

ORIGINAL SCIENTIFIC PAPER

The Effect of Social Capital Dimensions on the Knowledge-Sharing Intention of Physical Education Teachers

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Abstract

Social capital and knowledge sharing can be defined as the most important asset of educational organizations. The current study aims to assess the effect of social capital dimensions on the knowledge-sharing intention of physical education teachers in Fars province in Iran. To realize this research, a field study was conducted on 268 physical education teachers. Analysis of a moment structures (AMOS) version 18 and statistical package for the social sciences (SPSS) version 18 were applied for data analysis and hypotheses testing to fulfil the research objectives. To measure the validity and fitness of the model, Structural Equations Modelling (SEM) has been applied. The findings indicate that the social capital dimensions had a significant and positive effect on knowledge-sharing intention among physical education teachers. The findings also highlight the significant role of social capital elements in predicting physical education teachers' intention to participate in the process of knowledge sharing.

Keywords: social capital, knowledge sharing, physical education, teachers

Introduction

The success of organizations is not only dependent on physical resources, but it has a close relationship with acquiring knowledge as well as effective participation of employees in the process of organizational learning. Efficient employees are the most strategic factors for organizational success. Considering issues such as knowledge sharing and social capital can provide educational organizations with dynamic performance. Teachers and the education system in each community play an essential role in creating and increasing social capital as well as knowledge sharing. As the construction of educational systems has always been criticized for its lack of innovative capacities, or for its inability to employ a more efficient education process (Agapiou, 2002), examining both knowledge management mecha-

nisms and their enablers can provide education systems the ability to cope with these challenges, which require schools and educational sectors to expand their activities related to knowledge management. In this regard, public schools can promote the exchange of knowledge as one of the most critical intangible forms of capital.

Social capital can be defined as a proper theoretical framework to explain knowledge-sharing mechanisms in educational organizations. As a highly debated concept, it is a central construct in contemporary sociology (Coleman, 1988). Social capital plays a pivotal role in mediating human capital and organizational capital and refers to several collective emotional, cognitive and communicative skills and resources that are vital for enhancing the existing know-how of an organization (Styhre, 2008). Without social capital,



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the potentials of human and organizational capital cannot be exploited completely (Subramaniam & Youndt, 2005). According to Styhre (2008), the critical social practice that facilitates knowledge sharing can be considered to be the most critical way to convey learning. In organizations with high levels of social capital, co-workers share their insights and know-how. In such organizations, knowledge is not an individual property; instead, it is collectively mobilized and used in everyday practice.

Social capital explains how social resources create positive experiences at work and lead to useful results (Nahapiet & Ghoshal, 1998). It facilitates information exchange in organizations (Lazega & Pattison, 2001) and helps individuals work together effectively when they trust and identify with one another and can provide organizational advantages (Nahapiet & Ghoshal, 1998). It can facilitate the flow of information between individuals. Adler and Kwon (2002) concluded that social capital significantly contributes to organizational benefits. Nahapiet and Ghoshal (1998) also considered social capital necessary for the development and distribution of knowledge in organizations. The findings of Burt (1997) revealed that managers who had more social capital were promoted earlier on in their careers, received larger bonuses, and generally obtained a higher return on their investment in human capital (Burt, 1997).

In addition to social capital, knowledge is one of the primary sources of gaining competitive advantage in a dynamic and competitive environment (Wang & Noe, 2010). Liebowitz (2001) considered recording, sharing, applying and creating knowledge in the organization as the best means of influencing internal and external resources. The sharing of knowledge enables productivity and investment in knowledge-based resources. Knowledge sharing refers to disseminating ones' knowledge and experience to others. To develop knowledge efficiently, organizations should encourage people to be involved in knowledge contribution and knowledge-seeking cycles (Bock, Kankanhalli, & Sharma, 2006).

