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Explaining the Role of Integrating the Behavioral, Social, and Cognitive Dimensions of Peer Coaching in Enhancing the Psychological and Job Empowerment of Tehran Municipality Employees

ABSTRACT

The increasing complexity of tasks in public organizations and the requirements of modern service delivery have intensified the need for the psychological and job empowerment of human resources. The present study aimed to explain the role of integrating the three dimensions of peer coaching—behavioral, social, and cognitive—in enhancing the job and psychological empowerment of Tehran Municipality employees. In terms of purpose, this study was applied, and in terms of the nature of the data, it employed an exploratory mixed-methods design (qualitative–quantitative). In the qualitative phase, thematic analysis and semi-structured interviews with 18 managers and experts in human resource management and urban management, selected through purposive sampling until theoretical saturation was achieved, were used to extract the components and indicators of the model. The validity and reliability of the qualitative phase were confirmed using Cohen’s kappa coefficient (0.833) and Krippendorff’s alpha (0.877). In the quantitative phase, the developed model was validated using a researcher-made questionnaire administered to a sample of 210 Tehran Municipality employees, and the data were analyzed using partial least squares structural equation modeling (PLS-SEM). Qualitative data analysis resulted in the extraction of 151 initial codes, 27 basic themes, and 11 final components organized within three dimensions: behavioral, including role modeling, experience sharing, and constructive feedback; social, including interpersonal trust, psychological safety, and peer networking; and cognitive, including interactive learning, collaborative problem solving, and belief revision. The quantitative findings and structural model assessment indicated that integration of the three dimensions of peer coaching had a positive and significant effect on job empowerment and the enhancement of employees’ psychological competencies ($\beta = 0.580$, $t > 1.96$). Based on structural modeling, employee job empowerment (C06) was identified as an outcome construct influenced by the synergy of the behavioral and social dimensions through cognitive mechanisms, and the research model demonstrated satisfactory fit and a strong coefficient of determination. The results indicate that peer coaching extends beyond a unidimensional intervention and constitutes an integrated mechanism through which behavioral interactions and social facilitation, by activating cognitive processing mechanisms, contribute to the release of employees’ internal capacities, enhanced self-efficacy, a stronger sense of autonomy, and ultimately comprehensive job empowerment within the urban management system. This model provides valuable practical strategies for establishing a workplace peer-support system and redesigning mechanisms for human capital development within the municipality.

Keywords: peer coaching, behavioral, social, and cognitive dimensions, psychological empowerment, job empowerment, Tehran Municipality, structural equation modeling.

Introduction

Public organizations are increasingly required to operate in environments characterized by service complexity, rapidly changing citizen expectations, technological transformation, accountability pressures, and the need for greater organizational responsiveness. Under such conditions, the effectiveness of municipal organizations depends not only on formal structures, administrative regulations, and technological resources but also on the extent to which employees possess the psychological, behavioral, social, and cognitive capacities required to act autonomously, learn continuously, solve problems, collaborate with colleagues, and adapt their behavior to emerging organizational demands. Human resource development has therefore shifted from conventional training-oriented approaches toward developmental systems that emphasize empowerment, workplace learning, participatory capability building, and continuous professional growth. Contemporary human resource development models increasingly conceptualize employees as active agents whose performance improves when they experience meaningfulness, competence, autonomy, influence, and opportunities for self-development. Within public-sector organizations, empowerment is particularly important because bureaucratic structures, centralized decision-making, procedural constraints, and rigid hierarchical relationships may limit employee discretion and weaken initiative. Accordingly, recent human resource development research has emphasized the need to develop integrated empowerment systems capable of simultaneously strengthening individual capabilities and organizational performance [1]. Empowerment is therefore no longer viewed merely as the delegation of authority; rather, it encompasses a complex psychological and job-related process through which employees develop confidence in their competencies, perceive greater control over their work, become intrinsically motivated, and demonstrate stronger readiness to participate in organizational decision-making and problem-solving processes [2].

Psychological empowerment constitutes one of the central mechanisms through which organizations can transform human resources from passive recipients of managerial instructions into self-directed, responsible, and development-oriented organizational actors. It is generally associated with employees' perceptions of competence, self-determination, meaningfulness, and impact, and these perceptions can influence motivation, creativity, proactive behavior, organizational attachment, and willingness to accept responsibility. In the public sector, psychological empowerment is particularly relevant because employees are frequently required to work within formalized systems while simultaneously responding to complex and context-dependent service needs. Research has shown that empowerment can function as an important mediating mechanism between managerial or organizational conditions and employee behavioral outcomes. For example, inclusive leadership has been associated with proactive employee behavior through the mediating role of psychological empowerment, suggesting that employees are more likely to initiate constructive actions when they perceive themselves as capable and influential organizational participants [3]. Similarly, empowerment has been linked to professional thinking, ambidextrous work behavior, and employees' ability to combine exploration and exploitation in professional activities [4]. More recent evidence also indicates that empowerment can contribute to employee creativity when it develops within an organizational context characterized by fairness, identity, and socially responsible practices [5]. However, empowerment is not automatically beneficial in every organizational context; differentiated empowerment practices may also produce unintended outcomes such as perceptions of unequal treatment and knowledge hiding when empowerment opportunities are distributed inconsistently among employees [6]. Consequently, the development of empowerment should be grounded in participatory and relational processes rather than being limited to top-down managerial delegation.

One mechanism that has attracted increasing attention within contemporary human resource development is peer coaching. Peer coaching can be conceptualized as a reciprocal developmental relationship in which individuals at relatively similar organizational levels support each other through observation, dialogue, feedback, reflection, knowledge exchange, collaborative problem solving, and behavioral guidance. Unlike conventional supervisory coaching, peer coaching is based on horizontal rather than hierarchical interaction and therefore has the potential to reduce status barriers, facilitate open communication, and strengthen learning through shared experience. From a social-constructivist perspective, workplace learning is not merely an individual cognitive activity but is constructed through interaction, reflection, dialogue, and engagement with colleagues. Peer coaching creates a developmental setting in which employees can articulate work-related problems, exchange interpretations, receive constructive feedback, and jointly generate alternative courses of action [7]. Peer guidance and coaching can also contribute to employee empowerment by strengthening autonomy, reducing psychological exhaustion, and increasing access to developmental support within the workplace [8]. Earlier work on workplace coaching has similarly emphasized that effective coaches require multidimensional capabilities, including interpersonal communication, facilitation, feedback provision, reflective questioning, and the capacity to support learning without imposing solutions [9]. These characteristics make peer coaching particularly relevant to public and municipal organizations, where formal training alone may be insufficient to address the contextual, relational, and experiential dimensions of employees' developmental needs.

The effectiveness of peer coaching can be better understood when its behavioral dimension is considered explicitly. Workplace behavior develops through repeated practice, feedback, observation, reinforcement, and adjustment to social and task-related conditions. Peer coaching can provide employees with opportunities to observe effective behaviors, model successful practices, receive immediate feedback, identify ineffective work habits, and gradually modify their behavioral responses. Behavioral learning is particularly important in organizations where employees must perform complex interpersonal and service-related tasks because many competencies cannot be developed solely through formal instruction. Behavioral and social learning processes can operate systemically in municipal workplaces, enabling employees to learn not only from written procedures but also from observing colleagues, discussing work experiences, and receiving developmental guidance from peers [10]. Coaching strategies accompanied by interactive learning have also been associated with improvements in organizational citizenship behavior and job attachment, indicating that developmental interactions may influence employees' willingness to engage beyond formal role requirements [11]. Through behavioral self-regulation, constructive feedback, conflict management, active listening, and reinforcement of effective work routines, peer coaching may therefore contribute to a gradual transformation of employees' work behavior. Such behavioral transformation is especially significant in municipal settings, where employees continuously interact with colleagues, managers, and citizens and must regulate their conduct across diverse organizational situations.

