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Enhancing Human Capital Through Social Capital: The Mediating Role of Knowledge Management

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Abstract

This study delved into the dynamics between social capital and human capital and their influence on the knowledge management practices of teachers in Tehran, Iran. The researchers adopted a random sampling method, selecting 214 participants, and administered three standardized questionnaires to collect data. Data analysis was conducted using the Structural Equation Modeling approach. The findings of the study revealed that social capital did not have a significant impact on knowledge management. The researchers attributed this to the presence of a weak culture of teamwork among Iranians, a subject they elaborated on extensively in their article. However, the second hypothesis indicated that social capital significantly influenced human capital, while the third hypothesis demonstrated that human capital had a substantial effect on knowledge management. The fourth hypothesis proposed that social capital influenced knowledge management through the mediating role of human capital, and this effect was found to be significant. These research findings highlight the distinct roles played by social and human capital in knowledge management, with human capital emerging as the more influential factor. Moreover, the study not only explored the direct relationship between social capital and human capital but also emphasized the mediating function of knowledge management within these associations. This novel perspective can enhance our comprehension of methods to enhance human capital within organizations by harnessing the potential of social capital and effective knowledge management.

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Introduction

Organizations, particularly those that depend on complex knowledge. Management has faced a series of challenges due to dynamic complexity, technological changes, and international competition (Nadi et al.,2023). For this reason, the 21st century is often referred to as the era of knowledge-based economies, where knowledge wealth is abundant, and employees are considered valuable assets to organizations. Schools, being hubs of knowledge, serve as professional learning communities that encourage the development of valuable talents and skills. Knowledge is essential for the survival and success of individuals, groups, communities, and nations. Individuals require specific skills and knowledge to thrive, particularly within organizations like schools. Sending children to school primarily aims to equip them with knowledge and instill a sense of responsibility. Schools are institutions where individuals acquire relevant knowledge. In this context, teachers play pivotal roles in extracting knowledge from students. Teachers are seen as individuals who have attained a certain level of knowledge through training and professional experience. They are regarded as agents responsible for sharing and disseminating knowledge (Amie-Ogan & Godsplan, 2021). This perspective promotes a mindset centered around the knowledge economy and knowledge management. Knowledge management can be seen as a form of ongoing professional development—a means of enhancing accountability within the local community (Cai & Vinitwatanakhun, 2020). It encompasses the understanding, information, and skills derived from education and experience. As a strategic approach, knowledge management in schools facilitates the acquisition, sharing, application, and creation of knowledge. It also contributes to the development of teachers' professional expertise and competencies, fostering educational innovation (Zhao, 2010). Knowledge management supports innovative teaching methods and effective learning practices. It enables teachers to identify students' strengths and weaknesses, aiding in more effective educational planning (Cheng, 2013). Moreover, by providing suitable communication channels for teachers to discuss school-related matters, it allows for the review and reflection on feedback. This leads to the development of more effective strategies and programs for improving school policies and enhancing training effectiveness (Cheng, 2015).

Knowledge management holds significant importance among teachers, with several key aspects underscoring its relevance:

1) Knowledge management serves as a vital resource for teachers, enabling them to enhance the quality of their teaching by facilitating access to fresh knowledge and experiences. This, in turn, empowers educators to employ the most effective educational tools and methods in their practice.

2) Teachers can harness knowledge management to cultivate and refine their skills and teaching methodologies. Consequently, this refinement contributes to improved academic performance among students.

3) Knowledge management fosters the exchange of educational experiences among teachers, allowing them to draw upon each other's insights for their professional development. In light of the continual and swift advancements in educational technologies, knowledge management equips teachers with the means to update their knowledge base. This, in turn, aids in enhancing and optimizing the learning environment's effectiveness.

4) Implementing knowledge management can lead to heightened job satisfaction and increased motivation among teachers, further elevating the quality of education they provide. Knowledge management initiatives promote enhanced communication among teachers, facilitating networking opportunities that render learning environments more dynamic and adaptive.

