Received 11 December 2021
Revised 14 June 2022
29 October 2022
17 December 2022
10 January 2023
Accepted 2 February 2023

Shared leadership and team performance in health care: how intellectual capital and team learning intervene in this relationship

Muhammad Haroon Shoukat and Syed Asim Shah
Department of Management Sciences, COMSATS Institute of Information Technology – Attock Campus, Attock, Pakistan, and

Dilnaz Muneeb
College of Business, Abu Dhabi University, Abu Dhabi, United Arab Emirates

Abstract

Purpose – This study aims to examine the role of shared leadership (SL) practices in improving team performance (TP) in health-care producer organizations by mediating the roles of intellectual capital (IC) and team learning (TL).

Design/methodology/approach – Conceptual model was proposed using social learning theory and resource-based view theory. The structured questionnaire was administered to respondents of Pakistani health-care producer organizations using a cross-sectional approach. Data was collected from 23 team leaders and 203 team members from 23 different teams. PLS-structural equation modeling was applied to SmartPLS 3.2.9.

Findings – The findings revealed that SL and IC are positively associated with TP, while TL has no association with TP. Further, SL is positively associated with IC and TL. This study also found that IC significantly mediates between SL and TP. Still, no mediating role of TL between SL and TP was found.

Practical implications – The findings suggest health-care producer organizations adopt shared leader practices where team members are given a say in decision-making to boost their morale, leading to effective TP.

Originality/value – The conceptual model was created using social learning and resource-based view theories. This is an early attempt to examine the role of SL in health-care producer organizations.

Keywords Resource-based view, Shared leadership, Team performance, Social learning theory, Intellectual capital, Team learning

Paper type Research paper

1. Introduction

Successful organizations have recently switched from a conventional leadership style to a more contemporary horizontal leadership style, known as shared leadership (SL) (Pearce & Sims, 2002). SL is a collaborative and cooperative mechanism between project team members (Wu, Cormican, & Chen, 2020) and leadership to accomplish team goals and target achievement (Scott-Young, Georgy, & Grisinger, 2019).

SL has gained much popularity (Liu, Hu, Li, Wang, & Lin, 2014), becoming an organizational imperative (Dionne, Sayama, Hao, & Bush, 2010; Wu et al., 2020). For instance, in specific sectors and health-care companies, the tasks performed by team

The Learning Organization
Vol. 30 No. 4, 2023
pp. 426-445

0969-6474
DOI 10.1108/TLO-12-2021-0146

members are usually interdependent, unstructured and complex, and teamwork is highly needed (Alilyyani, Wong, & Cummings, 2018; Surace, 2019). Team leaders in such companies face significant challenges related to prevailing market dynamism and uncertainty (Ellinger & Ellinger, 2021; Dirani et al., 2021). It is challenging for a single team leader to master all critical information and skills to successfully and efficiently lead their team members (Hoch, Pearce, & Welzel, 2010). Recent research highlighted the need for SL (Shoukat, Elgammal, Shah, & Shaukat, 2022) to promote a team learning (TL) culture within project teams (Dirani et al., 2021). TL is essential when team members observe and imitate the SL style (Kérivel, Bossard, & Kermarrec, 2021). According to social learning theory, followers watch their leaders' specific behaviors and replicate them (Bandura & Walters, 1977). This resulted in a "trickle-down" effect from leader to followers (Liu et al., 2014). A previous study indicates that formal leadership can aid in promoting learning behavior at the team, individual and organizational levels (Boak, 2016). For example, if sharing responsibility and power among several leaders is a common aim, TL is vital (Creasy & Carnes, 2017). Liu et al. (2014) argue that SL is positively related to TL (Liu et al., 2014), is important in project teams and cannot be overlooked.

Prior research shows that health-care organizations rely on intensive knowledge and intellectual capital (IC) to achieve strategic goals and enhance team performance (TP) (Evans, Brown, & Baker, 2015; Mitchell & Boyle, 2021). IC comprises three subcomponents, namely, human, structural and relationship capital. These components represent employees' collective knowledge, specific skills and expertise (Bontis & Fitz-enz, 2002; Bontis, 1998), contributing to a competitive organizational edge (Asiaei, Jusoh, & Bontis, 2018). Prior literature confirms that SL practices effectively used IC and increased organizational performance (Nahapiet & Ghoshal, 1998; Pearce, 2004). However, the literature lacks an understanding of the role of IC in health-care organizations (Hoch & Dulebohn, 2017; Sweeney, Clarke, & Higgs, 2019). More specifically, very little work has been done in health-care organizations on SL with TP (Janssens, Simon, Beckmann, & Marshall, 2018) and the mediating mechanism of IC and TL (Zhu, Liao, Yam, & Johnson, 2018). Recently, Imam and Zaheer (2021) investigated SL and team success with the mediating role of knowledge sharing and found significant results in project teams. They emphasize the necessity for additional research on SL and intangible assets that can be leveraged to reach multiple goals to improve TP (Shoukat et al., 2022).

Prior studies have rarely investigated the SL and IC relationship (Bligh Michelle, Pearce Craig, & Kohles Jeffrey, 2006) and the IC and TP linkages (Asiaei et al., 2018). These empirical investigations were conducted in the business environment. The current literature has frequently discussed the increasing role of IC (human, structural and relational) in an organizational context (Issahaka Abdallah & Lines, 2020), while in the context of team level, the role of IC has rarely been discussed (Iqbal, Latif, Marimon, Sahibzada Umar, & Hussain, 2019; Greer & Carden, 2021). Existing research indicates a strong link between SL and TP (Scott-Young et al., 2019; Zhu et al., 2018) but further recommends studying a mediating variable between this link as IC and TL which can transform TP (Scott-Young et al., 2019; Liu et al., 2014; Hoon Song, Hun Lim, Gu Kang, & Kim, 2014).