Nevertheless, behavioral change does not occur independently of the social environment. Peer coaching is inherently relational, and its effectiveness depends on the quality of interpersonal relationships, trust, psychological safety, organizational support, and access to peer networks. Psychological safety enables employees to express uncertainty, admit mistakes, ask questions, seek help, and discuss performance difficulties without fear of humiliation or punitive consequences. Organizational trust further supports knowledge sharing by reducing perceived interpersonal risk and increasing confidence that shared information will not be misused. Evidence suggests that psychological safety and organizational trust have

important behavioral consequences for knowledge-sharing behavior among peers, demonstrating that relational conditions can determine whether employees are willing to exchange experiences and support each other's learning [12]. Social capital is also relevant because interpersonal connections, shared norms, and relational resources influence work motivation and employees' psychological functioning [13]. Within municipal organizations, collaborative learning and peer networks can become important components of integrated human resource development systems because they allow dispersed employee knowledge to circulate across organizational units and facilitate mutual learning [14]. Consequently, the social dimension of peer coaching should not be treated as a secondary contextual factor; it is a fundamental mechanism through which employees develop trust, reciprocal commitment, psychological safety, and access to informal learning resources.

Peer coaching also contains a distinct cognitive dimension that is essential for sustainable empowerment. Employees do not merely imitate observed behaviors; they interpret experiences, evaluate alternative responses, reconsider assumptions, organize knowledge, and develop new mental models. Cognitive coaching facilitates reflective thinking by encouraging individuals to question existing beliefs, analyze work-related situations, identify the assumptions underlying decisions, and consider multiple solutions to organizational problems. Research on peer guidance in bureaucratic organizations has highlighted the interaction between cognitive and social dimensions, indicating that peer-based development is most effective when employees are simultaneously supported in interpersonal learning and reflective cognitive processing [15]. Cognitive coaching combined with social support has also been associated with higher job autonomy and intrinsic motivation, suggesting that reflective developmental processes may influence not only competence but also employees' willingness to take ownership of their work [16]. From this perspective, peer coaching may enhance cognitive competencies such as critical thinking, situational analysis, problem solving, self-directed learning, and decision-making. These competencies are especially important in municipal administration because employees frequently encounter multidimensional problems that cannot be addressed effectively through routine procedures alone. The cognitive dimension of peer coaching may therefore serve as a mechanism through which behavioral experience and social interaction are transformed into deeper learning and more autonomous professional judgment.

The integration of behavioral, social, and cognitive mechanisms is particularly important because workplace development rarely occurs through a single pathway. Employees may receive behavioral feedback but fail to act on it if interpersonal trust is weak; they may participate in supportive peer networks but gain little developmental benefit if interactions do not stimulate reflection; and they may possess strong analytical capabilities but remain reluctant to apply them if organizational conditions undermine autonomy or psychological safety. An integrated peer-coaching model therefore requires attention to the interdependence of behavioral modification, social learning, and cognitive processing. Research on socio-technical dynamics has shown that empowerment within metropolitan administrations depends on the interaction between organizational, technological, and human factors rather than on isolated interventions [17]. Likewise, professional development models based on guidance and peer assessment demonstrate that developmental effectiveness improves when feedback, evaluation, learning, and peer interaction are systematically integrated [18]. Peer mentoring research has further shown that peer relationships can strengthen psychological empowerment through processes associated with self-determination, particularly when individuals experience supportive interactions that promote autonomy and competence [19]. These findings suggest that a comprehensive peer-coaching system should create a developmental cycle in which social

interaction enables psychological safety, behavioral exchange provides observable learning opportunities, and cognitive reflection transforms those experiences into competencies and empowered work behavior.

The importance of this integration is further reinforced by research connecting psychological empowerment with innovative work behavior and employee engagement. Knowledge sharing alone may not produce developmental outcomes unless employees interpret that knowledge as a resource for autonomous action and feel psychologically capable of applying it. Psychological empowerment can strengthen the relationship between collaborative knowledge-sharing environments and innovative work behavior by increasing employees' confidence and willingness to experiment with new approaches [20]. Organizational learning capability similarly depends on structural and behavioral conditions that encourage employees to participate in professional learning and remain committed to organizational goals [21]. Such findings have direct implications for peer coaching because coaching interactions represent a practical organizational mechanism through which learning capability can be embedded in daily work. Rather than relying exclusively on formal courses or episodic training programs, peer coaching integrates learning into routine organizational activity by transforming workplace problems, interpersonal interactions, and employee experiences into opportunities for continuous development. In this sense, peer coaching can contribute simultaneously to individual empowerment and collective organizational learning.

For municipal organizations, the need for such an approach is particularly pronounced. Municipal employees function at the interface between public administration and citizens and are expected to respond to operational problems, community needs, interdepartmental coordination requirements, and service-delivery challenges. These demands require a combination of technical knowledge, emotional regulation, interpersonal competence, critical thinking, and behavioral adaptability. At the same time, municipal organizations may be characterized by formal hierarchies and administrative routines that restrict spontaneous knowledge exchange and employee participation. Research specifically addressing human resource development in Tehran Municipality has emphasized the importance of collaborative learning and peer networks in designing integrated developmental systems [14], while studies of peer guidance within municipalities have demonstrated its potential contribution to job empowerment and the reduction of workforce burnout [8]. These findings support the idea that peer coaching may provide a contextually appropriate developmental strategy for Tehran Municipality, particularly when it is structured as an integrated system rather than as a loosely defined interpersonal practice.

Developing such an integrated system also requires methodological attention to the relationships among its components. Peer coaching includes multiple dimensions and mechanisms that may influence one another in hierarchical and reciprocal ways. Interpretive structural modeling has been used to examine complex organizational decision-making and problem-solving processes by determining the directional relationships among interconnected factors [22]. It has also been applied specifically to identify and structure factors influencing the effectiveness of coaching programs in public-sector organizations, enabling researchers to distinguish foundational drivers from intermediate mechanisms and outcome-level factors [23]. Once the conceptual structure of such a model is established, structural equation modeling can be used to empirically assess the relationships among latent constructs and evaluate the explanatory and predictive capacity of the proposed framework. This combined logic is appropriate for investigating peer coaching because its behavioral, social, cognitive, and empowerment-related components are theoretically interdependent rather than independent variables operating in isolation.

Despite the growing literature on employee empowerment, coaching, psychological safety, organizational learning, and workplace development, an important conceptual gap remains. Many studies have examined empowerment primarily as an

outcome of leadership, organizational climate, or human resource practices, while peer coaching studies have often emphasized either interpersonal support, knowledge sharing, behavioral learning, or reflective practice separately. Such fragmentation limits understanding of how different dimensions of peer coaching operate collectively to generate job and psychological empowerment. In particular, insufficient attention has been paid to the mechanisms through which behavioral practices such as modeling, feedback, and behavioral regulation interact with social mechanisms such as trust, psychological safety, and peer networking and with cognitive mechanisms such as reflection, problem solving, and belief revision. The existing evidence suggests that each of these dimensions contributes to employee development, yet the value of peer coaching may lie precisely in their integration. Furthermore, the dynamics of such integration remain underexplored within urban public administration, where employees work under distinctive institutional, bureaucratic, and service-delivery conditions. A context-sensitive model that identifies the constituent dimensions of peer coaching and empirically evaluates their relationships with employee empowerment can therefore contribute both to human resource development theory and to practical municipal management.

Accordingly, the aim of the present study was to explain the role of integrating the behavioral, social, and cognitive dimensions of peer coaching in enhancing the psychological and job empowerment of Tehran Municipality employees.