The ultimate goal of employee knowledge sharing is to attempt to transfer the experiences and knowledge of all individuals into assets and organizational resources to increase organizational effectiveness. Knowledge sharing is a set of behaviour that involves exchanging knowledge and information, which can provide individuals and organizations with an opportunity to create and utilize knowledge. Organizations play a critical part in persuading individuals to exchange their knowledge and experience with others (Nonaka, 1994). Close interaction and communication between people are necessary infrastructure for effective knowledge sharing. Stimulating individuals to participate in knowledge-sharing activities and the kind of social setting that facilitates knowledge sharing are essential domains for researchers and managers (Alavi & Leidner, 2001). Social capital has been used to explain why people are likely to exchange their knowledge with others (Wasko & Faraj, 2005). Understanding the different dimensions of social capital underpinning information sharing is a prerequisite for effective knowledge management.

Knowledge sharing is a fundamental tool for achieving a competitive advantage (Jackson, Chuang, Harden, & Jiang, 2006). It seems that knowledge-sharing practices with social capital in organizations can be closely related. In oth-

er words, indicators such as bilateral engagement and trust and integrity, which are part of social capital, can be primarily considered as prerequisites for knowledge-sharing behaviour. The need to identify and to explain the effects of social capital on knowledge sharing is one of the strategic requirements of organizations to move towards knowledge-based learning organizations.

Providing an appropriate platform and devising appropriate strategies can help teachers to gain more knowledge and transfer their knowledge to others effectively. The effective sharing of knowledge leads to a reduction in the costs of producing knowledge, and guarantees the dissemination of the best practices within the education systems and enables the education systems to solve the problems effectively. Based on the social capital theory, prior studies pertaining to knowledge sharing have been conducted under different sharing context, such as sharing in blogs (e.g., Chai & Kim, 2010), virtual communities (e.g., Chiu, Hsu, & Wang, 2006; Wasko & Faraj, 2005), knowledge repository systems (e.g., Lin & Huang, 2008), within organizations (e.g., Szulanski, Cappetta, & Jensen, 2004), or within teams (e.g., Majchrzak, Malhotra, & John, 2005; Staples & Webster, 2008). Social capital in the context of school teachers has not been studied to date, as the studies are mainly examining social aspects and knowledge sharing in corporate settings. The present research is one of the few studies that have been conducted to study the relationship between knowledge sharing with social capital in the field of physical education teaching.

Despite the increasing importance of knowledge sharing in education systems, few studies have been conducted to examine these concepts among physical education teachers. Social capital and knowledge sharing are of fundamental importance in increasing education efficiency, and more attention to these concepts can improve the effectiveness of physical education teachers' performance. Because social capital has been defined according to different approaches, it has also been conceptualized differently by scholars (Coleman, 1998). Contrary to other similar studies (Martínez-Cañas, Sáez-Martínez & Ruiz Palomino, 2012), that operationalized social capital following the framework of Nahapiet and Ghoshal (1998) with three dimensions (the structural dimension, the cognitive dimension and the relational dimension), the authors of the present paper employed a different social capital framework including "Reliability", "Social cohesion", "Social Network and Participation", "Capacity to accept criticism", and "Social interaction". These dimensions of social capital have been found to be useful when exploring knowledge-sharing practices. This study brings critical aspects to the debate on how the combination of social dimensions supports knowledge sharing.

This study was set up to study the effect of social capital dimensions on the knowledge sharing of physical education teachers in Fars province in Iran. Conducting such studies can be critical to promoting the concepts of knowledge management in different areas related to sport and exercise teaching. In this research, based on the literature review, the impact of social capital components on the knowledge sharing of physical education teachers according to the following conceptual model (Figure 1) has been studied.

