social cognitive theory, coaching efficacy research, and self-determination theory. Bandura's account of self-efficacy explains why beliefs about capability influence learning, persistence, and behaviour under pressure (Bandura, 1977, 1986, 1997), while Feltz et al. (1999) translated this logic into a conceptual model of coaching efficacy (Feltz et al., 1999). Evidence on coaching efficacy and effectiveness further indicates that coaches' beliefs, behaviours, and athletes' perceptions are interconnected (Kavussanu et al., 2008). From a motivational perspective, need-supportive coaching is relevant because athletes' autonomy, competence, and relatedness are closely connected with motivation, engagement, and well-being (Deci & Ryan, 2000; Reynders et al., 2019; Ryan & Deci, 2017).

Methodology

A qualitative model-building design was used because the aim was to organize the experiences, perceptions, and educational needs of coaches and sport experts into a thematic framework. The manuscript follows key qualitative-reporting principles, particularly transparency of sampling, data collection, analysis, and trustworthiness. The analytic approach is described as codebook-oriented thematic analysis informed by Braun and Clarke's six-phase procedure, rather than purely reflexive thematic analysis, because a coding-consistency check was also used.

Participants were recruited through purposive and snowball sampling. Eligible participants were individuals with direct experience in coaching, coach education, sport management, or academic work related to coach development in Tehran Province. The final sample included 15 participants, including active coaches, sport education and sport management specialists, and academic experts in coach development. This mixed expert sample was selected to capture practice-based, organizational, and academic perspectives on effective coaching skills training.

Data were collected through semi-structured interviews focused on effective coaching skills, educational needs, coach-learning challenges, interpersonal and emotional aspects of coaching, professional development, technology use, and contextual factors affecting coaching practice. The semi-structured format provided a consistent focus across interviews while allowing participants to explain practical examples, contextual constraints, and perceived priorities in their own terms.

The data were analysed using a codebook-oriented thematic analysis informed by Braun and Clarke's (2006) six phases (Braun & Clarke, 2006). The researcher first became familiar with the interview texts, generated initial codes, clustered related codes into candidate themes, reviewed themes for internal coherence and distinctiveness, defined and named the themes, and then organized them into a conceptual model. Sampling was stopped when data adequacy was judged to have been reached, meaning that further interviews did not add substantively new codes or themes relevant to the model.

Trustworthiness was supported through repeated engagement with the data, systematic coding, comparison of codes across interviews, review of the thematic structure, and a coding-consistency check on selected interviews. Three interviews

comprising 80 codes were assessed, with 64 agreements and 16 disagreements, yielding an overall agreement of 80%. Because reliability statistics are not central to reflexive thematic analysis, this manuscript presents the procedure as an auxiliary consistency check within a codebook-oriented approach. Interview data are reported at an aggregated thematic level, and no personally identifying participant information is disclosed.

Table 1. Study design and analytic procedures.

Item	Description
Design	Qualitative model-building study based on semi-structured interviews
Setting	Sports coaching context in Tehran Province, Iran
Participants	15 active coaches, sport education/management specialists, and academic experts in coach development
Sampling	Purposive and snowball sampling until data adequacy was judged to have been reached
Data collection	Semi-structured interviews focused on effective coaching skills and educational needs
Analysis	Codebook-oriented thematic analysis informed by Braun and Clarke's six-phase procedure
Trustworthiness	Repeated engagement with the data, systematic coding, theme review, and an 80% coding-consistency check on selected interviews
Ethics and confidentiality	Aggregated anonymized reporting with no personally identifying participant information disclosed

Research Findings

The analysis generated a conceptual thematic model of effective coaching skills training for sports coaches. Effective coaching skills training was placed at the centre of the model, with eight surrounding domains: specialist and scientific coaching knowledge; communication and interpersonal skills; leadership and team-management competencies; emotional intelligence and self-regulation; experiential learning and reflection; career-path management and professional development; technology and innovative educational approaches; and contextual, cultural, and organizational factors. The arrows and links in the model represent the authors' conceptual organization of the themes. They should not be read as tested causal, reciprocal, or statistical relationships.



Figure 1. Thematic model of effective coaching skills training for sports coaches in Tehran Province.