Knowledge management has a profound impact on enhancing teachers' performance, thereby influencing students' and schools' overall performance. It is imperative for policymakers and school administrators to closely oversee the implementation of knowledge management processes. This is particularly crucial in developing countries, such as Iran, where the performance of educational systems, including schools and universities, plays a pivotal role in national development. Human and social capital are fundamental factors that significantly influence the effectiveness of knowledge management processes within schools. In Iran, the culture of teamwork and cooperation has relatively weaker roots, leading to a lower degree of social capital within the education system. Iranian society tends to exhibit individualistic tendencies, with a focus on self-centeredness rather than collectivism and cooperation (Dadsetan, 2000; Akmali, 2008). The absence of robust social interactions gives rise to a critical social issue—the erosion of human and social capital within schools, which are considered the primary assets of society. Teachers, recognized as key drivers of development across various societal dimensions, including economics, culture, and politics, bear a substantial responsibility. Inadequate opportunities for interaction and the presence of barriers to academic collaboration can reduce work efficiency, diminish quality of life, and hinder scientific progress. Delaviz (2008) found that the social capital situation among teachers in Marivan, Iran, is characterized as low.

Nonetheless, a research void exists in understanding the intricate interplay among these three factors. Thus, our study introduces a novel approach by investigating the impact of social capital on human capital, with knowledge management acting as an intermediary

in school settings. Our aim is to scrutinize the influence of three pivotal social and human capital elements on knowledge management. Given the variation in findings concerning studies on the social capital variable in Iran, characterized by diminished collaboration, limited group engagements, and interpersonal relationships, it becomes imperative to delve into these variables. Consequently, we have formulated the following hypotheses:

Hypothesis (1): Social capital has a positive and significant effect on knowledge management.

Hypothesis (2): Social capital has a positive and significant effect on human capital.

Hypothesis (3): Knowledge management has a positive and significant effect on human capital.

Hypothesis (4): The effect of social capital on knowledge management with the mediation of human capital

These hypotheses hold significance in the realm of scientific research and organizational studies as they elucidate and scrutinize the connections between overarching factors pertaining to knowledge management and the social and human elements within organizations. They serve to enhance our comprehension of how social capital and human capital influence knowledge management within organizational settings and delve into the interplay among these components. Through the validation of these hypotheses, we can ascertain whether social capital indeed exerts an impact on knowledge management and whether this influence is both positive and substantial. Furthermore, we meticulously investigate the interrelationships among social capital, human capital, and knowledge management while assessing the intermediary role played by human capital in these associations. These investigations can assist organizations in formulating more effective strategies for harnessing their knowledge and human assets, thereby enhancing their organizational performance and overall effectiveness.

Literature review and Hypothesis Development

Social Capital

In recent years, social capital has gained significant prominence in the field of sociology. It pertains to the ability to make meaningful contributions to both individual and societal health, well-being, and the comprehension of human relationships (Enfield & Nathaniel, 2013; Forsell et al., 2020). Social capital encompasses various outcomes, including outperforming competitors. Within organizations, social capital is regarded as a crucial social asset, rooted in the interpersonal relationships among individuals, aimed at enhancing organizational performance by promoting knowledge sharing and transfer (Bhatti et al., 2020). Most conceptualizations of social capital encompass two primary forms: structural and cognitive/affective. The structural form focuses on the extent and

strength of associative connections or activities that facilitate resource-sharing, while the cognitive/affective form addresses subjective perceptions of support, trust, and social norms (Saw, 2020). Nahapiet and Ghoshal (1998) delineate three dimensions of internal social capital. The first dimension, structural, pertains to the connections between colleagues, encompassing the frequency and depth of information exchange. The second dimension, relational, signifies the personal bonds individuals cultivate over time, with trust being a pivotal element in this dimension. It fosters an environment of fairness and collaboration. Lastly, the cognitive dimension of internal social capital reflects the extent to which colleagues can collectively envision the future of the school or organization. At the core of the social capital concept lies the belief that networks serve as valuable assets, leading to mutual recognition and long-term commitments due to feelings of gratitude, respect, friendship, or institutionally guaranteed rights among family, class, or school members (Bourdieu, 1986; Miković et al., 2020).