The research context is health-care producer organizations, which is appropriate for several reasons. First, it aims to explain SL behavior from a team-level perspective, a topic of little research but practical importance (Evans et al., 2015). The job descriptions for health-care producers are highly dynamic and complex, with tasks changing regularly (Shoukat et al., 2022). To compete in a changing market, health-care practitioners are always looking for new ways to quickly understand emerging trends and implement new practices to improve TP. Second, the main goal of our research is to examine the team resources of

health-care producers' organizations at the team level. In today's competitive market, using internal organizational capabilities provides a new approach for health-care practitioners to use team IC (human, structural and relational) to increase TP; it also represents a new trend in team management for many health-care practitioners (Huang, Leone, Caporuscio, & Kraus, 2021).

This study aims to contribute in several ways: first, it investigates the impact of SL on TP and whether or not IC intervenes in the relationship. Our results show that SL plays an essential role in the development of the TP, and the IC acts as a mechanism link between these relationships, which is an important contribution of this research. This research advances the knowledge of RBV theory by emphasizing IC. The key questions of this study are as below:

RQ1. What is the impact of SL on TP in health-care producer organizations?

RQ2. What is the extent of mediating the role of IC and team learning between SL and TP in health-care producer organizations?

2. Literature review and hypotheses development

2.1 Shared leadership and team performance

SL is "a dynamic, interactive influence process among individuals in groups for which the objective is to lead another to the achievement of group or organizational objectives" (Pearce & Sims, 2002, p.1). This study argues that this "learning principle" also applies to SL in teams. In other words, we anticipate those team members who adhere to SL practices and demonstrate SL behavior will be more likely to complete tasks on time and improve TP.

In the health-care industry, because of the growing complexities of the projects, organizations are increasingly becoming project centric (Mitchell & Boyle, 2021) and, therefore, require the use of multitype teams, such as multidisciplinary (Mitchell & Boyle, 2021), occasionally, interorganizational teams to effectively ensure organizational goals (von Danwitz, 2018) and in interprofession groups (Ong, Koh, & Lim, 2020; Han, Yoon, Choi, & Hong, 2021). In these teams, sharing power among multiple team leaders is necessary for the timely accomplishment of tasks (Hoch & Dulebohn, 2017). According to Bandura's (1977) social learning theory, the learning process is a trickle-down effect in which followers observe and imitate their leaders' behavior. Every team member is a leader, and they all learn from one another to improve TP. Yet, the role of SL on TP is explored in other sectors (Han et al., 2021; Nicolaides et al., 2014); however, not much is studied in the health-care setting. Therefore, we proposed the following hypothesis:

H1. SL is positively associated with TP.

2.2 Shared leadership and intellectual capital

IC is a firm that combines knowledge and resources to gain a competitive advantage (Bontis, 1998). Nowadays, IC is a need of every organization. Modern organizations educate their team members to use IC to accomplish their assigned tasks. SL in this respect may be of particular importance (Iqbal et al., 2019). Organizations now face problems in a turbulent and competitive corporate environment, requiring strategic leadership (i.e. SL) (Shafique, Rafi, & Kalyar, 2021). Since businesses are more concerned with creating organizational resources and capabilities through the concentration of IC, another rationale for using SL is that a single leader understanding everything needed to lead multiple elements of the work

process is usually unreasonable in the corporate context (Han et al., 2021). The tasks require the IC of knowledgeable team members, where the knowledge of different individuals is integrated to contribute to the team's innovative outcome (Turner, Maylor, & Swart, 2015; Bontis, 1998) and increase the organizational resources. Therefore, leadership sharing depends on organizing and incorporating the insights and potentials of individuals with diverse perspectives, strategies and experiences (Stephens & Carmeli, 2016; Ahern, Leavy, & Byrne, 2014). As an outcome, SL significantly affects IC (Shafique et al., 2021).

Using the resource-based view theory, we explain the relationship between SL and IC (Barney, 2001). RBV proposes that every team comprises a collection of human, structural and relational resources, all of which are required for every team. These resources can be effectively used in completing complex tasks by sharing leadership among team members. There is a lack of literature on SL (Asiaei et al., 2018; Shafique et al., 2021), and a corresponding lack of literature on SL and IC relationship in health care. Grounded on these assumptions, it is proposed that SL will positively impact IC. The following hypothesis is therefore proposed:

H2. SL is positively related to IC.

2.3 Shared leadership and team learning

TL is the efforts of individuals working in groups to achieve a common goal (Zellmer-Bruhn & Gibson, 2006). TL is vital in learning organizations where individuals work hard to complete assigned tasks (Pandey, Gupta, & Gupta, 2019). Bandura and Walters (1977), well-articulated individual learning in social learning theory, say that individuals are more likely to engage in learning behavior through direct experience or observation. Influential team leaders ensure that their team members participate in the TL process (Bandura & Walters, 1977). These direct experiences come from one's work, whereas practical experiences come from situational sources such as others' modeling conduct. As a result, an SL leader provides team members with an opportunity to gain experience and knowledge. However, it is unclear to what extent team leaders exercise SL in teams. Yet, some researchers have confirmed the significant impact of SL on TL (Song, Gu, & Cooke, 2020; Liu et al., 2014). Some have argued that it relates to inter-team information sharing (Hoch & Dulebohn, 2017), which further enhances the team's absorption capacity (Meghani, Sehar, & Punjani, 2014), and therefore, it positively impacts TL in teams (Wu et al., 2020).