In the integrated model, the central construct is effective coaching skills training for sports coaches in Tehran Province. Around this core, eight major domains are organized. The model is intended as a conceptual structure derived from qualitative themes, not as an empirically validated pathway model. In practical terms, the model proposes that coach education should address individual coach capacities, relational and team-level skills, and system-level conditions. This distinction helps separate the empirical themes from the authors' interpretation and policy implications.

Note. The schematic presents the authors' conceptual organization of the qualitative themes. The arrows indicate proposed conceptual links among domains and the central construct; they do not indicate statistically tested, causal, or empirically validated relationships.

The first theme was specialist and scientific coaching knowledge. This theme included two subthemes: technical and tactical knowledge, and bodily/scientific-analytical literacy. The associated codes included mastery of sport-specific technical principles, tactical analysis of competition, periodised training planning, updating technical knowledge, adapting drills to athletes' skill levels, knowledge of physiology and injury mechanisms, the coach's own bodily literacy, use of fitness data, understanding training load and recovery, and reading scientific resources. Participants framed technical knowledge as necessary but insufficient unless it was updated, individualized, and connected to evidence-informed practice. One statement captured this practical logic: when a coach deeply understands technical principles, the skill can be explained to athletes in a simpler and step-by-step manner. Another statement emphasized that recording heart rate and fatigue helped regulate training load and recovery. These codes show that coach education should include applied sport science, not as abstract theory but as a decision-making resource for safer and more effective training. This first theme has direct implications for athlete well-being. Inadequate knowledge of workload, recovery, injury prevention, and athlete readiness may expose athletes to avoidable physical and psychological strain. Conversely, coaches who understand training load, adaptation, and

individual differences are better positioned to create developmentally appropriate training environments. From a governance perspective, this means that sport organizations should not treat technical certificates as one-time achievements. They should require continuing education in sport science, injury prevention, monitoring, and evidence-informed planning. Scientific knowledge must be connected to daily coaching decisions, including session design, recovery planning, athlete progression, and competition preparation.

The second theme was communication and interpersonal skills. This theme included supportive communication with athletes and professional interaction with stakeholders. Codes within the first subtheme included active listening, constructive feedback, emotional empathy, clarity of roles and expectations, and conflict management with athletes. Codes within the second subtheme included interaction with parents, cooperation with club and school managers, networking with other coaches, management of media and fan expectations, and promotion of respectful dialogue. Participants repeatedly connected communication to trust, problem solving, and team climate. One coach indicated that when they listen without interrupting, athletes more easily discuss training and personal problems. Another described starting corrective feedback with a positive point before explaining how the athlete can improve, in order to avoid a sense of blame. The communication theme is central to the proposed model because it translates knowledge into a teachable and emotionally acceptable form. Coaching communication is not limited to instruction; it includes listening, role clarification, negotiation, expectation management, conflict resolution, and public explanation of team processes. These capacities protect athlete well-being by reducing ambiguity, humiliation, relational tension, and perceived unfairness. They also support governance because coaches are boundary-spanning actors who interact with athletes, families, administrators, other coaches, and sometimes media or community audiences. A sustainable coach education program should therefore include modules on athlete-centred communication, feedback delivery, conflict mediation, parent communication, and professional conduct in public and organizational settings.

The third theme was leadership and team-management competencies. It contained two subthemes: transformational and motivational leadership, and management of training and competition programs. Codes included inspiration and motivation, involving athletes in decisions, behavioural role modelling, fairness in treatment, building team identity and culture, time management and practice structure, decision-making during competition, continuous performance assessment, tactical adaptation to opponents, and use of assistants and support staff. Participants did not describe leadership as authoritarian control. Rather, leadership was expressed through motivation, fairness, structure, shared identity, and the ability to make adaptive decisions under competitive pressure. One coach reported setting a rule that no player had the right to speak insultingly in the locker room, while also trying to speak respectfully as a model. Another emphasized that playing time should be based on performance rather than personal relationships.

This theme links coaching to ethical and organizational governance. Team leadership determines whether sport environments normalize respect, fairness, responsibility, and collective identity or reproduce arbitrary authority and interpersonal harm. Athletes may accept demanding training when they perceive that the coach is fair, prepared, transparent, and committed to the team rather than to personal preference. Leadership also has a technical-management dimension. Coaches must manage time, structure sessions, evaluate team performance, adapt to opponents, and coordinate assistants. These skills require training and assessment. A coach-development system should therefore evaluate not only whether

coaches know sport techniques but also whether they can organize learning environments, make fair decisions, distribute roles, use support staff appropriately, and build a culture that supports both performance and character development.