Unlike other forms of capital, social capital is rooted in the realm of social interactions. Consequently, social capital is inherently tied to the relationships among individuals and their connections within their networks and communities, whereas other types of capital are founded on assets or individual attributes. Social capital encompasses social networks and the accompanying norms of reciprocity (Putnam, 2000; Kim et al., 2020). Several key points warrant emphasis: Firstly, social capital is a product of social relationships and thus fundamentally differs from trust, culture, or other features of the social structures in which it is embedded. Secondly, social capital, stemming from relationships, can serve both collective and individual interests. Thirdly, relationships transform into social capital when they are employed instrumentally. While a friendly conversation may constitute the raw material from which social capital is constructed, it only becomes social capital when one or more individuals leverage their relationship to achieve a particular objective (Murray et al., 2020).

Human Capital

In 1964, Baker introduced the concept of human capital theory. Becker's insights emphasized the significant impact of high levels of human capital on enhancing business performance. To this day, the human capital theory remains a potent force in the knowledge-based economy (Fitzsimons, 2015). This theory posits that knowledge equips individuals with enhanced cognitive skills, thereby boosting their potential efficiency and productivity in various endeavors (Gillies, 2014; Dhar et al., 2019). Human capital plays a pivotal role in shaping the capacity to acquire, exchange, nurture, and disseminate new knowledge (Bianchi Martini et al.,

2016). Human capital encompasses the knowledge, skills, and expertise accumulated by individuals through education and training (Odhong and Omolo, 2015; Fernando et al., 2020). Through investments in education, training, and practical experience, individuals can augment their human capital, which is associated with favorable outcomes.

At the organizational level, elevated levels of human capital are linked with enhanced organizational performance (Harris & Brown, 2020). Human capital stands as a vital and distinctive resource that influences performance, contributes to attaining an organization's competitive edge, and fosters the generation, innovation, and dissemination of knowledge. It elevates the overall efficiency of the organization (Khasawneh, 2020). Consequently, corporate leaders must prioritize human capital to ensure that it effectively facilitates the value creation necessary for their desired advantages (Ameyaw et al., 2019). Human capital development encompasses the processes undertaken by an organization to enhance and refine its employees' skills, talents, competencies, knowledge, and creative capabilities. It also encompasses the individual activities aimed at enhancing one's skills, competencies, abilities, knowledge, and expertise to effectively handle work responsibilities. Human capacity has emerged as a critical benchmark for competitiveness in the business world, to the extent that the development of these capacities through training has taken center stage in the strategic planning of business entities. Undoubtedly, organizations now recognize the paramount importance of investing in their workforce more than ever before. They are increasingly aware that in order to thrive and achieve their objectives in today's global business landscape, they must prioritize the training and development of their employees (Obiekwe, 2018).

Knowledge Management

Drucker was among the early visionary authors who foresaw the emergence of a new knowledge-driven economy. He astutely noted that "knowledge, over the past few decades, has evolved into the central asset, the cost center, and the pivotal resource of the economy. This transformation has had profound implications for labor forces, work dynamics, education, and our understanding of knowledge and its implications" (Drucker, 2017; Bratianu et al., 2021). In the contemporary landscape, technological advancements have become a formidable and far-reaching global force, exerting significant influence on individuals, businesses, and economies. They have fundamentally reshaped trade and industry across all sectors while revolutionizing business operations. This transformation has ushered in an era of intense competition, rapid innovation, and abbreviated product life cycles. To navigate these challenges and enhance operational efficiency and effectiveness, organizations must devise

new processes. Among these, knowledge management stands out as a crucial practice. Organizational knowledge management has evolved into an imperative discipline, and the speed at which knowledge is disseminated within an organization can profoundly impact its competitive advantage and overall performance (Szulanski, 1996; Alshawabkeh et al., 2020). Knowledge management, fundamentally, involves creating an enabling environment that fosters knowledge acquisition and application within the organization (Quresh et al., 2014; Gopinath et al., 2021). At its core, knowledge management can be defined as the systematic management of an organization's processes for generating, organizing, and sharing knowledge. It is a practice that should be integrated into every organization to preserve the knowledge assets inherent to that organization (Wahjudewanti et al., 2021). These practices encompass the organizational routines and procedures related to knowledge, from its inception or external acquisition to its internal utilization and integration throughout the organizational framework (Carmeli et al., 2013; Natalicchio et al., 2017; Pellegrini et al., 2020). Knowledge can be further categorized into explicit and tacit/implicit forms (Gao et al., 2008). Explicit knowledge is readily explainable or describable, formalized, and often expressed in the form of data, scientific formulas, specifications, manuals, or textbooks. On the other hand, tacit or implicit knowledge is often unrecognized by individuals, challenging to articulate, action-based, unstructured, highly personal, and difficult to transfer. It is worth noting that tacit and implicit knowledge are not mutually exclusive; thus, revealing and leveraging them within an organization necessitates dedicated organizational resources (Taylor, 2007; Kusumastuti et al., 2021).