Nonetheless, the engagements of team members are inspired by problem-solving activities as part of TL, which plays a crucial role in coordinating, participating and integrating team experience and information sources (Duffield & Whitty, 2015; Alkhudary & Gardiner, 2021). It implies that these processes will be significant where activity-based learning is declared, and related issues are addressed in a comparable environment (Creasy & Carnes, 2017); where business-oriented, mutually-owned teams are established, it will be necessary to carry out such organizing and review tasks and to appreciate action (Song et al., 2020). The subsequent hypothesis is proposed in light of the existing literature:

H3. SL is positively associated with TL.

2.4 Mediating *role* of intellectual capital

IC is the sum of employees' expertise that plays a significant role in organizational performance (Bontis & Fitz-enz, 2002). IC is considered the intangible asset of any company (Asiaei et al., 2018; Bontis, 1998) and a source of financial and nonfinancial organizational

success (Bontis & Fitz-enz, 2002). Prior scholars emphasize that leaders should strategically manage these critical assets for businesses to augment and enhance organizational efforts to achieve a competitive advantage and improve performance (Shafique et al., 2021; Gallego, Mejia, & Calderón, 2020).

Many studies have found a significant impact of SL on TP (Scott-Young et al., 2019; Han et al., 2021; Hsu, Li, & Sun, 2017; Zhu et al., 2018; Hans & Gupta, 2018; Saber, Shoukat, Shah, Selem, & Shaukat, 2022); however, the association between SL and TP can be established through IC. Two studies explored the mediating role of IC between knowledge-sharing activities and financial performance (Wang, Wang, & Liang, 2014) and between knowledge-sharing and organizational performance (Iqbal et al., 2019). Both of these studies found positive and significant relations. TP depends on team members' knowledge-sharing practices (Fransen, Mertens, Cotterill, Vande Broek, & Boen, 2020). Thus, team members' knowledge is considered IC (Iqbal et al., 2019). Hence, following hypotheses are proposed:

H4. IC is positively associated with TP.

H4a. IC significantly mediates between SL and TP.

2.5 Mediating role of team learning

SL plays a significant role in developing team members' attitudes, behaviors and collective team actions (Wu et al., 2020). Such leadership behavior is a powerful enabler of TL (Song et al., 2020; Alkhudary & Gardiner, 2021). Though leadership style varies from team to team, specifically in larger groups, a senior manager's positive attitude and keen interest can motivate team members (Forsyth & Mason, 2017). Ample research shows the significant impact of SL on TL (Liu et al., 2014; Song et al., 2020); some researchers also expressed that traditional leadership is less effective than SL in increasing TP (Hsu et al., 2017; Ensley, Hmieleski, & Pearce, 2006). Thus, SL practices are reported to positively influence TL (Liu et al., 2014) and TP (Zhu et al., 2018; Han et al., 2021). A positive behavior change may lead to a positive outcome (Bandura & Walters, 1977). It is therefore proposed that TL mediates significantly between SL and TP in the health-care context and hypothesizes the following statement:

H5. TL is positively associated with TP.

H5a. TL significantly mediates between SL and TP.

Figure 1 shows the conceptual framework based on a resource-based view and social learning theories. The conceptual model represents how IC and TL intervene in the relationship between SL and TP.

3. Methods

3.1 Sample and procedure

Health-care producer organizations must inevitably provide well-timed, organized patient care products (Kellogg, Gainer, Allen, O'Sullivan, & Singer, 2017). Thus, they must use IC and promote a TL culture in sales teams. Health-care producer organizations primarily focus on a valuable sample to foster a culture of patient-centered products and efficiently ensure sales tasks (Qurashi, Khalique, Ramayah, Bontis, & Yaacob, 2020). The health-care sales teams must exchange evidence-based drug knowledge and extensively emphasize sales team automation and team-oriented solutions for effective and efficient performance.

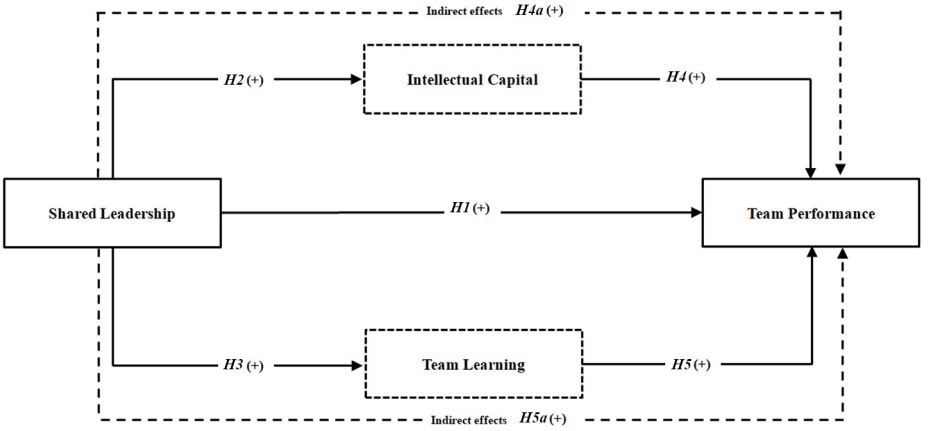


Figure 1.
Conceptual model

The unit of analysis of this study was an interprofessional sales team promoting various specialty drug brands. The usefulness of health-care producer sales and marketing teams is the geographically widespread network, such as the northern region of Pakistan, unlike the microlevel R&D teams. In this regard, in pharmaceutical sales, product knowledge, customer knowledge, market knowledge and disease knowledge shared by team leaders are the prerequisites for achieving the tasks assigned to the sales team on a monthly, quarterly and annual basis (Mitchell & Boyle, 2021).