As social capital dimensions increase the exchange of knowledge, according to the literature review, it is likely that their development among physical education teachers

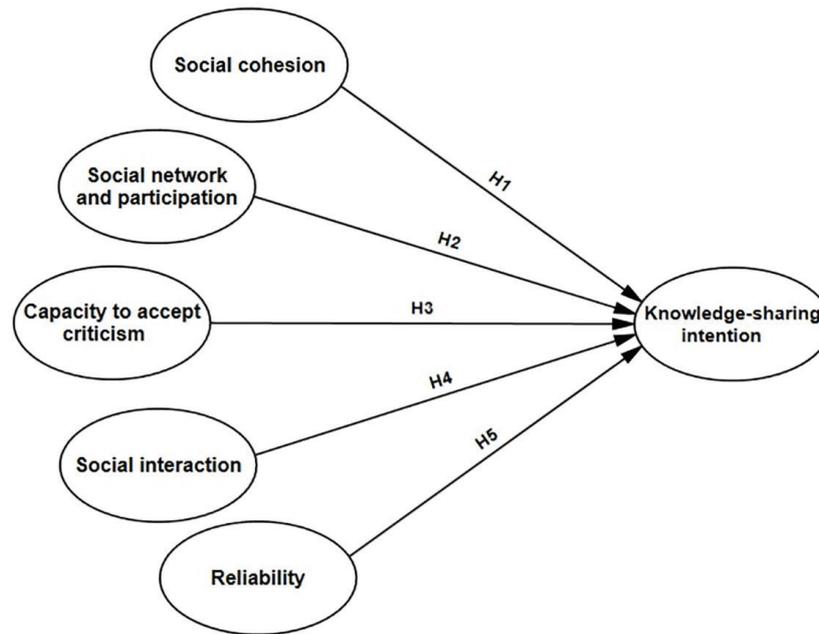


FIGURE 1: The Research Model

operates as a platform for knowledge sharing. Thus, the following hypotheses were developed in the research model. According to the research model, the hypotheses were proposed as follows:

H1. “Social cohesion” has a significant effect on “knowledge-sharing intention” among physical education teachers.

H2. “Social Network and Participation” has a significant effect on “knowledge-sharing intention” among physical education teachers.

H3. “Capacity to accept criticism” has a significant effect on “knowledge-sharing intention” among physical education teachers.

H4. “Social interaction” has a significant effect on “knowledge-sharing intention” among physical education teachers.

H5. “Reliability” has a significant effect on “knowledge-sharing intention” among physical education teachers.

Methods

A field study with a quantitative approach was conducted among physical education teachers in Fars province in Iran to realize this study. Based on a proposed equation for measuring the sample size for an SEM approach, a research sample ($n=268$) was selected through convenience sampling. All the respondents were physical education teachers in Fars province, Iran; 144 of the respondents (53.7%) were male. The average age was 28.0 years (standard deviation of 5.6 years); 189 of the respondents (70.5%) had up to five years of work experience.

A cover letter of explanation with detailed information about the research objectives was attached to each survey. The questionnaire took 10 to 12 minutes to complete. The data collection period took four months, from February to May 2018; 251 valid questionnaires were returned to be used in data analysis (the response rate was 93.66%). AMOS20 and SPSS18 were used for data analysis. To measure the dimensions of social capital, a researcher-developed questionnaire was used. The knowledge-sharing intention was mea-

sured using a four-item instrument adapted from Taylor and Todd’s questionnaire (1995). The dimensions of social capital (Reliability, Social cohesion, Social Network and Participation, Capacity to accept criticism, Social interaction) were measured using a 24-item instrument extracted from a semi-structured interview conducted with 15 academic experts through a qualitative approach. A Likert-type seven-point response scale from “Strongly disagree” (1) to “Strongly agree” (7) was employed for data collection. To verify the validity of the questionnaires, content and face validity as well as construct validity were employed. The reliability of the questionnaire was calculated using Cronbach’s alpha after a pilot study. The Cronbach’s alpha coefficient was found to be 0.85, and the validity of the questionnaire was verified by using experts’ point of views. Accordingly, at first, 10 copies of the first questionnaire were distributed among faculty members and specialists in the field of sports management and organizational behaviour, and they were asked to comment on the comprehensibility, modification, and deletion of items. To verify the construct validity of the questionnaire, confirmatory factor analysis was used.