The relationship between social capital and knowledge management

Afshari et al. (2020) established that organizational culture exerts a positive and substantial influence on the management of both knowledge and social capital. Their findings also affirmed that social capital plays a constructive and significant role in bolstering knowledge management, underscoring the mediating function of social capital. Lefebvre et al. (2017) conveyed that social capital is positively and notably associated with knowledge sharing within learning networks. Liu and Lee (2015) noted diverse relationships between social capital, revealing its positive impact on knowledge management and its practical application. Furthermore, they underscored the harmonious coexistence of social capital, entrepreneurial orientation, and knowledge management. Aghamirzaee et al. (2014) deduced that social capital wields a direct and considerable influence on knowledge management within knowledge-based organizations. Aslam et al. (2013) found that social capital facilitates the process of

knowledge sharing, thereby enhancing the quality of learning. Hau et al. (2013) ascertained that social capital significantly contributes to enhancing employees' inclination to share both tacit and explicit knowledge. Winch (2008) confirmed a substantial relationship between social capital, particularly in terms of knowledge transfer, and organizational knowledge management. Hoffman et al. (2005) determined that organizations endowed with abundant social capital possess greater capabilities in knowledge management compared to those with limited social capital, leading to sustained performance. Tymon & Stumpf (2003) established that social capital has a significant impact on knowledge management within organizations, leading to improved organizational performance.

The relationship between social capital and human capital

Hsiao et al. (2016) established that internal control's influence on entrepreneurship is channeled through the mediation of social and human capital. Knipprath and De Rick (2015) found that the impact of social capital on lifelong learning within non-lifelong learning environments varies depending on the level of education attained during initial education. Additionally, lifelong learning is more substantially predicted by human capital, labor market status, and other individual traits compared to social capital. Nonetheless, social capital can be advantageous, particularly for those without higher education, in promoting human capital. Felício et al. (2014) ascertained that human capital exerts an influence on social capital, with experience and cognitive ability influencing interpersonal relationships and collaboration. Organizational performance is significantly shaped by human capital, particularly through the cognitive abilities of managers. Cabello-Medina et al. (2011) determined that social capital indirectly impacts innovation through its influence on human capital. Furthermore, the effect of human capital on development potential is entirely mediated by social capital. Moreover, employees possessing firm-specific human capital, occupying managerial positions, and having longer tenures receive higher potential ratings from their supervisors through their core roles (Lin & Huang, 2005).

The relationship between knowledge management and human capital

Rezaei et al. (2021) indicated that knowledge management has a direct impact on organizational performance and also exerts its influence indirectly through the mediating factor of human capital. Palacios-Marques et al. (2011) established that knowledge management positively and significantly contributes to the development of human capital. Furthermore, Birasnav and Rangnekar (2010) found that the various dimensions of knowledge management

significantly and positively influence the development of human capital.

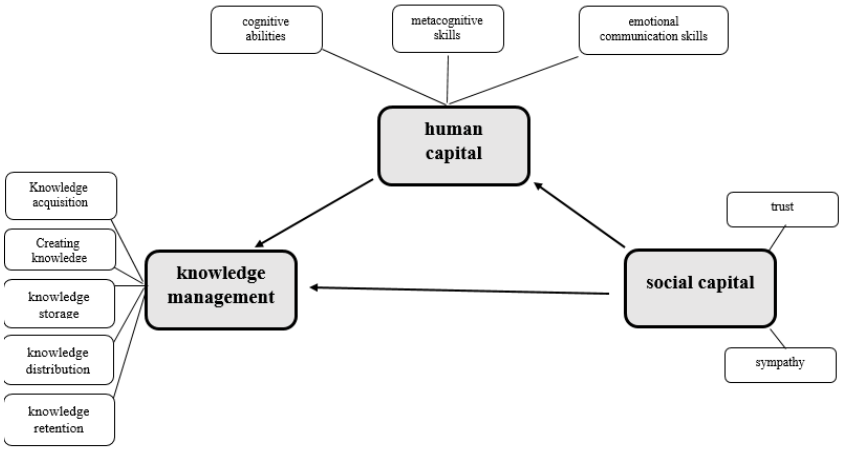

Figure 1. Conceptual model of research

Research Model

The present study is applied research and correlational.