For data collection purposes, the top 10 pharmaceutical companies of Pakistan, as per IMS-Q4-2020 data were invited to participate in the study. As a unit of analysis, the "sales team" consisted of sales executives who were professional members of the respective sales teams. The questionnaire was divided into two groups (team leaders and team members). Team members respond to questions about SL, IC and TL, whereas team leaders respond to questions about TP. Because the questionnaires in this study were distributed to two sample groups (team leaders and team members), intraclass correlation coefficients (Bliese & Halverson, 1998) and data aggregation are required (James et al., 1984). As a result, the intrarater contract index [rWG(J)] was used to explain the aggression process, and the intraclass correlation coefficients (ICC-1) and (ICC-2) were used to assess the data's reliability (Bliese & Halverson, 1998). We provide detailed results of these tests in Section 4.3.

A total of 289 survey questionnaires were distributed to 25 teams, including 264 sales executives and 25 managers as team leaders. We have received 23 responses from team leaders and 209 from team members. Only six invalid responses from team members were dropped. Finally, 226 valid responses were considered for analysis (team member = 203, team leader = 23). The response rate for team leaders and team members was 92% and 76.8%, respectively.

From the team member perspective, 93.1% (189) were males, and the majority of team members, 63.1% (129), fell under the age group of 25–30 years. Out of all, 187 (92.1%) hold a bachelor's degree and have a team tenure of —two to three years (51.7%, 105).

The demographic profile of team leaders shows that 22 (95.6%) team leaders were male, and 65.2% (15) represent the age group of 35–40. All team leaders hold bachelor's degrees at their current designation for 2–12 months. Nine (39.1%) team leaders have job experience of —three to five years.

3.2 Measurements of constructs

The instruments chosen for this study are widely used in the literature and are rated on a five-point Likert scale. TP was measured with the help of seven items, as adapted from Latif and Williams (2017). A sample item is "the team was able to attain their targets in time." SL was measured with seven items adapted from the study of Grille and Kauffeld (2015). A sample item is "as a team and we assign sales tasks." IC items were adapted from Iqbal et al. (2019). IC was divided into three subconstructs operationalized with five, seven and five items: human, structural and relational capital. The sample item for human capital is "members of our team have excellent professional knowledge in their particular team functions." For relational capital, "our team discovers and resolves problems through intimate communication and effective collaboration" (Bontis, 1998). For structural capital, "there is support among other sales and marketing teams in our company." TL was measured with eight-item scales adapted from previous studies (Pandey et al., 2019; Boak, 2016; Liu et al., 2014; Zellmer-Bruhn & Gibson, 2006). A sample item is "my team targets, and timelines of delivering results are mutually decided."

3.2.1 Control variables. In addition, the study employed two control variables-tenure of a team and the size of the team (Jamshed & Majeed, 2019). Team size averaged three to seven members (M = 3.67, SD = 2.31), and team tenure averaged one to five years (M = 4.32, SD = 6.1).

3.3 Common method variance

Scholars used various techniques to avoid CMV, such as using a variety of scales, recoding questions and removing double-barreled questions from questionnaires. We used Podsakoff, MacKenzie, and Podsakoff (2012) approach to analyze the CMV, and all constructs were statistically tested for CMV using Harman's single factor. We discovered a variance of 21.9% in the single components for all items, which is less than the 50% recommended by Podsakoff, MacKenzie, Lee, and Podsakoff (2003) (Table 1). Our findings show that there is no risk of CMV in this study.

4. Results

The study used SmartPLS v.3.2.9 software to analyze the data collected. Hair, Risher, Sarstedt, and Ringle (2019) recommended that structural equation modeling (SEM) is very prevalent in leadership-based studies.

4.1 Estimation of measurement model

This study used SEM for the measurement evaluation of the model (Figure 2). The reason for selecting PLS is that it maximizes the conceptual model's explanatory ability by evaluating the R^2 values for the (endogens) dependent constants. Therefore, PLS was carried out as it is more suitable for complex models and small samples (Hair et al., 2019).

Table 2 represents the outer loading, Cronbach's alpha, composite reliability and AVE. for measuring internal consistency, the Cronbach's alpha of each variable has been examined and found to be more than 0.70, which means that each construct covers more than 70% area in the field of study in which they have been examined. To evaluate the convergent validity, AVE has been used. Each construct AVE was more than 0.50; hence, convergent validity has been established. The results reveal that each variable of AVE is higher than 0.50. Moreover, all construct's CR values were higher than the 0.70 limits, as recommended by Churchill (1979) (Figure 2).

This study follows the Heterotrait-Monotrait (HTMT) ratio for evaluating discriminant validity and is reported in Table 3. HTMT ratio shall be less than 0.85 (Hair et al., 2019;

Total variance explained						
	Initial eigenvalues			Extraction sums of squared loadings		
component	Total	% of variance	Cumulative (%)	Total	% of variance	cumulative (%)
1	21.956	56.297	56.297	21.956	56.297	56.297
2	2.649	6.792	63.090			
3	2.175	5.576	68.666			
4	1.878	4.814	73.480			
5	1.284	3.293	76.773			
6	0.945	2.423	79.195			
7	0.815	2.089	81.284			
8	0.770	1.976	83.260			
9	0.680	1.743	85.003			
10	0.610	1.564	86.567			
11	0.550	1.410	87.977			
12	0.484	1.240	89.217			
13	0.475	1.217	90.434			
14	0.387	0.991	91.426			
15	0.375	0.962	92.387			
16	0.332	0.852	93.240			
17	0.306	0.785	94.025			
18	0.286	0.734	94.760			
19	0.261	0.670	95.429			
20	0.247	0.634	96.063			
21	0.204	0.522	96.586			
22	0.173	0.443	97.029			
23	0.146	0.374	97.403			
24	0.137	0.352	97.754			
25	0.124	0.317	98.071			
26	0.114	0.291	98.362			
27	0.091	0.233	98.595			
28	0.088	0.227	98.821			
29	0.074	0.189	99.010			
30	0.070	0.179	99.189			
31	0.062	0.158	99.348			
32	0.058	0.149	99.497			
33	0.047	0.121	99.618			
34	0.036	0.094	99.712			
35	0.032	0.083	99.795			
36	0.029	0.073	99.868			
37	0.020	0.053	99.921			
38	0.018	0.046	99.966			
39	0.013	0.034	100.000			

Note: Extraction method: principal component analysis

Table 1.
Common method bias

Henseler, Ringle, & Sarstedt, 2015), and reported values are within the recommended threshold.