The fourth theme was emotional intelligence and self-regulation. It contained two subthemes: awareness and regulation of personal emotion, and management of stress and competitive pressure. Codes included recognizing one's own emotional weaknesses, controlling anger during training and competition, psychological recovery after defeat, maintaining focus in sensitive situations, managing emotion before competition, using healthy coping strategies, drawing on social support, managing administrative and organizational pressure, teaching stress-coping skills to athletes, and balancing work and personal life. Participants recognized that coaching involves emotional exposure. Mistakes by referees, public pressure, losses, administrative demands, fatigue, and high expectations can provoke anger, anxiety, or burnout. The model therefore treats the coach's internal regulation as a professional competency, not as a private personality trait. Emotional self-regulation is closely connected to athlete well-being. A coach who cannot regulate anger may create fear rather than trust. A coach who catastrophizes defeat may transfer anxiety to athletes. A coach who is chronically exhausted may become inconsistent, punitive, or inattentive. Participants described practical self-regulation strategies such as breathing, walking, talking with colleagues, and reframing defeat as a learning opportunity. They also referred to teaching relaxation and imagery to athletes. These findings suggest that coach education should include psychological skills for coaches themselves, not only psychological skills for athletes. Sport organizations should also recognize that coaches operate under pressures that require structural support. Training in emotional intelligence should be combined with workload management, mentoring, peer support, and realistic evaluation systems.

The fifth theme was experiential learning and reflection. This theme contained two subthemes: learning from experience and error, and mentoring and peer-oriented learning. Codes included regular reflection after practice and competition, recording coaching experiences, learning from past mistakes, adapting coaching style to conditions, using athlete feedback, having a mentor coach, observing experienced coaches, coach discussion meetings, learning groups for exchange of experience, and participation in workshops and coaching clinics. The theme indicates that effective coaching skills develop through iterative learning rather than through one-directional instruction. Participants emphasized writing notes after sessions, reviewing repeated tactical errors, asking athletes for direct feedback, observing experienced coaches, and participating in peer learning groups.

This theme is particularly important for sustainable sport governance because it implies that coach education should be longitudinal. If skill development depends on experience, reflection, feedback, and mentoring, then one-off training courses cannot be expected to produce competent coaches on their own. Coach education should include structured reflection journals, supervised practice, peer review, mentorship, video-based self-analysis, and post-course follow-up. Reflection also connects to athlete well-being because it helps coaches question whether their instructional methods, emotional responses, and selection decisions are producing intended or unintended effects. A reflective coach is more likely to revise harmful habits and to adapt methods to the needs of current athletes rather than relying uncritically on inherited routines. The sixth theme was career-path management and professional development. It included career planning and continuous, levelled education. Codes included setting long-term career goals, planning for different coaching levels, seeking growth and promotion opportunities, managing transitions between coaching roles, balancing short-term results and professional growth, attending formal coaching courses, training based on competency standards, continuous evaluation of coach competence, educational

needs assessment before courses, and maintaining a lifelong learning portfolio. Participants described coaching as a career trajectory with role transitions, not simply as a static job. Moving from assistant coach to head coach, from youth to adult sport, or from local to higher-level competition requires changes in responsibility, mindset, and competence.

The career-development theme suggests that sustainable coach education should be aligned with progression pathways. Courses should be differentiated by coaching level, athlete age, competitive context, and role responsibility. They should begin with needs assessment, include competency-based standards, and end with evaluation of learning and practice. Participants valued courses that asked what problems coaches actually faced before designing content. They also described keeping certificates, notes, and practice plans as a way of tracking growth. For governance, this implies that sport institutions should build transparent development pathways, competency maps, continuing professional development requirements, and mechanisms for recognizing learning across formal and informal contexts. Such systems can reduce dependence on short-term results and encourage long-term professional improvement.