Methodology

The present study was applied in terms of purpose and employed an exploratory mixed-methods design in terms of data collection.

a) Qualitative Phase: Using thematic analysis involving open, axial, and selective coding, and drawing on 18 in-depth interviews with experts, 11 components were identified within the three principal dimensions. Instrument reliability in this phase was assessed using an intercoder agreement index.

b) Quantitative Phase: A researcher-made questionnaire based on a five-point Likert scale was used to collect data from 210 Tehran Municipality employees. Construct validity, including convergent and discriminant validity, and instrument reliability, including Cronbach's alpha and composite reliability, were confirmed using SmartPLS. The data were analyzed using partial least squares structural equation modeling (PLS-SEM).

The data collection methods used in this study were classified into library-based and field methods. Library-based methods were employed to collect information relating to the theoretical literature and previous research, whereas field methods, including document review, interviews, and questionnaires, were used to collect the information required to confirm or reject the propositions of the study.

In the qualitative phase, experts' opinions were collected through semi-structured interviews.

To examine the theoretical issues associated with the research topic and to review the relevant literature and previous studies, written sources were used, including specialized books addressing the design of an integrated peer-coaching model based on behavioral, social, and cognitive approaches within Tehran Municipality, as well as scholarly articles relevant to the research topic.

In the quantitative phase of the study, a questionnaire was used for data collection.

The identification of the main and subcategories derived from the semi-structured interviews concerning the integrated peer-coaching model based on behavioral, social, and cognitive approaches in Tehran Municipality was conducted using ATLAS.ti software.

In the qualitative component of this study, thematic analysis was used to analyze the data. Thematic analysis is a method used to extract meaningful information and patterns from textual data. Through thematic analysis, the researcher identifies important issues raised within the text. The thematic analysis process involves continuous movement between the complete dataset, coded summaries, and the emerging interpretation of the data. Thematic analysis is therefore recursive, with repeated movement backward and forward across the various stages of analysis.

The stages of thematic analysis applied in this study were as follows:

Familiarization with the Data: To become familiar with the depth and breadth of the data content, the researcher needed to develop a comprehensive understanding of the material. Such familiarity was achieved through repeated reading of the data and active reading, including searching for meanings and patterns, taking notes, and highlighting relevant sentences.

Generating Initial Codes: The second stage began after the researcher had read the data and developed sufficient familiarity with them. This stage involved generating initial codes from the data. Codes represent characteristics of the data considered analytically meaningful or interesting. Coded data are distinct from units of analysis, namely themes.

Searching for Themes: This stage involved classifying different codes into potential themes and organizing all summaries of the coded data under the identified themes. In other words, the researcher began analyzing the codes and considering how different codes could be combined to create an overarching theme. At this stage, some initial codes formed primary themes, whereas others were categorized as subthemes, and the remaining irrelevant codes were eliminated. Some codes could not readily be assigned to any particular theme; therefore, a miscellaneous theme was created for such codes.

Reviewing Themes: The fourth stage began once the researcher had generated a set of themes and proceeded to review them. This stage comprised two processes: reviewing and refining the themes. The first process involved review at the level of coded summaries. In the second process, the validity of the themes was considered in relation to the entire dataset.

Defining and Naming Themes: The fifth stage began once a satisfactory thematic map had been developed. At this stage, the researcher defined and further reviewed the themes proposed for analysis and subsequently analyzed the data contained within each theme. Through definition and review, the central essence of each theme was clarified, and the particular aspect of the data represented by each theme was specified.

Producing the Report: The sixth stage began when the researcher had obtained a clearly defined set of themes and proceeded to conduct the final analysis and prepare the research report. Ultimately, the themes were defined and named, and the final report and research model were developed.

Validation of the indicators extracted for the integrated peer-coaching model based on behavioral, social, and cognitive approaches in Tehran Municipality was performed using ATLAS.ti software.

In this study, interpretive structural modeling was employed to identify and design the relational structure among the indicators. This technique is used to structure elements and indicators that contribute to solving a problem or improving a system. Interpretive structural modeling analyzes relationships among indicators by decomposing the relevant criteria into several hierarchical levels. An interpretive structural model can determine relationships among indicators that are individually or collectively interdependent. By decomposing criteria into multiple levels, interpretive structural modeling facilitates

analysis of the relationships among indicators. The method can be employed to analyze relationships among characteristics of multiple variables defined for a particular problem. Interpretive structural modeling can likewise be used to analyze relationships among the characteristics of several variables defined for a given problem. The development of an interpretive structural model (ISM) provides a method for examining the influence of each variable on other variables. It constitutes a comprehensive approach to relationship assessment and is used to develop the model framework required to achieve the overall objectives of the research.

Findings and Results

The qualitative phase of this study was conducted based on the perspectives of 18 Tehran Municipality managers. Their demographic characteristics are presented by frequency in Table 1.

Table 1

Demographic Characteristics of the Experts

Demographic Characteristic	Category	Frequency	Percentage
Gender	Male	14	77%
Gender	Female	4	23%
Work experience	Less than 10 years	10	55%
Work experience	More than 11 years	8	45%
Work experience	Total	18	100%

In the present study, thematic analysis was employed to analyze the qualitative data. Thematic analysis was used to identify the components required for designing an integrated peer-coaching model based on behavioral, social, and cognitive approaches in Tehran Municipality. The qualitative data analysis process begins when the researcher identifies and considers statements and expressions that are meaningful and relevant to the research topic. The analysis begins with repeated examination and review of the data, followed by coding once meaningful statements related to the research topic have been identified. The practical process of data analysis comprised four stages: preparation, familiarization, coding, and derivation of the main categories.

The six phases of thematic analysis proposed by Braun and Clarke (2006) are described below.

Stage 1. Familiarization with the Data: To become familiar with the depth and breadth of the data content, the researcher needed to immerse themselves in the data to an appropriate extent. Data immersion generally involves repeated reading of the data and active engagement with the material, that is, searching for meanings and patterns. The interview questions were as follows:

Please describe your experience as a coach or learner within the municipal work environment. How did the coaching process develop for you?

In your opinion, what are the most important needs of employees for succeeding in a peer-coaching process?

What barriers exist to the implementation of peer coaching within the municipal environment?

How would you describe the behaviors of an effective peer coach?

Which behavioral skills, such as active listening, providing feedback, and careful observation, are most important in peer coaching?

How should peer coaches manage employees' undesirable or ineffective behaviors?

What methods have been effective in strengthening positive workplace habits among employees?

Have you had any experience with continuous monitoring of changes in employee behavior? How was such monitoring conducted?

How do communication and interpersonal interactions within the municipality influence the success of peer coaching?

What factors contribute to the creation or deterioration of a “safe environment” for honest dialogue between the coach and the peer?

What role do informal networks and workplace relationships play in peer learning?

How should psychosocial support be provided within the coaching process?

In your opinion, what role does the organizational culture of Tehran Municipality play in the acceptance or rejection of peer coaching?

How can coaches encourage employees to ask deep and reflective questions?

What methods are effective for strengthening critical thinking and problem-solving skills in peer coaching?

What role do cognitive skills, such as self-awareness, self-regulation, and cognitive analysis, play in the coaching process?

How can a peer coach help employees reconsider and revise their mental models?

Does the municipality provide cognition-related training, such as training on learning styles or metacognition? If so, how effective has it been?

What mechanisms can facilitate employees’ access to the resources and support required during the coaching process?

To what extent should a peer coach act as a guide, and to what extent should the coach avoid dominance or direct intervention?

What role do senior managers play in the successful implementation of a peer-coaching system?

Which indicators do you consider appropriate for evaluating the effectiveness of peer coaching?

What actions are necessary to institutionalize an integrated peer-coaching model within the municipality?

If a final peer-coaching model were to be designed, which key components should necessarily be incorporated into it?

Do you have any experiences or recommendations that you consider important to this study but that have not yet been addressed?

Stage 2. Generating Initial Codes: The second stage began once the researcher had read the data and become familiar with them. This stage involved generating initial codes from the data. Codes identify characteristics of the data that appear analytically meaningful to the researcher. Coded data are distinct from the units of analysis, or themes. Coding can be conducted manually or with the assistance of software programs. In the present study, coding was performed using software. Some of the interview questions used in the analysis were presented above.