Research Design

We formulated a theoretical structural equation model to illustrate the influence of variables on knowledge management. Structural equation modeling (SEM) is a method that enables the assessment of a series of interconnected relationships between dependent and independent variables in a quantifiable manner. As proposed by Fornell and Larcker (1981), SEM is a robust statistical technique that evaluates the hypotheses regarding the connections between observable and latent variables. Therefore, SEM proves to be highly effective in depicting both the direct and indirect impacts of latent variables on the observable factors within the theoretical framework.

Sample, sample size, and sampling method

The study encompassed all secondary school teachers in Tehran as its statistical population. According to the most recent data provided by the educational authorities of Tehran cities, the total count of teachers, both male and female, in government and non-government secondary schools in Tehran amounts to 10,658 teachers. For this research, a sample of 214 individuals was chosen through a random cluster sampling method. Initially, the sample size was determined, and then a subset of schools was randomly selected as the sample, with the intention of generalizing the findings to the broader population of teachers in the area. Regarding the sample size in structural equation modeling, there exist differing perspectives. Loehlin (2004) suggests that a sample size of less than 100 is inadequate, while sizes exceeding 200 are preferred. Furthermore, it is recommended that in structural equation modeling, the sample size should not

fall below 200, as stated by Kline (2005).

Measures and Scale Validation

Knowledge management questionnaire

Here, three questionnaires were used for data collection, which will be explained separately in the following:

One of the questionnaires was that of Fong and Choi (2009). It is a 38-question questionnaire that includes five components of knowledge management: knowledge acquisition, knowledge creation, knowledge storage, knowledge distribution, and knowledge maintenance (Table 1).

Table 1. The dimensions of the knowledge management questionnaire

Questions	Indicator
1–3	knowledge acquisition
4–6	creating knowledge
7–9	knowledge storage
10–12	knowledge distribution
12–15	knowledge retention

- **Human capital questionnaire**

In this case, the Adjusted Human Capital Questionnaire (Naderi, 2015) was used. It consists of 118 questions, including the three components of cognitive abilities, metacognitive skills, and emotional communication skills. It is adapted to measure the human capital of teachers (Table 2).

Table 2. The dimensions of the human capital questionnaire

questions	Indicator
16-27	cognitive abilities
28-33	metacognitive skills
34-36	emotional communication skills

- **Social capital questionnaire**

The social capital questionnaire developed by Alishahi et al. (2015) was used to evaluate social capital. This questionnaire was designed based on the social capital questionnaire of Nahapiet et al. (1998).

Table 3. The dimensions of the social capital questionnaire

questions	Indicator
41-37	trust
42-49	sympathy

After adjusting the questions of three questionnaires, the experts approved their face validity. Then, Table 4 presents the reliability of each questionnaire.

Table 4: Reliability of questionnaires in research

Questionnaires	Cronbach's alpha value
Knowledge Management Questionnaire	0.849
Human Capital Questionnaire	0.840
Social Capital Questionnaire	0.714

Results

A scale factor loading lower than 0.40 suggests that an item should be considered for removal, and items with a factor loading between 0.40 and 0.70 may be considered for deletion if their removal leads to an increase in average variance extracted (AVE), composite reliability (CR) and Cronbach's alpha (a) above the threshold (Hair et al., 2017). All the main constructs meet the minimum threshold of reliability. Thus, all individual reflective items with loading above 0.60 remained, confirming the proposed relationships among research constructs. The average variance extracted was used to examine convergent validity. Fornell and Larcker (1981) recommend an AVE value ≥ 0.50. This means that 50% or more of the indicator variance should be accounted for. To check reliability, the composite reliability and Cronbach's alpha were used. If the value of composite reliability and Cronbach's alpha is above 0.7, the reliability is desirable (Hair et al., 2017).