4.2 Estimation of a structural model

4.2.1 Direct hypotheses analysis. The direct hypotheses are reported in Table 4 and Figure 3. This study proposed and tested five hypotheses, four out of five were supported and one out of two indirect hypotheses was supported. For instance, a shred of empirical evidence found

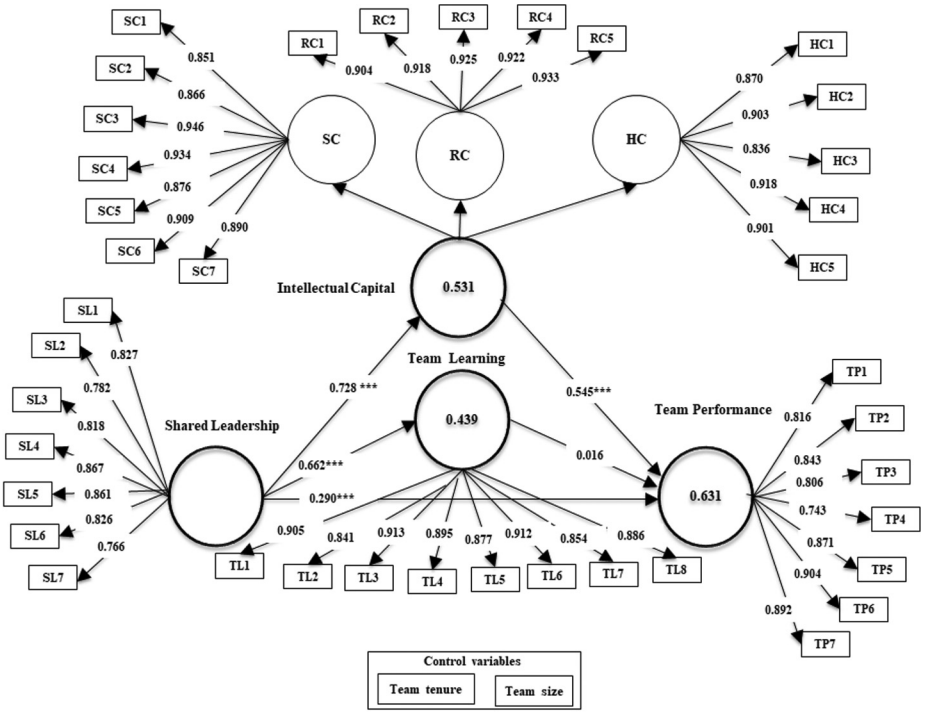


Figure 2.
Measurement model

Notes: ***$p < 0.01$. SC = structural capital; HC = human capital; RC relational capital. Model fit indices: SRMR: 0.073; NFI: 0.735; Chi2: 1752.8

a positive and significant direct impact of SL on TP ($\beta = 0.29$, $t = 4.65$); hence, *H1* supported the proposed argument. The results indicate that SL has a significant and positive impact on IC ($\beta = 0.72$, $t = 16.13$, $p = 0.000$); therefore, *H2* is supported. Similarly, the proposed *H3* supported and confirmed SL's positive and significant direct impact on TL, as shown in the values ($\beta = 0.66$, $t = 14.27$, $p = 0.000$). In addition, the result showed a direct and positive impact of IC on TP. As shown ($\beta = 0.54$, $t = 7.55$, $p = 0.000$), *H4* is supported. Contrary, there was no positive 3 correlation between the DV (TP) and the mediating variable (TL) 4 ($\beta = 0.01$, $t = 0.22$, $p = 0.824$). *H5a* is therefore rejected.

4.2.2 Indirect path analysis. This study tested two mediators between SL and TP (IC and TL). We used the four-step method Baron and Kenny (1986) proposed for mediation analysis. We used 5,000 bootstraps and 97.5% confidence intervals. It has been observed that the literature questioned mediation; the bootstrap procedures are highly used in place of the Sobel test to analyze the significance of mediation. Zhou, Vredenburgh, and Rogoff (2015) criticized normality assumed as its adequacy is questioned. This study uses a more appropriate mediation analysis approach (Zhao, Lynch, and Chen, 2010).

As shown in Table 5, the results indicate that IC plays a significant mediation role between SL and TP ($\beta = 0.39$, $t = 6.06$, $p = 0.000$), and *H4a* is supported. Contrary, there was no positive correlation between the DV (TP) and the mediating variable (TL) ($\beta = 0.01$, $t = 0.22$, $p = 0.824$). *H5a* is therefore rejected.