Stage 3. Searching for Selective Codes (Basic Themes): This stage involved classifying different codes into selective codes and organizing all summaries of coded data. In practice, the researcher began analyzing the codes and considering how different codes could be combined to create overarching themes. At this stage, 11 selective codes were identified by the researcher. In reaching this set of selective codes, the researchers excluded incomplete, irrelevant, and duplicate codes.

Stage 4. Formation of Organizing Themes: The fourth stage began once the researcher had developed a set of themes and proceeded to review them. This stage involved two processes: reviewing and refining the themes and forming the subthemes. The first process involved reviewing the coded summaries, whereas the second involved assessing the validity of the subthemes in relation to the complete dataset. At this stage, the researchers identified the organizing themes. The results

of the analysis indicated that, among the 151 available indicators or items, 27 basic themes could be identified, which were subsequently organized into 11 categories of organizing themes.

Stage 5. Defining and Naming the Main Themes: The fifth stage began once a satisfactory representation of the themes had been achieved. At this stage, the researcher defined and further reviewed the primary themes proposed for analysis and subsequently analyzed the data contained within them. Through definition and review, the nature and conceptual scope of each theme were clarified, and the specific aspect of the data captured by each primary theme was determined. Following repeated movement between the subthemes, the researcher ultimately identified one overarching theme capable of explaining the phenomenon within the specific research context. Some of the subthemes from which the broader themes were derived are presented below.

Table 2

Identification of the Overarching Theme for Designing an Integrated Peer-Coaching Model Based on Behavioral, Social, and Cognitive Approaches in Tehran Municipality

Second-Order Organizing Themes	First-Order Organizing Themes	Initial Themes
Strengthening behavioral skills	Behavioral self-regulation	Discipline and consistency in work
		Time management and personal planning
		Control of behavioral impulses in the workplace
		Accountability in fulfilling commitments
Strengthening behavioral skills	Emotional control	Monitoring and modifying work behaviors
		Stress management in high-pressure situations
		Maintaining composure during challenging interactions
		Controlling negative emotional reactions
Strengthening behavioral skills	Conflict management	Regulating emotions during decision making
		Transforming negative emotions into constructive energy
		Dialogue aimed at reducing misunderstandings
		Mediation in workplace disputes
Collaborative social learning	Sharing practical experience	Collaborative problem solving using a win–win approach
		Preventing escalation of conflicts
		Managing disagreements with mutual respect
		Transfer of experiential field knowledge
Collaborative social learning	Observation and modeling	Sharing authentic workplace stories
		Sharing problem-solving techniques
		Communicating errors and lessons learned
		Documenting successful and unsuccessful experiences
Collaborative social learning	Team learning	Learning from peer-coach behavior
		Modeling effective interaction practices
		Observing the performance of successful colleagues
		Modeling effective problem-solving styles
Effective cognitive processing	Situational analysis	Gradual and improvement-oriented imitation of behaviors
		Active participation in working groups
		Collective learning through joint projects
		Discussion and exchange of ideas for solving unit-level problems
Effective cognitive processing	Cognitive decision making	Strengthening collaboration in decision-making processes
		Creating a participatory and supportive learning environment
		Identifying environmental conditions before taking action
		Assessing factors influencing decisions
Effective cognitive processing	Cognitive reflection	Analyzing recurring situational patterns
		Identifying possible behavioral consequences
		Examining available resources, limitations, and capacities
		Logically prioritizing alternatives
Effective cognitive processing	Cognitive reflection	Using evidence when selecting solutions
		Conducting mental cost–benefit analysis
		Processing information before decision making
		Reducing cognitive errors in decisions
Effective cognitive processing	Cognitive reflection	Reviewing judgments after action

		Revising assumptions and preconceptions
		Learning from past mistakes
		Changing perspectives on problems
		Questioning previously held beliefs
Constructive interpersonal interactions	Effective dialogue	Communicating messages clearly and comprehensibly
		Active and nonjudgmental listening
		Asking questions to clarify issues
		Maintaining focus on the shared objective of the dialogue
		Adjusting communication tone according to the audience
Constructive interpersonal interactions	Mutual trust	Honoring commitments in interactions
		Establishing honesty in workplace communications
		Respecting confidentiality of information
		Adhering to professional ethics
		Demonstrating predictable and consistent behavior
Constructive interpersonal interactions	Applied empathy	Understanding colleagues' psychological and occupational circumstances
		Attending to emotions during conversations
		Providing practical support in difficult circumstances
		Identifying the other party's latent needs
		Providing situation-appropriate emotional responses
Continuous peer feedback	Precise feedback	Providing feedback based on actual evidence
		Focusing on behavior rather than the individual
		Specifying areas requiring improvement
		Appropriate timing of feedback
		Using concrete examples for clarification
Continuous peer feedback	Supportive feedback	Encouraging effective and positive behaviors
		Maintaining motivation following mistakes
		Providing feedback in an empathetic manner
		Providing psychological support throughout development
		Emphasizing the individual's strengths
Continuous peer feedback	Corrective feedback	Providing practical strategies for improvement
		Clarifying undesirable behaviors
		Guiding individuals toward gradual improvement
		Monitoring behavioral changes following feedback
		Focusing on constructive outcomes rather than blame
Employee job empowerment	Enhanced self-efficacy	Belief in one's ability to perform difficult tasks
		Experiencing small successes in the workplace
		Relying on individual competencies to solve problems
		Reducing fear of performance failure
		Accepting new responsibilities with confidence
Employee job empowerment	Enhanced autonomy	Ability to make independent task-related decisions
		Freedom to select methods for completing work
		Reduced dependence on supervisors in routine actions
		Ability to exert influence over work outcomes
Employee job empowerment	Enhanced intrinsic motivation	Performing work for personal satisfaction
		Experiencing meaning and purpose in work activities
		Genuine interest in improving performance
		Enjoying learning and occupational development
		Sustained effort without dependence on external rewards
Development of cognitive competencies	Advanced problem solving	Structured analysis of complex problems
		Designing creative solutions
		Evaluating the consequences of solutions before implementation
		Using data and evidence in problem diagnosis
Development of cognitive competencies	Critical thinking	Questioning existing assumptions
		Considering multiple perspectives before judgment
		Logically evaluating claims and information
		Identifying fallacies and cognitive errors
Development of cognitive competencies	Self-directed learning	Establishing personal learning goals
		Independently seeking educational resources
		Evaluating individual progress over time
		Learning from experience without requiring direct instruction
		Pursuing emerging occupational interests
Trust building in relationships	Behavioral transparency	Honest communication with colleagues and service recipients