Table 5. The measurement model

	factor loading	AVE	CR	Cronbach's alpha	Q^2
Social capital		0.718	0.832	0.714	0.236
Trust	0.696				
Sympathy	0.976				
Human capital		0.758	0.904	0.840	0.313
Cognitive abilities	0.873				
Metacogniti ve skills	0.886				
Emotional communicati on skills	0.853				
Knowledge management		0.624	0.892	0.849	0.323
Knowledge acquisition	0.752				
Creating knowledge	0.774				
Knowledge storage	0.812				
Knowledge distribution	0.829				
Knowledge retention	0.779				

The heterotrait-monotrait ratio of correlations (HTMT) approach was employed to calculate the discriminant validity. If the numbers in the index of the HTMT matrix are below 0.85, the research has divergence validity (Henseler et al., 2015).

Table 6. The discriminant validity (HTMT criterion)

	Social capital	Human capital	Knowledge management
Social capital			
Human capital	0.533		
Knowledge management	0.195	0.344	

Table 7 specifies the significance test results to investigate the research dimensions.

Table 7: Significance test for dimensions

	t-value	p-values	Conclusion
Social capital → Trust	7.657	0.000	supported
Social capital → Sympathy	61.789	0.000	supported
Human capital → Cognitive abilities	40.521	0.000	supported
Human capital → Metacognitive skills	37.008	0.000	supported
Human capital → Emotional communication skills	32.419	0.000	supported
Knowledge management → Knowledge acquisition	12.636	0.000	supported
Knowledge management → Creating knowledge	17.527	0.000	supported
Knowledge management → Knowledge storage	15.143	0.000	supported
Knowledge management → Knowledge distribution	15.599	0.000	supported
Knowledge management → Knowledge retention	22.655	0.000	supported

Table 7 specifies the t-values and p-values of the dimensions of the questionnaires. The highest value t-value was sympathy (social capital) (61.789), followed by cognitive abilities (human capital) (40.521). All dimensions of the questionnaires were significant.