First-order construct	Second-order construct	Items	Outer loading	α	CR	AVE
Shared leadership				0.920	0.936	0.675
		SL1	0.827			
		SL2	0.782			
		SL3	0.818			
		SL4	0.867			
		SL5	0.861			
		SL6	0.826			
		SL7	0.766			
Human capital		HC1	0.870	0.931	0.948	0.785
		HC2	0.903			
		HC3	0.836			
		HC4	0.918			
		HC5	0.901			
Structural capital		SC1	0.851	0.959	0.966	0.804
		SC2	0.866			
		SC3	0.946			
		SC4	0.934			
		SC5	0.876			
		SC6	0.909			
		SC7	0.890			
Relational capital		RC1	0.904	0.955	0.965	0.847
		RC2	0.918			
		RC3	0.925			
		RC4	0.922			
		RC5	0.933			
	Intellectual capital	Human capital	0.926	0.888	0.931	0.818
		Structural capital	0.917			
		Human capital	0.869			
Team learning				0.961	0.967	0.785
		TL1	0.905			
		TL2	0.841			
		TL3	0.913			
		TL4	0.895			
		TL5	0.877			
		TL6	0.912			
		TL7	0.854			
		TL8	0.886			
Team performance				0.930	0.944	0.707
		TP1	0.816			
		TP2	0.843			
		TP3	0.806			
		TP4	0.743			
		TP5	0.871			
		TP6	0.904			
		TP7	0.892			

Table 2.
Outer loading with constructs Cronbach's alpha, composite reliability and AVE

4.3 Data aggregation

We collected data from managers and team members and more than one team member responded to the survey. As a result, all responses were aggregated at the team level. The intrarater contract index (rWG(J) was obtained across the teams to explain the aggression process and our findings show that all teams' rWG(J) indexes exceed the 0.70 thresholds (James et al., 1984). Moreover, we used intraclass correlation coefficients (ICC-1) and (ICC-2)

to assess the data's reliability (Bliese & Halverson, 1998). The ICC-1 values are significant and the absolute values are greater than 0.05, which is an acceptable level (Bliese & Jex, 2002). The range of values is 0.128–0.215.

5. Discussion

5.1 Results discussion

This research aimed to examine the direct impact of SL on TP and the indirect effect through IC and TL in Pakistan-based pharmaceutical companies. We hypothesized a model based on social learning theory and resource-based view theory. Overall, we observed moderate support for our hypothesized model.

For *H1*, this research empirically confirmed that SL among team leaders positively affects overall sales TP. The results align with previous studies (Scott-Young et al., 2019; Shoukat et al., 2022). Shoukat et al. (2022) examined the influence of SL on TP with the mediation of TL and the moderation role of workplace bullying at the team level, and their findings show that SL positively influences TP. They found that supervisor bullying in teams weakens the impact of SL on TL. However, our findings contradict the study of Han et al. (2021), who investigated the same relationship and reported no direct influence of SL on TL. They used the conservation of resources theory to examine the role of psychological capital in mediating the relationship between SL and TP. According to Shoukat et al. (2022), this relationship has less understating in health-care producer organizations because of its outstanding potential for producing performance profit margins. We answer how SL influences TP at the team level by triggering social learning theory; this theory contends that followers observe and imitate their leader's behavior (Bandura & Walters, 1977). As a result, the trickle-down effect is expected in teams, in which followers idealize their team leaders. According to SL research, team members act as team leaders simultaneously

Table 3.
Heterotrait-Monotrait Ratio analysis

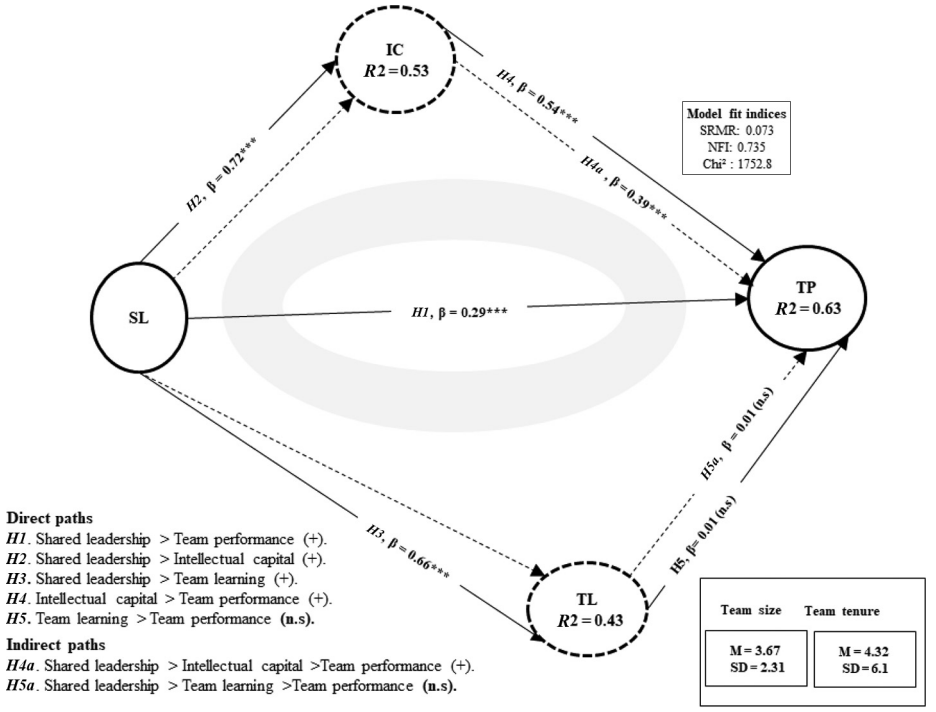
	IC	SL	TL	TP
IC				
SL	0.765			
TL	0.785	0.695		
TP	0.804	0.739	0.651	

Notes: Significance level <0.85. SL = shared leadership; TP = team performance; TL = team learning; IC = intellectual capital