The seventh theme was technology and innovative educational approaches. It contained two subthemes: use of technology and data analysis, and game-based perception-action training. Codes included video analysis, software for training design, digital monitoring of training load, infrastructural limitations, improvement of coaches' digital literacy, designing drills similar to match conditions, using small-sided and scenario-based games, varying environmental conditions, attention to environmental cues, and encouraging creativity in problem solving. Participants valued technology because it made practice and competition visible for later analysis. Video could reveal details missed during live performance; apps could help monitor training load; and planning software could make sessions more structured. However, they also noted barriers such as low internet speed and lack of equipment.

This theme expands the meaning of innovation beyond digital tools. Innovative coaching also involved designing training environments that simulate decision-making pressures in competition. Participants described using small-sided games with specific rules, changing training spaces and participant numbers, asking athletes to scan environmental cues, and encouraging creative solutions. These approaches support athlete well-being by making practice more engaging, adaptive, and cognitively meaningful. They also support governance by identifying infrastructure and digital literacy as organizational responsibilities. A coach cannot be expected to implement video analysis, data monitoring, or modern learning design if facilities, internet access, equipment, or training support are absent. Therefore, innovation should be planned as a system-level capacity, not merely as individual coach enthusiasm.

The eighth theme was contextual, cultural, and organizational factors. It included organizational and multicultural challenges, and culture, ethics, and professional values. Codes included cultural differences in teams, language and communication problems, conditions of training facilities, inadequate organizational support, pressure from administrative and federation structures, adherence to professional ethics, respect for religious and cultural values, avoidance of discrimination and labelling, character and social education of athletes, and the coach's social responsibility. This theme shows that coaching skills are not practiced in an empty environment. Coaches work inside cultural, institutional, and material conditions that shape what they can do and how their actions are interpreted.

The contextual theme is fundamental to the governance orientation of the model. Coaches may need to adjust communication when athletes come from different ethnic or linguistic backgrounds. They may need to adapt training when facilities are poor. They may face short contracts, administrative pressure, or expectations for immediate results that conflict

with long-term athlete development. They also carry ethical responsibilities, including avoiding discrimination, respecting cultural and religious values, and supporting athletes' social development. One participant expressed that an athlete should leave the coaching relationship not only as a better player but also as a more responsible person. This perspective positions coaches as community and developmental actors. It also shows that athlete well-being depends on ethical climates and organizational support, not only on individual coaching technique.

The eight themes were conceptually integrated into a thematic model in which effective coaching skills training is understood as a multi-domain and context-sensitive process. The model organizes four broad capacities: professional knowledge, interpersonal competence, intrapersonal regulation, and contextual-ethical judgment. These capacities are operationalized through the eight themes. This interpretation links coach training to potentially athlete-supportive and governance-relevant practice, but these implications should be treated as conceptual because athlete outcomes and governance effectiveness were not directly measured.

Table 2. Final thematic model of effective coaching skills training.

Theme	Subthemes	Illustrative codes from interview data
Specialist and scientific coaching knowledge	Technical/tactical knowledge; bodily and scientific-analytical literacy	Technical mastery; tactical analysis; periodised planning; updating knowledge; adapting drills; physiology and injury knowledge; load and recovery monitoring
Communication and interpersonal skills	Supportive athlete communication; professional stakeholder interaction	Active listening; constructive feedback; empathy; role clarity; conflict management; parent communication; networking; respectful dialogue
Leadership and team-management competencies	Transformational/motivational leadership; training and competition management	Motivation; athlete participation in decisions; behavioural role modelling; fairness; team culture; time management; match decision-making; performance assessment
Emotional intelligence and self-regulation	Personal emotional awareness/regulation; stress and pressure management	Recognizing emotional weaknesses; controlling anger; recovery after defeat; maintaining focus; healthy coping; social support; teaching stress coping
Experiential learning and reflection	Learning from experience and error; mentoring and peer-oriented learning	Post-session reflection; recording experiences; learning from mistakes; athlete feedback; mentor coach; observing experienced coaches; peer groups
Career-path management and professional development	Career planning; continuous and levelled education	Long-term career goals; role transitions; formal courses; competency standards; needs assessment; continuous evaluation; learning portfolio
Technology and innovative educational approaches	Technology and data analysis; game-based perception-action training	Video analysis; training-design software; digital load monitoring; digital literacy; match-like drills; small-sided games; environmental cues; creativity
Contextual, cultural, and organizational factors	Organizational/multicultural challenges; culture, ethics, and professional values	Cultural differences; language barriers; facility limitations; weak organizational support; administrative pressure; professional ethics; anti-discrimination; social responsibility

Table 3. Conceptual interpretation of the model for athlete-supportive practice and sport-governance implications.