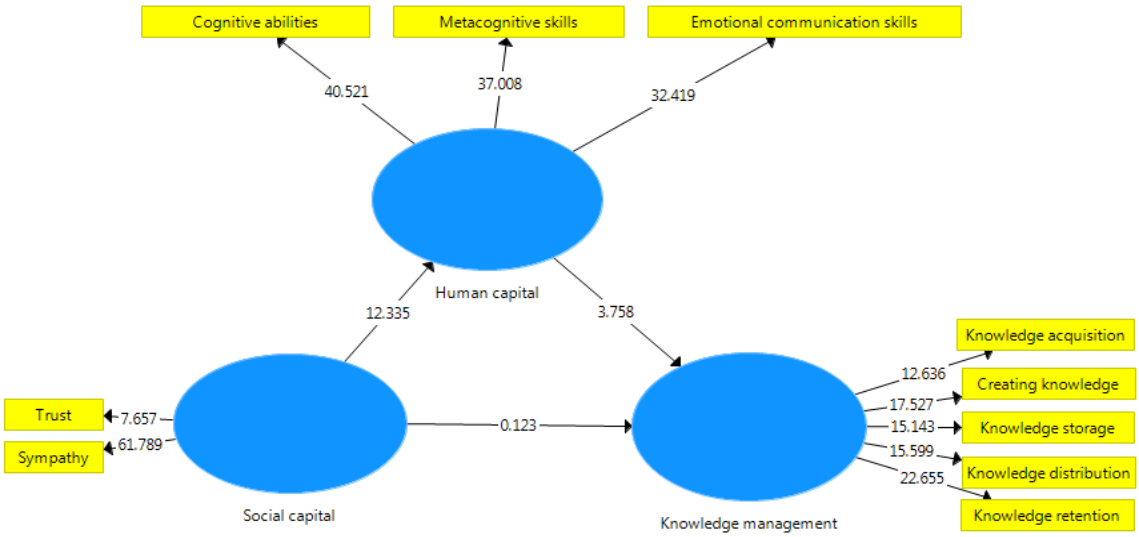

Figure 2: PLS-SEM results

Figure 2 compares the research hypotheses, and Table 8 shows the results. In Hypothesis I, social capital significantly relates to knowledge management. The significance test coefficient (t-value) is 0.123. This finding rejects this hypothesis. Hypothesis II states that social capital has a significant relationship with human capital. The significance test coefficient of this hypothesis is 12.335, which confirms this hypothesis. The path coefficient of this hypothesis is 0.507. Hypothesis III states that human capital has a significant relationship with knowledge management. The significance test coefficient of this hypothesis is 3.758, which confirms this hypothesis. The path coefficient of this hypothesis is 0.291. In Hypothesis IV, which examines the effect of social capital on knowledge management by mediating human capital, the t-value is 3.471. This value confirms the hypothesis.

Table 8. Significant testing results of the structural model path coefficients

	Path coefficient	t-value	p-values	Conclusion
Social capital → Knowledge management	0.011	0.123	0.902	Not supported
Social capital → Human capital	0.507	12.335	0.000	supported
Human capital → Knowledge management	0.291	3.758	0.000	supported
Social capital → Human capital → Knowledge management	0.147	3.471	0.001	supported

The effect of the mediator variable was examined using the Sobel test. The z-value obtained was 3.69. Also, since the absolute value of the z-value is greater than 1.96, the significance of the effect of the mediator variable can be confirmed. Also, relevance prediction (Q2) was used to check the model's fitness. If its value is higher than 0, fitness is desirable (Henseler et al., 2009). Table 5 specifies the results, indicating the appropriate status of the research.

Discussion and Conclusions

Hypothesis I, which proposed the influence of social capital on knowledge management, was refuted because of the evident lack of a strong spirit of teamwork and a culture of interaction among Iranians, a longstanding issue. Despite the crucial importance of social capital's impact on knowledge management, one of the primary goals of this study was to explore its effect on teachers. Perez (1999) contends that knowledge management holds significant value in helping organizations leverage their existing knowledge, work more efficiently and swiftly, and ultimately enhance profitability. Knowledge management involves the process of capturing the knowledge, wisdom, and value-added experiences of individuals within an organization, facilitating easy retrieval, and thereby preserving it as a valuable organizational asset.

The significance of social structures and interactions in optimizing knowledge management is exemplified in well-established lean manufacturing techniques, which are heavily reliant on the social capital of the workforce and often result in substantial efficiency improvements (Fukuyama, 2001). An evident commonality in this trend is the heightened focus on knowledge work, knowledge workers, and the inherent nature of knowledge within organizations. This discourse underscores the increasing emphasis on collaboration among individuals and groups within the organizational context. One promising area for collaboration lies in the emerging group of professionals dedicated to managing the knowledge assets within organizations. The interest in exploring the relationship between knowledge management and social capital has grown as knowledge management and social capital have become more sophisticated and intricate (Manning, 2010). However, it's worth noting that this hypothesis was disproved, with a p-value of 0.902. The outcomes associated with this hypothesis do not align with the findings in previous studies (Afshari et al., 2020; Liu & Lee, 2015; Aghamirzaee et al., 2014; Aslam et al., 2013; Hau et al., 2013; Winch, 2008; Daud & Yusoff, 2010; Roxas, 2008; Hoffman et al., 2005; Tymon & Stumpf, 2003).

Hypothesis II posits that the influence of social capital on human capital is indeed significant. The human and social capital brought into play by group members plays a pivotal role in shaping their collective actions and overall effectiveness (Oh et al., 2006). Coleman (1988) postulates that social capital is instrumental in fostering human capital development, contending that individuals acquire knowledge and skills through interpersonal interactions. Building on this notion, Meyerson (1994) asserts that social capital's impact on income is contingent on the strength of social ties, with strong ties being the catalyst for this effect. Furthermore, social capital serves as a

conduit for accessing technical guidance during the dissemination of innovations and knowledge transfer (Hansen, 1999). Glaeser et al. (2002) document a robust empirical association between human capital and membership in specific social organizations (utilized as a proxy for measuring social capital). The outcomes of this study demonstrate that social capital among teachers significantly influences human capital, as indicated by a p-value of 0.000. These results corroborate the findings of prior research conducted by Felício et al. (2014), Lin and Huang (2005), and Boxman et al. (1991).