Table 4.
Direct hypotheses summary

Hypothesis no.	Relationship path	Proposed significance	β	SD	*t*-value	*p*-value	Remark
H1	SL → TP	+	0.29***	0.06	4.65	0.000	Supported
H2	SL → IC	+	0.72***	0.04	16.13	0.000	Supported
H3	SL → TL	+	0.66***	0.04	14.27	0.000	Supported
H4	IC → TP	+	0.54***	0.07	7.55	0.000	Supported
H5	TL → TP	+	0.01	0.07	0.22	0.823	Not Supported

Notes: ***$p < 0.01$. SL = shared leadership; TP = team performance; TL = team learning; IC = intellectual capital



Notes: ***$p < 0.01$. SL = shared leadership; TL = team learning; IC intellectual capital; TP = team performance

Figure 3.
Structural model

Hypothesis	Proposed significance	*B*	*t*-value	*p*-value	CI (97.5%)	Remark
H4a. SL → *IC* → *TP*	(+)	0.39***	6.06	0.000	[0.274, 0.522]	Partial mediation
H5a. SL → TL → *TP*	(+)	0.01	0.22	0.824	[−0.077, 0.118]	Not supported

Note: Significance level ***$p < 0.01$

Table 5.
Mediation analysis

because SL engages and motivates followers to take on leadership roles. Their participation (e.g. sharing product information with team members and coordinating for the timely completion of team tasks) can aid in completing desired tasks, resulting in increased TP. Team members assist their peers in making effective decisions, demonstrating the critical role of SL in increasing TP.

Second, concerning *H2*, the relationship of SL with IC was investigated and found significant. Prior research has found that SL significantly impacts human capital, structural capital and relationship capital (Evans et al., 2015). Team leadership promotes power-sharing, facilitates information sharing, improves team member competencies (human capital) and makes use of team stakeholder relations (relationship capital) and team resources (structural capital) to shape teams' IC (Bontis & Fitz-enz, 2002; Gallego et al., 2020; Nahapiet & Ghoshal, 1998). This

association has not been investigated in the health-care literature. We used the resource-based view theory to support this hypothesis (Barney, 2001). According to this theory, team leaders can effectively use team resources (i.e. structural capital) to increase team capabilities. According to recent research, IC can be enhanced when a group of leaders shares a common vision (Wu et al., 2020). This demonstrates the critical role of SL in improving IC. However, there is a scarcity of research on SL and IC in the literature. Our findings show that in teams where each team member is a leader in his sphere, using personal relationships and social networking to increase relationship capital can increase team IC. At the same time, discussing team structural capital (i.e. procedures, methodologies and standard operating procedures) in completing complex tasks among team members is an outcome of SL. The result of the SL–IC relationship is a significant contribution to RBV theory, which is currently lacking in the literature.

Third, regarding *H3*, the relationship between SL and TL was investigated, and the results supported the hypothesis. The finding is consistent with the literature (Liu et al., 2014; Shoukat et al., 2022). In the Chinese context, Liu et al. (2014) explored the influence of SL on TL and individual learning with the mediating role of psychological safety and the moderating role of job diversity. Their findings show that SL positively impacts TL, both directly and indirectly, through psychological safety. Additionally, they observed that the indirect impacts were more positive when team members reported high job security. Similarly, Shoukat et al. (2022) confirmed that SL improves TL. Our findings also show that when team members share their leadership power with all team members, TL increases, and members are more motivated to learn new practices.

Fourth, *H4* focused on the relationship between IC and TP. The results demonstrate that IC (human, relational and structural capital) positively influences sales TP. The finding is consistent with previous studies (Sharabati Abdel-Aziz, Naji Jawad, & Bontis, 2010; Asiaei et al., 2018). Sharabati Abdel-Aziz et al. (2010) investigate the role of IC in improving organizational performance among top and middle-level Jordanian pharmaceutical managers. They considered IC in its structural, human and relational dimensions but used different items, such as innovation and creation and R&D relationships with suppliers. According to their findings, innovation and creation have no significant impact on business performance. In future studies, they suggested combining IC with other research items. We used research items for IC developed by Iqbal et al. (2019), and our findings show that IC has a significant relationship with TP in health care. Previously, the role of IC in health-care producer organizations received less attention. RBV theory was used to support the connection between IC and TP. According to this theory, organizations comprise human, structural and relational resources. These resources are unique and valuable to organizations because they provide a source of competitive advantage and can improve organizational performance. RBV is commonly used at the organizational level (Barney, 2001), but its role at the team level is rarely discussed in the literature. According to our findings, team IC improves team resources and thus TP.

As hypothesized in *H5 that TL is positively related to TP; however, our study results does not support this hypothesis*. The results are inconsistent with previous research (Leicher & Mulder Regina, 2016). Leicher and Mulder Regina (2016) investigated the impact of knowledge sharing on elder care nursing TP in the context of TL and team climate. They discovered a significant relationship between all constructs. In contrast, we found no positive effect of TL on TP, and the hypothesis may be rejected because health-care companies' sales employees strictly adhere to their daily, weekly and monthly assigned sales target schedules. They participate in the fewest formal learning processes. sales representatives must strictly adhere to the given sales and marketing strategy. *H5* was supported by social learning theory, but our findings show that it does not affect the relationship between SL and TP. This demonstrates that sharing power among team

members does not improve TL and, as a result, TP. This means that social learning theory has been unaffected by this framework.