		Explaining the rationale for decisions and actions
		Avoiding ambiguous or concealed behaviors
		Providing clear reports on completed duties
		Acting consistently with ethical principles
Trust building in relationships	Performance consistency	Consistently applying work standards
		Reducing behavioral variability in the workplace
		Adhering to plans under conditions of pressure
		Maintaining performance quality over time
Trust building in relationships	Mutual commitment	Providing reciprocal support in task performance
		Adhering to team agreements
		Assuming responsibility for shared outcomes
		Creating positive interdependence in collaborative activities
Sustainable organizational support	Operational support	Providing facilities required for task execution
		Facilitating administrative procedures for employees
		Coordinating among organizational units to advance activities
		Removing operational barriers from daily work
		Providing managerial support in project implementation
Sustainable organizational support	Psychosocial support	Strengthening employees' sense of worth
		Creating a sense of belonging in the workplace
		Providing emotional support in difficult situations
		Reducing psychological pressure through dialogue
		Encouraging employees to express concerns
Sustainable organizational support	Access to resources	Providing required tools and equipment
		Ensuring easy access to organizational information and data
		Appropriately allocating budgets to activities
		Providing training required for task performance
		Providing necessary technological infrastructure
Facilitation of peer learning	Guidance without dominance	Guiding through suggestions rather than directives
		Respecting peers' intellectual autonomy
		Encouraging independent decision making
		Participating in problem solving without imposing opinions
		Establishing an egalitarian and informal coaching relationship
Facilitation of peer learning	Asking deep questions	Asking questions that challenge individuals' assumptions
		Using questions to enhance insight
		Asking open-ended questions to stimulate thinking
Facilitation of peer learning	Creating a safe environment	Creating a nonjudgmental environment for dialogue
		Ensuring confidentiality during coaching sessions
		Accepting mistakes without psychological punishment
		Building trust for the free expression of opinions
		Reducing employees' fear of negative evaluation
Advancing behavioral change	Reinforcing positive habits	Supporting repetition of constructive behaviors
		Replacing ineffective behaviors with effective behaviors
		Establishing daily improvement-oriented plans
		Encouraging adherence to positive work routines
Advancing behavioral change	Continuous change monitoring	Periodically evaluating employees' progress
		Recording behavioral changes over time
		Providing regular feedback regarding improvement trajectories
		Adapting the coaching program according to observed outcomes

Stage 6. Producing the Report: The sixth stage began when the researcher had developed a set of fully abstracted primary themes consistent with the contextual structures of the study.

In the present study, partial least squares structural equation modeling (PLS-SEM) was used to assess the measurement model and test the research hypotheses. PLS places fewer restrictions on sample size, does not require multivariate normality, and focuses on maximizing explained variance. Accordingly, compared with covariance-based software packages such as LISREL and AMOS, PLS is particularly suitable for prediction-oriented and applied research settings.

Each research hypothesis was analyzed separately using the partial least squares technique. Finally, the overall research model was also tested using the same technique. Several considerations are particularly important when applying partial least squares structural equation modeling.

First, the strength of the relationship between a factor or latent variable and an observed variable is represented by its factor loading. Factor-loading values range from 0 to 1. In a standardized measurement model, an indicator should generally be removed when its loading on the corresponding construct is below 0.40. According to Hair et al. (2013), indicators with factor loadings between 0.30 and 0.70 should also be carefully evaluated for potential removal, whereas a loading of 0.70 or higher is generally regarded as desirable.

Second, once relationships among the variables have been identified, their statistical significance must be assessed. The significance of observed relationships can be examined using resampling procedures, including bootstrapping or jackknife cross-validation. In the present study, bootstrapping was employed to obtain t statistics. At a 5% significance level, an observed relationship is considered statistically significant when the bootstrapped t value exceeds 1.96.

Figure 1

Factor Loadings of the Research Model (Outer Model)

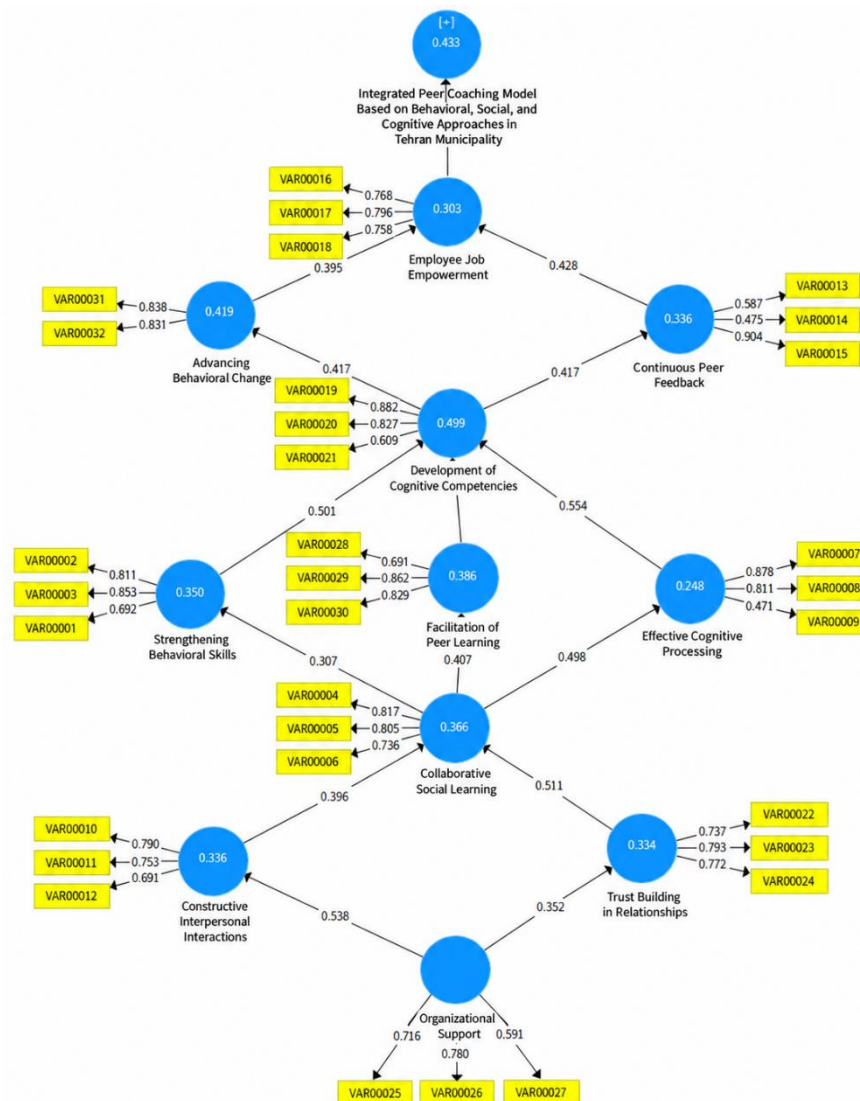
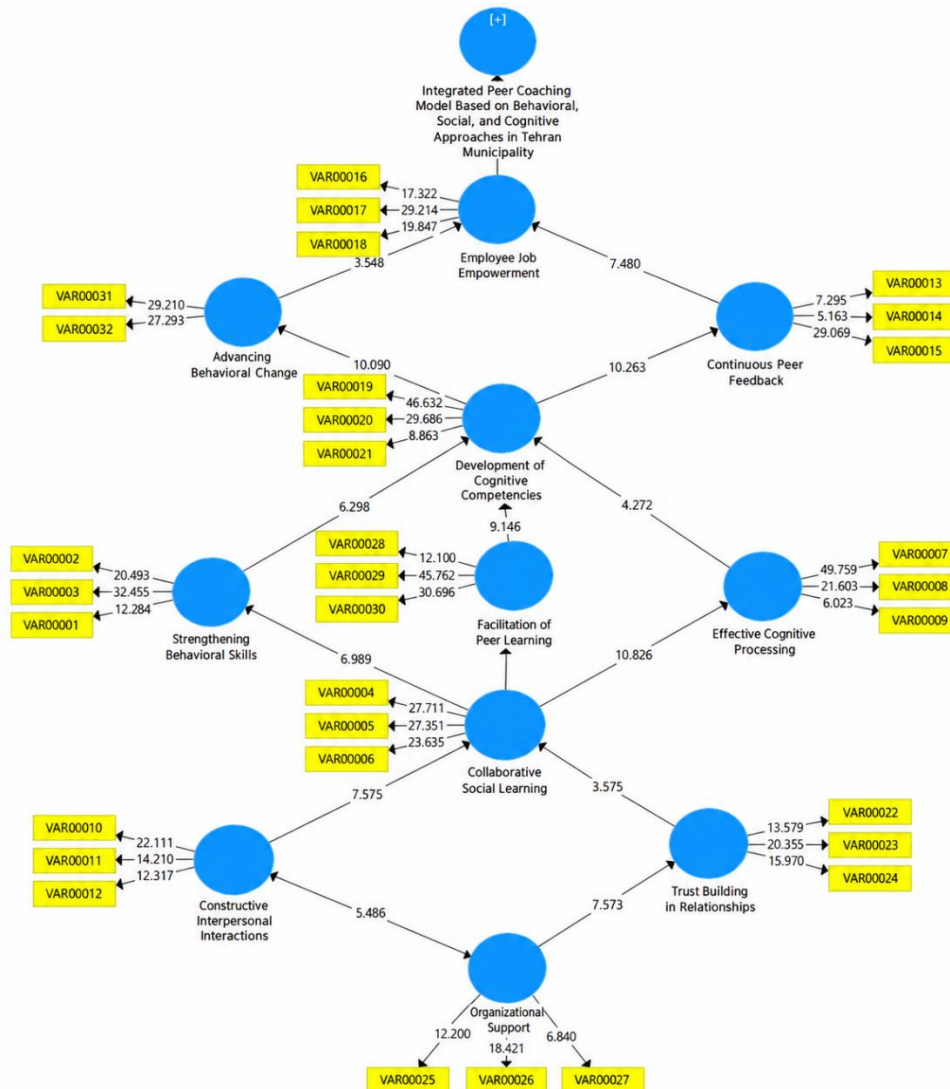