The value of Cronbach’s alpha coefficients (greater than 0.7), and the C.R. indexes (greater than 0.8), supported the scale reliability (Chin, 2010) (Table 1). The factor loadings were higher than the recommended threshold of 0.70, and the AVE for each construct ranged from 0.65 to 0.74 (Table 1), which were higher than the suggested threshold of 0.5 (Hair Jr, Hult, Ringle, & Sarstedt, 2016), showed proper convergent validity for all constructs.

An assessment of the measurement model was presented in Table 1 to support the scale reliability and validity (Table 1).

To measure the validity and fitness of the model, Structural Equations Modelling (SEM) has been applied. This modelling both investigates the adaptation of the data and the conceptual model to determine if it bears a sufficient fit and investigates the significance of the relationships in this fitted model.

Table 1. Results of measurement properties

Construct	Items	OL (>0.70)	α (>0.70)	CR (>0.70)	AVE (>0.50)
Social cohesion	SC1	0.89 ^a	0.82	0.83	0.75
	SC2	0.85 ^a			
	SC3	0.80 ^a			
	SC4	0.88 ^a			
Social network and participation	SNP1	0.85 ^a	0.79	0.85	0.73
	SNP2	0.81 ^a			
	SNP3	0.89 ^a			
	SNP4	0.91 ^a			
	SNP5	0.86 ^a			
Capacity to accept criticism	CAC1	0.88 ^a	0.82	0.88	0.70
	CAC2	0.86 ^a			
	CAC3	0.86 ^a			
	CAC4	0.85 ^a			
	CAC5	0.84 ^a			
Social interaction	SI1	0.88 ^a	0.86	0.84	0.64
	SI2	0.84 ^a			
	SI3	0.83 ^a			
	SI4	0.81 ^a			
	SI5	0.85 ^a			
Reliability	RE1	0.82 ^a	0.81	0.82	0.68
	RE2	0.88 ^a			
	RE3	0.82 ^a			
	RE4	0.83 ^a			
	RE5	0.81 ^a			
Knowledge-sharing intention	KSI1	0.81 ^a	0.82	0.83	0.69
	KSI2	0.83 ^a			
	KSI3	0.81 ^a			
	KSI4	0.86 ^a			

Legend: OL - Outer Loading; A - Cronbach's Alpha; CR - Composite reliability; AVE - Average variance extracted; SC - Social Cohesion; SNP - Social Network and Participation; CAC - Capacity to Accept Criticism; SI - Social Interaction; RE - Reliability; KSI - Knowledge-Sharing Intention

Results

To test the hypotheses, a structural equations model was used. Table 2 shows the fit indices of that model. The indexes of the overall fit of the model included normed chi-square,

goodness-of-fit index, adjusted goodness-of-fit index, normed fit index, comparative fit index and root mean squared error. The results of the fit indices of the conceptual model have been given in Table 2.

Table 2. Fit Indices of the Model

Index	Cmin/df	GFI	AGFI	NFI	CFI	RMSEA
Study model	2.49	0.94	0.95	0.93	0.92	0.07
Recommended value	<3	>0.90	>0.90	>0.90	>0.90	<0.10

Legend: GFI - Goodness-of-fit index; AGFI - Adjusted goodness-of-fit index; NFI - Normed fit index; CFI - Comparative fit index; RMSEA - Root mean squared error

According to Table 2, the fitness indices showed a good fitness.

Critical ratio (C.R.) and p value were used to test the significance of the hypotheses. The critical ratio is computed through regression weight divided by the standard error. Based on the significance level of 0.05, C.R. should be higher

than 1.96. Those values under 1.96 are not considered to be important parameters in the model. Also, the P values lower than 0.05 show a significant difference in the computed values for regression weights of zero at 0.95 of confidence level. Table 3 shows the hypotheses, regression weights, and the index

Table 3. Hypothesis-Testing Results

Path	Regression weight	C.R	Result
Social cohesion → knowledge-sharing intention	0.44***	7.44	Supported
Social Network and Participation → knowledge-sharing intention	0.59***	8.31	Supported
Capacity to accept criticism → knowledge-sharing intention	0.48***	9.58	Supported
Social interaction → knowledge-sharing intention	0.41***	8.85	Supported
Reliability → knowledge-sharing intention	0.51***	10.36	Supported

Legend: *** - p<0.001

of each hypothesis. Table 3 shows the hypotheses, regression weights, and the index of each hypothesis.