Model domain	Relevance to athlete well-being	Governance implication
Scientific coaching knowledge	Supports safe, individualized, evidence-informed training and recovery	Require continuing education in sport science, monitoring, and injury-prevention literacy
Communication	Reduces ambiguity, humiliation, conflict, and mistrust	Assess feedback skills, parent communication, role clarity, and conflict-resolution competence
Leadership	Builds fair, respectful, motivating team climates	Include ethical leadership, fairness standards, and team-culture criteria in coach evaluation
Emotional self-regulation	Reduces fear-based coaching and supports healthy interpretation of pressure and failure	Provide coach well-being support, mentoring, and realistic workload/performance expectations
Reflective learning	Improves responsiveness to athlete needs and reduces repeated harmful habits	Require reflective journals, supervised practice, mentorship, and post-course follow-up
Career development	Improves continuity and competence across athlete age groups and competitive levels	Create transparent competency pathways and lifelong learning portfolios
Technology and innovation	Improves analysis, engagement, workload awareness, and representative practice design	Invest in equipment, digital literacy, and infrastructure for technology-enabled coach education
Context and ethics	Strengthens inclusion, cultural responsiveness, and social development	Integrate ethics, anti-discrimination, cultural competence, and organizational accountability

Discussion and Conclusion

This study developed a qualitative thematic model of effective coaching skills training for sports coaches in Tehran Province. The central contribution is context-specific integration: the model brings together technical, interpersonal, intrapersonal, reflective, technological, ethical, and organizational domains that participants considered relevant to coach education in this setting. The findings are consistent with Côté and Gilbert's (2009) integrative definition of coaching effectiveness, but the present study should not claim that the eight domains are entirely novel in the international coach-education literature (Côté & Gilbert, 2009).

Figure 1 is interpreted as a conceptual map rather than a validated structural model. The arrows among the domains show how the authors propose the themes may relate in practice; however, the study did not statistically test reciprocal relationships or causal pathways. This clarification is important because the data support theme identification and conceptual organization, not empirical validation of inter-domain effects.

The model is also consistent with evidence that coach education systems are most effective when they combine formal learning, situated practice, mentoring, and coach-developer support. Research on continuing professional development emphasizes that coach learning is strongly shaped by experience and reflection rather than by classroom transmission alone (Cushion et al., 2003; Gilbert & Trudel, 2001; Irwin et al., 2004; Nelson et al., 2006; Werthner & Trudel, 2006). Studies of national and high-performance coach education programs further show that coherent pathways, coach developers, and institutional support are critical to sustainable coach development (Callary et al., 2014; International Council for Coaching et al., 2013; Mallett et al., 2009; North, 2010). Because organized sport is also a setting for health promotion and physical activity participation, this governance responsibility is aligned with global public-health priorities that call for supportive systems and environments for active participation (World Health, 2018).

The first major implication is that technical knowledge remains essential but should not dominate coach education at the expense of other competencies. Participants identified mastery of technical principles, tactical analysis, periodised planning, and sport-science literacy as important components of effective coaching. This aligns with the literature on coaching expertise, which recognizes sport-specific knowledge and planning as core elements of professional competence (Lyle, 2002; Trudel & Gilbert, 2006). However, the model shows that technical skill must be connected to athlete readiness, injury prevention, recovery, and individualized progression. From a health-governance perspective, this implies that evidence-informed training should be integrated with safeguarding and workload management. Courses that teach tactics without teaching load monitoring, recovery, and adaptation may unintentionally contribute to overtraining or avoidable injury risk.