Hypothesis III addresses the notable impact of human capital on knowledge management. In response, organizations have initiated efforts to raise awareness among their workforce regarding the advantages of implementing knowledge management initiatives on both employee well-being and overall corporate performance. These steps taken to achieve success in knowledge management can exert a certain degree of influence on the human capital aspect of employees. The organizational capabilities perspective posits that success or effectiveness in knowledge management is contingent on organizational capabilities or the collective knowledge infrastructure, encompassing advanced technology, organizational structure and culture, and knowledge management processes (Gold et al., 2001). Recognizing the intrinsic link between knowledge management and the management of human capital is crucial because knowledge is deeply embedded in individuals, and the value of human capital is predicated on the wealth of knowledge possessed by individuals (Abdullah et al., 2013).

Within the context of knowledge management, human capital development activities are routinely practiced by employees, whether formally or informally, and primarily occur through knowledge management initiatives. Employees engage in knowledge management through three primary avenues: informal knowledge sharing through conversations in hallways and common areas, knowledge acquisition by learning from books, magazines, and research papers, and knowledge application by leveraging colleagues' expertise to address their own challenges. This active engagement in knowledge management activities serves to enrich individual knowledge and foster innovative behavior among individual employees. Consequently, these tactical knowledge management processes positively contribute to the creation of human capital (Birasnav & Rangnekar, 2010).

The findings associated with this hypothesis demonstrate that the human capital variable significantly influences the knowledge management variable, evident by a p-value of 0.000. These findings are in alignment with the outcomes of other studies (Rezaei et al., 2021; Palacios-Marques et al., 2011; Birasnav and Rangnekar, 2010). Hypothesis IV explores the significant effect of social capital on knowledge management, with human capital acting as a mediating factor.

Limitations and Future Research

The study encountered several limitations, primarily stemming from the COVID-19 pandemic and the subsequent closure of educational institutions. Consequently, the research team had to resort to electronic questionnaires for data collection. The actual return rate of these questionnaires

was documented. It's worth noting that a significant number of questionnaires were incomplete and had to be excluded from the analysis, resulting in a substantial amount of missing data. As a result, caution should be exercised when attempting to generalize the study's findings. Notably, one of the proposed hypotheses was rejected due to cultural factors and the observed reluctance among Iranians to engage in teamwork and cooperation. In light of these limitations, it is recommended that future researchers consider qualitative research methods, such as phenomenological interviews with teachers. This approach can provide valuable insights into the lived experiences of educators, particularly in the context of low social capital and its impact on knowledge management. Additionally, subsequent researchers are encouraged to employ advanced statistical analyses, such as multilevel analysis, to explore the various levels of influence on these variables.

Here are the paraphrased suggestions for school administrators and educational policymakers:

Enhancing Social Capital: Schools can boost their social capital and enhance knowledge management productivity by fostering a culture of collaboration and interaction within the workplace. This includes organizing group meetings, promoting the sharing of experiences and knowledge among teachers, and establishing communal spaces for information exchange.

Developing Human Capital: Human capital plays a pivotal role in knowledge management. Schools can strengthen their human capital by improving the skills, training, and professional development of teachers. This entails offering training programs, facilitating access to educational resources, and encouraging continuous learning among teachers.

Prioritizing Knowledge Management: Knowledge management is of utmost importance for increasing the efficiency and effectiveness of schools. Schools should develop robust knowledge management systems and processes while leveraging modern knowledge management tools. These tools can facilitate optimal knowledge utilization and support teachers in acquiring new knowledge.

Fostering Internal Communication: Creating more avenues for knowledge and experience sharing among teachers promotes internal communication and collaboration. This, in turn, cultivates a dynamic and knowledge-rich learning environment within schools.

Statements and Declarations

The authors confirm that they do not have any competing interests to disclose. All the authors have made substantial contributions to the project and meet the criteria for authorship. To the best of our knowledge, there are no conflicts of interest, whether financial or otherwise. Furthermore, all authors have collectively agreed to submit the manuscript, and it is not concurrently being considered for publication in any other journal.

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