The findings in Table 3 showed that all dimensions of social capital had a positive and significant effect on knowledge-sharing intention among physical education teachers in Fars province.

Discussion

Education systems are often engaged with the question of how to do more with fewer resources, and one of the most critical areas in which remarkable increases in effectiveness are to be achieved is the knowledge-sharing process. This study demonstrated that social capital plays a significant role as the infrastructure of knowledge-sharing performance. Our article contributes to the literature on social capital and knowledge sharing by introducing different social capital dimensions as well as studying these concepts in the physical education school domain.

The purpose of the current study was to assess the effect of social capital dimensions on the knowledge-sharing intention of physical education teachers in Fars province. This study provides a model that examines the effects of social capital dimensions (Reliability, Social cohesion, Social Network and Participation, Capacity to accept criticism, Social interaction) on the knowledge-sharing intention of physical education teachers. The findings revealed that social capital plays a key role in explaining knowledge-sharing performance.

The results showed that the influence of Reliability, Social cohesion, Social Network and Participation, Capacity to accept criticism and Social interaction on knowledge sharing was statistically significant (As demonstrated in Table 3). Focusing on social capital and its relationship with knowledge sharing promote knowledge in the education system, especially among teachers. The results of the research are consistent with the findings of Adler and Kwon (2002). Nahapiet and Ghoshal (1998) also consider social capital necessary for the development and distribution of knowledge in organizations. Harell (2009), and Cohen and Prusak (2001) find that there was a positive relationship between social capital and the dimensions of knowledge management, which is consistent with the results of the current research. Knowledge sharing provides physical education teachers with the opportunity to interact closely with each other and to exchange their technical, expert, and experimental information. Social capital is a critical asset that can help any organization create a sustainable competitive advantage. The necessity of identifying and explaining the re-

lationship between social capital and knowledge sharing is one of the strategic needs of organizations in achieving a knowledge-based and learning atmosphere.

According to Coleman (1998), social capital is productive and enables the achievement of certain ends. The social capital creation provides an opportunity to develop mutual understanding, to build trust and to ensure equality to foster commitment and cooperation (Cohen & Prusak, 2001). The knowledge-sharing process often takes place in collaborative settings and, therefore, the social aspects may play an important role.

To examine and understand how organizations develop, the concept of social capital should be brought into the analysis (Styhre, 2008). To reinforce social capital, a trusting atmosphere should be increased in schools and education systems. Social capital can be strengthened by encouraging communication skills among physical education teachers. Communication between management and teachers can develop social capital and finally job satisfaction among physical education teachers. Thus, management must help to provide formal as well as informal communication opportunity to facilitate knowledge-sharing processes. To develop social capital, we need to design strategies for reinforcing a culture of trust and willingness to work collectively. As a consequence, managers of education systems should carefully consider how social capital is nourished and developed at their organizations.

To manage different aspects of knowledge-sharing mechanisms, the dimensions of social capital are proper tools: Reliability, Social cohesion, Social Network and Participation, Capacity to accept criticism, and Social interaction. Our model is the initial attempt to conceptualize the effect of social capital elements on knowledge-sharing intentions in public educational sectors. The testing and verification of the model require more data which can be obtained by conducting quantitative and qualitative studies in a variety of educational systems.

The study of social capital and knowledge-sharing concepts by conducting quantitative and qualitative approaches can be considered by researchers in the field of sport education in the future. Future studies on knowledge sharing and social capital should focus on different kinds of enablers of and obstacles to knowledge sharing and various aspects of social capital in public school contexts. A complete understanding of the multidimensionality of enablers and obstacles of knowledge sharing and intangible capital in the physical education sector is highly significant and may promote educational efforts.

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Conflict of Interest

The authors declare that there are no conflicts of interest.

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