Figure 2*Bootstrapping t Statistics of the Research Model (Outer Model)*

To assess the validity and reliability of the measurement-model constructs in partial least squares structural equation modeling, factor loadings, Cronbach's alpha, composite reliability (CR), convergent validity based on the average variance extracted (AVE), and discriminant validity based on the Fornell–Larcker criterion were calculated and evaluated.

As noted above, the outer model is equivalent to confirmatory factor analysis. Therefore, before assessing relationships among the latent variables, the outer model was used to evaluate the relationships between the latent variables and their measurement indicators. The outer model examines the relationships between the measurement items, or questionnaire questions, and the corresponding constructs. Unless it is first demonstrated that the questionnaire items adequately measure the latent variables, the hypothesized relationships among those latent variables cannot be meaningfully tested.

Cronbach's alpha represents a key indicator for evaluating the internal consistency reliability of the variables. The value of this coefficient ranges from 0 to 1, with values above 0.70 generally regarded as acceptable and values below 0.60 considered undesirable (Cronbach, 1951).

Composite reliability is considered a more appropriate and valid criterion than Cronbach's alpha in structural equation models because, in calculating Cronbach's alpha for each construct, all indicators are assumed to have equal importance, whereas composite reliability assigns greater importance to indicators with higher factor loadings. Consequently, CR values provide a more realistic and precise assessment of construct reliability than Cronbach's alpha. Composite reliability values range from 0 to 1; values above 0.70 are considered acceptable, whereas values below 0.60 are considered undesirable.

Convergent validity was also assessed. When one or more characteristics are measured using two or more methods, the correlation among those measurements provides important evidence regarding measurement validity. When correlations among measures designed to assess the same characteristic are sufficiently high, the instrument is considered to demonstrate convergent validity. Such relationships are essential for demonstrating that an instrument measures the construct it is intended to measure. In the present study, convergent validity was assessed using the average variance extracted (AVE). AVE values range from 0 to 1, and values above 0.50 are regarded as acceptable (Hair et al., 2019).

Table 3

Convergent Validity and Reliability of the Research Variables

Variable	Cronbach's Alpha	AVE	CR
C01	0.856	0.611	0.896
C02	0.736	0.535	0.827
C03	0.794	0.582	0.736
C04	0.781	0.620	0.804
C05	0.764	0.609	0.763
C06	0.790	0.566	0.864
C07	0.737	0.601	0.783
C08	0.811	0.604	0.764
C09	0.825	0.633	0.758
C10	0.803	0.614	0.794
C11	0.784	0.628	0.733

According to the results presented in Table 3, Cronbach's alpha values for all variables exceeded 0.70; therefore, the reliability of all variables was confirmed. The AVE values were consistently greater than 0.50, thereby confirming convergent validity. The composite reliability values were also greater than 0.70, indicating that the constructs included in the model demonstrated satisfactory reliability and validity.

Discriminant validity is one of the criteria used to evaluate the fit of measurement models and addresses two major issues: first, comparison of the correlations between a construct's indicators and that construct with the correlations between those indicators and other constructs; and second, comparison of the relationship between a construct and its own indicators with the correlations between that construct and other constructs.

The Fornell–Larcker criterion compares the relationship between a construct and its indicators with its relationships with other constructs. Acceptable discriminant validity indicates that a construct shares greater variance with its own indicators than it shares with other constructs. Discriminant validity is therefore considered satisfactory when the AVE associated with each construct exceeds the shared variance between that construct and other constructs, that is, the squared correlations among constructs within the model. This property is examined using a matrix containing correlations among the constructs and the square roots of the AVE values for each construct. A model demonstrates acceptable discriminant validity when the diagonal values are greater than the corresponding off-diagonal values.

The distinguishing feature of the original correlation matrix is that the main diagonal consists of values equal to 1. These diagonal values are then replaced by the square roots of the corresponding AVE values, resulting in the matrix presented in Table 4.

Table 4

Fornell–Larcker Criterion

	C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
C01	0.855										
C02	0.634	0.846									
C03	0.434	0.578	0.857								
C04	0.592	0.410	0.376	0.866							
C05	0.543	0.533	0.556	0.554	0.869						
C06	0.549	0.537	0.804	0.536	0.663	0.870					
C07	0.604	0.345	0.587	0.436	0.536	0.463	0.860				
C08	0.597	0.335	0.354	0.553	0.456	0.600	0.627	0.855			
C09	0.584	0.656	0.584	0.634	0.670	0.627	0.735	0.567	0.856		
C10	0.667	0.456	0.656	0.330	0.753	0.537	0.635	0.537	0.696	0.847	
C11	0.330	0.595	0.610	0.738	0.332	0.526	0.638	0.629	0.636	0.465	0.910

As shown in Table 4, the values located on the main diagonal of the matrix are greater than the corresponding values below them, indicating satisfactory discriminant validity for the model. However, more recent research by Henseler et al. (2015) has demonstrated that the Fornell–Larcker criterion may not perform adequately when the differences among construct factor loadings are relatively small. Accordingly, Henseler et al. proposed the heterotrait–monotrait ratio of correlations (HTMT) as an alternative criterion. Under this approach, discriminant validity is generally considered acceptable when all HTMT values are below 0.90.

Table 5

HTMT Results for Assessing Discriminant Validity

	C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
C01											
C02	0.373										
C03	0.363	0.467									
C04	0.537	0.649	0.635								
C05	0.619	0.453	0.756	0.500							
C06	0.554	0.363	0.591	0.500	0.536						
C07	0.793	0.646	0.338	0.557	0.599	0.648					
C08	0.735	0.592	0.621	0.543	0.582	0.637	0.627				
C09	0.850	0.638	0.483	0.527	0.345	0.555	0.637	0.373			
C10	0.526	0.750	0.238	0.666	0.584	0.548	0.730	0.540	0.786		
C11	0.700	0.505	0.559	0.610	0.594	0.509	0.710	0.638	0.483	0.557	

As shown in Table 5, all obtained values were below 0.90; therefore, discriminant validity based on the HTMT criterion was considered acceptable.

After establishing the adequacy of the measurement models through tests of reliability, convergent validity, and discriminant validity, the results of the structural model could be evaluated. Unlike the measurement models, the structural component does not focus on questionnaire items or manifest variables but instead examines the latent variables and the relationships among them. Structural model assessment was conducted using the coefficient of determination (R^2), effect size (f^2), and predictive relevance (Q^2).