The second implication concerns the relational foundation of coach effectiveness. The communication theme supports Jowett's (2017) argument that the coach-athlete relationship is central to coaching effectiveness (Jowett, 2017). Active listening, constructive feedback, empathy, role clarity, and conflict management were not peripheral skills in this study. They were core mechanisms through which coaching knowledge became usable and athlete trust was maintained. The coach's interactions with parents, managers, colleagues, fans, and media further show that coaching is embedded in a network of stakeholders. This has implications for coach-education curricula. Communication training should not be reduced to generic advice to 'communicate well.' It should include observable and assessable practices, such as how to deliver corrective feedback without humiliation, how to clarify selection decisions, how to hold private conflict-resolution conversations, and how to communicate development goals to parents or administrators.

Leadership and team management emerged as another domain linking performance and well-being. The model's leadership theme resonates with work on coaching culture and the social organization of coaching practice (Cassidy et al., 2009; Potrac et al., 2000). Coaches in the study associated leadership with fairness, motivation, role modelling, identity formation, and structured practice management. These elements influence whether a team becomes an environment of shared responsibility or a setting marked by arbitrary authority. The governance relevance is clear: sport systems cannot ensure athlete welfare only through written policies if everyday team cultures contradict those policies. Coach education should therefore include ethical leadership, fairness in selection, anti-discrimination practice, and team-culture building.

The emotional intelligence theme is one of the most important findings for athlete well-being. Research has increasingly drawn attention to coaches' psychological stress and well-being, including the pressures associated with performance demands, daily interactions, and organizational expectations (Potts et al., 2024). The present model shows that emotional regulation is not merely a personal preference. It is a professional skill with consequences for athletes. A coach who reacts to mistakes with uncontrolled anger may create fear, avoidance, and reduced learning. A coach who manages post-defeat emotions constructively can help athletes interpret failure as information rather than as identity threat. This finding supports the inclusion of emotional intelligence, coping strategies, and work-life balance in coach education. It also suggests that sport organizations should provide support systems for coaches, because self-regulation is harder when workloads, contracts, and performance expectations are structurally unreasonable.

The experiential learning and reflection theme supports established research on how coaches learn. Coaches do not develop only through formal courses; they learn from experience, mentors, peers, observation, and reflective practice (Gilbert & Trudel, 2001; Irwin et al., 2004; Nelson et al., 2006; Werthner & Trudel, 2006). In the current model, reflection was expressed through note-taking after practice, reviewing repeated errors, seeking athlete feedback, and observing experienced coaches. These practices make coaching knowledge visible to the coach and create opportunities for improvement. A practical implication is that coach-development programs should include structured reflection tasks and mentoring relationships. Certificates should not be awarded only for attendance. They should involve evidence of reflective learning, applied experimentation, and feedback-based improvement.

Career-path management and professional development add a longitudinal dimension to the model. The findings indicate that coaches need pathways, not isolated workshops. They need to understand the competencies required at different coaching levels and to prepare for role transitions. This aligns with international frameworks that conceptualize coaching as a profession requiring staged development and continuing learning (International Council for Coaching et al., 2013; Mallett et al., 2009). For Tehran Province and similar settings, this suggests that sport authorities and federations should design competency maps that link training content to coaching levels, athlete age groups, and competitive responsibilities. Evaluation of coach competence should include evidence from practice, not only written examinations or course attendance.

The technology and innovative pedagogy theme reflects changing expectations in modern coaching. Technology-enhanced learning, video analysis, and digital monitoring can support coach decisions, but only when coaches have digital literacy and adequate infrastructure. The interview data also showed that innovation includes game-based and perception-action training, not just software. This is consistent with ecological and constraints-led approaches that emphasize representative practice environments and athlete decision-making (Davids et al., 2008; Renshaw et al., 2019). The governance implication is that digital and pedagogical innovation require institutional investment. It is not enough to ask coaches to modernize their

methods while facilities remain poor or equipment unavailable. Sustainable sport governance should align coach training with technological infrastructure and access.

The contextual, cultural, and organizational theme is a distinctive strength of the model. Many coach-education models describe competencies but give insufficient attention to the constraints under which coaches work. The participants in this study identified cultural differences, language barriers, inadequate facilities, administrative pressure, short-term result expectations, ethical obligations, religious and cultural values, and social responsibility. These findings emphasize that coaching is situated. The same behaviour may have different effects depending on cultural background, organizational pressure, and resource availability. For governance, this means that coach education should include cultural responsiveness, ethical reasoning, and strategies for working within constrained environments. It also means that organizations should be held responsible for the conditions that shape coaching quality.