The coefficient of determination, R^2 , is a criterion that links the measurement and structural components of a structural equation model and indicates the proportion of variance in each endogenous variable that is explained by the predictor variables. Importantly, R^2 is calculated only for endogenous or dependent constructs, whereas this criterion is not applicable to exogenous constructs. Higher R^2 values for endogenous constructs generally indicate better explanatory performance of the model. Chin (1998) proposed R^2 values of 0.19, 0.33, and 0.67 as indicative of weak, moderate, and substantial explanatory power, respectively. In addition, Henseler (2009) and Hair et al. (2011) proposed values of 0.25, 0.50, and 0.75 as approximate benchmarks for weak, moderate, and substantial explanatory performance of the structural model.

The coefficients of determination (R^2) for the endogenous constructs in the research model were satisfactory. The coefficient of determination for the dependent components indicated that approximately 40% of the variance in the model variables was explained through the combined effects of the independent and dependent variables, representing a strongly acceptable level of explanatory power.

Effect size constitutes another criterion for assessing the structural component of the model and is relevant to exogenous independent variables. The effect-size index was introduced by Cohen (1988). The f^2 statistic for an independent variable represents the change in the explained variance of a dependent variable when the effect of that independent variable is removed from the model. According to Cohen, f^2 values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects, respectively.

The model's predictive power, or cross-validated redundancy, represents another criterion for evaluating the structural model. Model predictive relevance can be assessed using the Stone–Geisser procedure, whereas the Q^2 statistic evaluates the success of this predictive process. Hair et al. (2019) proposed different levels for interpreting the predictive relevance of endogenous constructs, with values of 0, 0.25, and 0.50 representing weak, medium, and strong predictive relevance, respectively. In PLS software, Q^2 is calculated using the blindfolding procedure.

Table 6

Predictive Relevance and Effect-Size Criteria

Criterion	C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
Q^2	0.453	0.447	0.406	0.376	0.339	0.382	0.110	0.383	0.500	0.549	0.490
f^2	0.483	0.305	0.552	0.493	0.403	—	0.634	0.483	0.425	0.372	0.320

As shown in Table 6, the obtained Q^2 values, which represent the model's predictive relevance for the endogenous constructs, indicate that the research constructs generally demonstrate moderate to strong predictive power.

Discussion and Conclusion

The present study sought to explain how the integration of the behavioral, social, and cognitive dimensions of peer coaching contributes to psychological and job empowerment among Tehran Municipality employees. The qualitative phase identified 151 initial indicators, 27 basic themes, and 11 organizing components that together formed an integrated peer-coaching structure. These components included strengthening behavioral skills, collaborative social learning, effective cognitive processing, constructive interpersonal interactions, continuous peer feedback, employee job empowerment, development of cognitive competencies, trust building in relationships, sustainable organizational support, facilitation of peer learning, and advancement of behavioral change. The quantitative findings subsequently confirmed the empirical relevance of the developed structure. The structural model showed that the integrated peer-coaching framework had a positive and

statistically significant effect on employee job empowerment, with the principal relationship reported as $\beta = 0.580$ and a t value exceeding the critical value of 1.96. The model also demonstrated satisfactory explanatory and predictive performance, with approximately 40% of the variance in the endogenous constructs accounted for by the model and Q^2 values generally indicating moderate to strong predictive relevance. Taken together, these findings suggest that employee empowerment in a municipal context does not emerge from a single developmental intervention but from the synergistic operation of behavioral regulation, socially embedded learning, cognitive reflection, constructive feedback, relational trust, organizational support, and opportunities for autonomous action.

One of the most important findings was that behavioral processes constitute a fundamental layer of peer coaching. The qualitative findings showed that behavioral self-regulation, emotional control, conflict management, continuous feedback, reinforcement of positive habits, and monitoring of behavioral change were central elements of the model. This result suggests that peer coaching becomes practically meaningful when employees are able to translate interpersonal learning into observable behavioral modifications. Such a finding is consistent with the view that workplace learning is reinforced through observation, imitation, feedback, and repeated adjustment of behavior in real organizational settings [10]. The behavioral dimension also supports the conclusions of Rowzehei et al., who emphasized that coaching strategies and interactive learning can contribute to constructive organizational behaviors and stronger job attachment [11]. In the context of Tehran Municipality, this result can be explained by the operational nature of municipal work, where employees are frequently required to manage interpersonal encounters, administrative pressures, citizen demands, and cross-unit coordination. Under such conditions, peer coaching can serve as a continuous behavioral correction mechanism through which employees learn to regulate emotions, improve communication patterns, adopt more effective problem-solving routines, and receive nonpunitive feedback on their daily performance.

The study also demonstrated that social mechanisms are indispensable to the effectiveness of peer coaching. Constructive interpersonal interactions, trust building, psychological safety, mutual commitment, and organizational support emerged as central components of the qualitative model, while the structural findings indicated that the social dimension contributed to empowerment through interconnected pathways involving collaborative learning and cognitive development. This result aligns with evidence showing that trust and psychological safety are critical conditions for knowledge sharing and peer-based developmental behavior [12]. When employees feel that their colleagues will treat their questions, mistakes, and developmental needs with respect, they are more likely to participate openly in coaching relationships. The finding is also consistent with research showing that social capital and employees' psychological conditions affect motivation and work-related functioning [13]. In municipal organizations, where informal relationships frequently coexist with formal bureaucratic structures, peer networks can create an additional channel for transferring practical knowledge that may not be fully captured by official procedures. This interpretation is strongly supported by previous research on Tehran Municipality indicating that collaborative learning and peer networks can form an important foundation for integrated human resource development [14]. Thus, trust in the present model should not be interpreted simply as a desirable interpersonal quality; rather, it appears to function as an enabling condition that allows feedback, knowledge exchange, reflective dialogue, and autonomous problem solving to occur.

Another major result concerned the cognitive dimension of peer coaching. The qualitative findings identified situational analysis, cognitive decision making, cognitive reflection, critical thinking, advanced problem solving, and self-directed learning

as important developmental outcomes and mechanisms. The structural model further indicated that cognitive competency development occupied a central position in the integrated framework, suggesting that behavioral and social interactions may achieve their strongest empowerment effects when they are cognitively processed by employees. This result is consistent with prior research indicating that cognitive coaching and social support can enhance job autonomy and intrinsic motivation [16]. It also supports the argument that cognitive and social dimensions of peer guidance should be treated as complementary rather than separate processes [15]. From this perspective, peer coaching does not merely transfer ready-made solutions from one employee to another. Instead, it stimulates employees to reinterpret situations, examine assumptions, compare alternative explanations, and generate more sophisticated responses to work-related problems. In municipal administration, where many problems are context-dependent and cannot be solved solely by standardized rules, such cognitive development is particularly important. Employees who learn to examine evidence, consider consequences, reassess prior judgments, and engage in reflective problem solving are more likely to function autonomously and adaptively.

The significant positive effect of the integrated peer-coaching dimensions on employee job empowerment provides further support for the psychological empowerment literature. The model showed that empowerment was reflected through enhanced self-efficacy, greater autonomy, and stronger intrinsic motivation. These dimensions correspond closely to established conceptions of psychological empowerment and reinforce the argument that empowerment develops through employees' subjective experience of competence and control rather than merely through formal delegation of authority. Previous research has demonstrated that psychological empowerment mediates the relationship between supportive leadership and proactive employee behavior [3], and other work has connected empowerment with professional thinking and employees' ability to handle complex work demands [4]. The present study extends this line of reasoning by showing that empowerment may also emerge from horizontal developmental relationships among peers. Rather than relying exclusively on managers to create empowered employees, organizations can cultivate peer systems in which employees progressively strengthen confidence through shared problem solving, successful behavioral experiences, constructive feedback, and mutual learning.

The findings also correspond with research emphasizing the relationship between empowerment, creativity, innovation, and engagement. The present model showed that peer coaching facilitates self-directed learning, reflection, and independent decision making, all of which create conditions favorable to proactive and innovative behavior. Maramba et al. found that psychological empowerment can strengthen the relationship between knowledge-sharing processes and innovative work behavior [20]. Similarly, empowerment has been linked to creativity in organizational contexts characterized by fairness and identification with the organization [5]. These findings help explain why peer coaching can be especially useful when municipalities seek not only compliance with procedures but also adaptive responses to changing citizen needs and administrative challenges. When employees are encouraged to exchange ideas and are simultaneously given the psychological confidence to act on what they learn, peer learning can become a mechanism for organizational renewal. However, the present findings should also be interpreted in light of evidence that empowerment can generate negative consequences if it is inconsistently distributed or perceived as inequitable [6]. An effective peer-coaching system should therefore be inclusive and accessible rather than restricted to selected employee groups, because unequal developmental opportunities could weaken trust and create new forms of knowledge withholding.

The role of peer learning and peer facilitation found in this study is also compatible with the social-constructivist understanding of workplace development. The results showed that guidance without dominance, deep questioning, creation of a safe learning space, experiential knowledge sharing, and team learning were fundamental components of the model. These findings strongly support the view that peer coaching is effective when learning is jointly constructed through dialogue, reflection, and reciprocal engagement rather than delivered unidirectionally [7]. The result also accords with models of professional development based on peer guidance and assessment, which emphasize the importance of feedback and reciprocal evaluation as mechanisms for professional growth [18]. The importance of non-dominant guidance in the present model is particularly noteworthy because it distinguishes peer coaching from conventional hierarchical supervision. Employees may be more willing to disclose uncertainty, experiment with alternative solutions, and accept corrective feedback when the relationship is perceived as reciprocal rather than evaluative. This relational equality may therefore be one of the mechanisms through which peer coaching enhances psychological safety and subsequently contributes to empowerment.

Organizational support also emerged as an important foundational component of the integrated model. The qualitative analysis showed that operational support, psychosocial support, access to resources, managerial facilitation, and appropriate technological infrastructure were necessary for the effective institutionalization of peer coaching. This finding indicates that peer coaching should not be conceptualized as an informal process that can be sustained entirely through employee goodwill. Rather, the organization must provide time, resources, managerial legitimacy, learning opportunities, and administrative conditions that enable coaching relationships to develop. This interpretation is consistent with the socio-technical perspective, which emphasizes that employee empowerment depends on the interaction of human, organizational, and technological conditions [17]. It is also compatible with research demonstrating that organizational learning capability and professional commitment are structurally connected within public-sector environments [21]. In practice, even highly motivated peers may be unable to sustain coaching if workloads are excessive, managers discourage horizontal interaction, or employees lack access to information and developmental resources. The present findings therefore suggest that organizational support functions as a structural prerequisite that allows behavioral, social, and cognitive coaching mechanisms to operate effectively.

The significance of peer coaching for job empowerment found in this study is directly aligned with research conducted in municipal contexts. Yasavol et al. reported that peer guidance can improve job empowerment while also reducing employee burnout in municipalities [8]. The present study extends this evidence by identifying the mechanisms through which such outcomes may emerge. Specifically, the integration of trust, supportive feedback, behavioral learning, cognitive reflection, autonomy, and organizational support appears to provide a more complete explanation than a simple direct relationship between coaching and empowerment. Peer mentoring has similarly been associated with psychological empowerment and self-determination in public services, particularly through improvements in competence and autonomous motivation [19]. Therefore, the present findings contribute to the literature by demonstrating that peer coaching may be conceptualized as an empowerment architecture rather than merely as a discrete training technique. Its effectiveness depends on an interdependent system of behaviors, relationships, cognitive mechanisms, and contextual supports.

The structural configuration identified in the study also supports the use of multidimensional modeling approaches in research on coaching and employee development. The model included multiple interconnected components rather than assuming that all coaching variables exert direct and independent effects on empowerment. This is consistent with the use

of interpretive structural modeling to identify hierarchical relationships among organizational variables [22] and with previous applications of ISM to identify factors affecting the effectiveness of coaching programs in public organizations [23]. The approximately 40% explained variance reported for the model suggests that the integrated peer-coaching framework accounts for a meaningful proportion of employee empowerment-related variation while also indicating that empowerment remains influenced by additional individual and organizational factors not represented in the model. The generally moderate-to-strong Q^2 values further indicate that the model possesses useful predictive relevance rather than merely acceptable explanatory relationships. Such findings reinforce the practical potential of the proposed framework for human resource development interventions.

Finally, the findings support a broader shift in public-sector human resource management from episodic training toward embedded developmental systems. Contemporary empowerment models emphasize sustained individual development and continuous capability formation rather than isolated training events [1]. Psychological empowerment research likewise indicates that employees develop stronger intrinsic motivation when organizational practices support meaningfulness, competence, autonomy, and influence [2]. The integrated peer-coaching model developed in the present study responds to this need by embedding learning within daily relationships and work processes. Through observation, reciprocal feedback, questioning, social support, reflection, and shared problem solving, employees are able to convert routine workplace interactions into developmental experiences. Accordingly, peer coaching can serve as a bridge between individual learning and organizational capability building, allowing municipalities to strengthen human capital without relying exclusively on centralized formal training programs.

The present study has several limitations that should be considered when interpreting the findings. First, the empirical investigation was conducted within Tehran Municipality, and the organizational culture, administrative structure, workforce characteristics, and regulatory environment of this institution may limit the generalizability of the model to other municipalities, government agencies, or private-sector organizations. Second, the quantitative phase relied primarily on self-reported questionnaire data, which may be affected by common-method variance, social desirability, or participants' subjective perceptions. Third, although the qualitative sample reached theoretical saturation, the number of experts was relatively limited, and alternative perspectives might emerge from operational employees, citizens, external consultants, or managers from different municipal regions. Fourth, the cross-sectional design does not allow definitive conclusions regarding temporal causality or the long-term persistence of empowerment outcomes. Finally, although the model explained a meaningful proportion of variance in the endogenous constructs, additional organizational, leadership, personality, technological, and cultural factors were not included and may also influence the effectiveness of peer coaching.

Future research should test the proposed model in different municipal regions, government agencies, and organizational sectors to assess its external validity and determine whether the relative importance of the behavioral, social, and cognitive dimensions changes across institutional contexts. Longitudinal and quasi-experimental studies would be particularly valuable for determining whether peer-coaching interventions produce sustained changes in psychological empowerment, job autonomy, performance, innovative behavior, and organizational commitment over time. Researchers should also examine possible mediating and moderating mechanisms, such as psychological safety, leadership support, organizational culture, digital collaboration, employee tenure, personality characteristics, and generational differences. Multilevel studies could investigate whether individual peer-coaching experiences accumulate into team-level learning climates or unit-level

performance improvements. Future investigations may also integrate objective performance indicators, supervisor evaluations, network analysis, behavioral observations, and digital interaction data with questionnaire measures to provide a more comprehensive assessment of peer-coaching effectiveness.

From a practical perspective, Tehran Municipality should institutionalize peer coaching as a structured human resource development mechanism rather than leaving it entirely to informal interpersonal relationships. Managers should establish peer-coaching programs that include transparent participant selection, coach preparation, guidelines for confidentiality, scheduled coaching interactions, mechanisms for constructive feedback, and periodic evaluation of behavioral and developmental outcomes. Particular attention should be devoted to creating psychologically safe environments in which employees can discuss mistakes, uncertainties, and developmental needs without fear of punitive evaluation. Managers should also ensure that peer coaching includes reflective questioning and collaborative problem solving rather than becoming a mechanism for merely transmitting existing routines. Providing adequate time, technological tools, access to organizational information, managerial support, and recognition for participation can strengthen program sustainability. Finally, peer-coaching outcomes should be integrated into broader human resource development and organizational learning systems so that successful experiences, effective practices, and lessons learned can be shared across municipal units and translated into continuous improvement in service quality and employee capability.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Written consent was obtained from all participants in the study.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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