The model has potential relevance for athlete-supportive practice because several themes concern safety, communication, role clarity, emotional regulation, inclusion, and ethical conduct. However, athlete well-being, psychological safety, satisfaction, safeguarding outcomes, and retention were not directly measured. Therefore, the manuscript frames athlete well-being as a plausible implication of the model rather than as a demonstrated outcome.

The model also has possible implications for sport governance. Sustainability in coach education may require programs that are continuous, evidence-informed, responsive to local needs, and institutionally supported. These implications are presented as policy-relevant interpretations of the qualitative themes, not as evidence that the model improves governance effectiveness. Future intervention or longitudinal studies are needed to test whether implementation of this model changes coach behaviour, athlete outcomes, or organizational accountability.

Several limitations should be acknowledged. The study was qualitative and based on 15 interviews in Tehran Province, so the findings should be interpreted as an in-depth thematic model rather than statistically generalizable evidence. The sample was heterogeneous, which may limit transferability across sports, provinces, and organizational settings. The model was not validated through structural equation modelling, intervention testing, longitudinal evaluation, or direct athlete-outcome measurement. The study also did not directly measure athlete well-being or governance effectiveness. In addition, the Results section relies mainly on summarized thematic evidence rather than extensive verbatim quotations from participants. Although confidentiality and voluntary participation are addressed, a formal ethics approval code is not reported in the manuscript.

Future research should test the model in different provinces, sport types, competitive levels, and athlete age groups. Quantitative instruments could be developed to assess the eight domains and their subcomponents. Intervention studies could examine whether training programs based on this model improve coach behaviour, athlete satisfaction, perceived psychological safety, training quality, or retention. Longitudinal studies could explore how coaches progress across the career pathway and how mentoring, digital tools, and reflective practice influence their development. Finally, policy research could examine how federations, clubs, and public sport authorities can implement competency-based coach education while accounting for resource constraints and cultural diversity.

Conclusion

This study presents a qualitative thematic model of effective coaching skills training for sports coaches in Tehran Province. The model identifies eight interrelated domains that may inform coach-education planning: specialist and scientific knowledge, communication and interpersonal skills, leadership and team management, emotional intelligence and self-regulation, experiential learning and reflection, career-path management and professional development, technology and innovative educational approaches, and contextual, cultural, and organizational factors. The model is treated as a conceptual and programmatic framework derived from interview data, not as a validated causal model. Its practical message is that coach education should move beyond short technical courses toward more continuous, competency-based, reflective, ethically informed, and context-sensitive professional development. Further empirical work is needed to test whether this model improves coach behaviour, athlete well-being, or sport-governance outcomes.

Practical Recommendations for Coach-Education Policy

Coach education curricula should include technical, relational, emotional, reflective, digital, ethical, and contextual competencies.

Training should be organized as a continuous pathway rather than as isolated short-term courses.

Needs assessment should precede course design so that program content reflects actual challenges faced by coaches.

Mentoring, peer learning groups, video-based reflection, and post-course follow-up should be embedded in coach development.

Sport organizations should provide infrastructure and policy support for technology-enabled analysis and workload monitoring.

Evaluation of coaches should include evidence of communication, fairness, ethical conduct, and athlete-supportive practice, not only competition results.

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Authors' Contributions

Hoora Heybatzadeh: conceptualization, investigation, data analysis, and original research preparation. Mahdi Naderi Nasab: supervision, conceptual guidance, methodological review, and corresponding-author responsibilities. Seyyed Abbas Biniaz: advisory support, scientific review, and interpretation of sport-science relevance. All authors approved the manuscript for submission.

Declaration of Interest

The authors of this article declared no conflict of interest.

AI use statement

Artificial intelligence tools were used only to support language editing, translation refinement, formatting, and consistency checks. The authors take full responsibility for the accuracy of the data, analyses, interpretations, citations, and final content of the manuscript.

Ethical Considerations

This study was conducted using interview and questionnaire data. Participation was voluntary, and the confidentiality of participants' responses was preserved. The research procedure was designed to avoid harm to participants and to respect the principles of informed participation and academic integrity.

Transparency of Data

Reasonable requests for research materials should be directed to the corresponding author, subject to university policies and participant confidentiality.

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