In addition, two intervening variables were proposed as *H4a* and *H5a*. First, the mediating role of IC between SL and TP was proposed and found to be partial mediation. The results demonstrate that sharing IC among team members may enhance TP. We responded to the future call of Zhu et al. (2018) and Evans et al. (2015), who proposed that IC can establish and mediate the relationship between SL and TP. Prior scholars contend that the most valuable assets of health-care organizations are their employees' skills, product knowledge and leadership experience (Asiaei et al., 2018; Bontis & Fitz-enz, 2002). They emphasize that these intangible resources are linked to the external and internal capabilities that contribute to the creation of IC. As a result, health-care organizations are attempting to maximize resources to improve their sales performance. Sharing leadership power among multiple team leaders can help teams build internal capabilities, shape IC and improve TP. However, previous research did not investigate the mediating role of IC and our research investigated and found significant support for this mediation relationship. This is an essential contribution of this study in RBV theory. Our findings are consistent with the resource-based view theory introduced by Wernerfelt (1984), which states that organizational resources are essential, difficult to replicate, rare and ideal for firms' long-term performance. These resources can assist in developing organizational capacities, leading to enhanced performance (Barney, 2001). Our findings contribute to the literature by expanding the explanatory power of the resource-based view theory.

The intervening role of TL between SL and TP relationships was proposed as the second mediation hypothesis. We found no evidence of TL because of a variety of factors, including the nature of the sales job, team employees' inability to participate in TL opportunities and other explanations, such as sales training, workshops and sales conferences that are rarely focused on the overall learning process.

This study has several theoretical and managerial implications indicated below.

5.2 Theoretical contributions

The findings make several contributions to the SL literature in the health-care context. First, the study contributes to our understanding of an influential construct (i.e. IC) that has not been undertaken in-depth in the current literature on SL and TP in health-care organizations (Evans et al., 2015). The vital contribution of this research is that the SL plays an essential role in developing the TP, and the IC acts as a link between these relationships.

On the contrary, our findings show that TL was only directly related to SL and had no effect on TP. As a result, the capital IC derived from RBV theory may explain the success of TP better than TL. To explain the research hypothesis, we used social learning theory and RBV theory; however, social learning is limited to understanding the team environment and the characteristics of team members (skills and abilities) and could not better explain the relationship between SL and TP. By investigating IC (human, structural and relational capital) as an intervening mechanism between SL and TP, RBV theory can better explain this relationship and address the limitations of social learning theory. Thus, IC intervening between SL and TP can make a significant contribution in a novel way:

- by improving the team's internal capabilities;
- by facilitating team leadership; and
- by extending the prior literature by demonstrating that individual conduct is not limited solely to leadership skills but depends on the organization's intellectual resources.

This approach shows that using organizational resources aids team leadership in enhancing TP.

5.3 Practical implications

The results presented in this research study come from the current body of literature and research findings to provide practitioners with valuable insights into the value of team dynamics for improved TP. Teams should be encouraged to understand the different elements of SL to produce more successful TP. The study results showed that SL existence within groups has a bearing effect on TP.

SL suggests sustainable TP. Team leaders and administrators should take this into account when they handle teams. This could be accomplished by empowering sales team leaders to exercise SL at the team level; using team resources (i.e. IC); and improving sales performance. Managers who want to maximize sales TP should build strategies to improve their internal capabilities as part of their diversified experiences and work together to provide better patient-centered products. IC (evidence-based product knowledge) mediates between SL and TP in delivering patient-centered products. In addition, executives can build their relational capital and human capital to strengthen the knowledge management culture among groups, improving sales TP (Al-Ali, Singh, Al-Nahyan, & Sohal, 2017).

This study presents an integrated model that can be extensively implementable for the pharmaceuticals' professional sales teams to foster sales TP. The results of this study in health-care professionals benefit from the insights from SL in teams. In light of these findings of the study, the researchers argue that SL and IC are essential intangible organizational assets. Therefore, policymakers and health-care organizations should develop a deliberate strategy to include hospitable SL and develop intellectual capabilities to maximize the productivity of sales teams. Based on this research results, it is suggested that top management in health care should adopt an incentive and rewards program commensurate with the development, sharing and use of knowledge. In addition, collaborative research will provide the best ideas and innovative solutions to the organizations led by this incentive system (Zhang, Cao, & Wang, 2018; Joo, Lim, & Kim, 2016). Our findings indicate that SL has a significant impact on IC. As a result, health-care organizations may devise a mechanism to encourage and monitor a team member or team leader to consistently behave SL while working together to promote IC, which may benefit TP. Moreover, this research model can be broadly applied to the interprofessional team employed in health-care producer organizations to improve TP.

5.4 Limitation and future research work

This study has several limitations that open the doors to future studies. First, this analysis was performed with companies with a limited number and a small sample size that was a purposeful sample in the health-care sector, thus encouraging sample bias and challenging the generalizability to other industries. A large sample size may be taken from the public and private sectors for future studies. Second limitation was the CMV, although this study found CMV less than 50%, the eigenvalue values for five components were greater than 1, with the exception of component 0.945, which is not within the recommended threshold (Podsakoff et al., 2012). Notwithstanding, we used the procedure suggested by previous scholars (Podsakoff et al., 2003; Tehseen, Ramayah, & Sajilan, 2017) to record the response on independent and dependents from multiple sources (i.e. team leaders and team members) to reduce CMV. However, this research model needs to be replicated with other procedural remedies, such as temporal separation, by introducing a time lag approach among the

measurement items of independent and dependent variables to address the eigenvalue value less than 1.

Third, this study tested team learning as a mediator between SL and TP. However, the results are insignificant and found no mediation between SL and TP and opening the door for new researchers to explore further this relationship in other sectors or with different leadership styles, i.e. servant leadership and transformational leadership (Vashdi, Levitats, & Grimland, 2019; Imran, Ilyas, Aslam, & Ubaid-Ur-Rahman, 2016) and authentic leadership (Lloyd-Walker & Walker, 2011). Future researchers may also investigate workplace bullying as a moderator between SL and TL in health-care or any other industry because workplace bullying significantly impacts project success (Creasy & Carnes, 2017).

References

Ahern, T., Leavy, B., & Byrne, P. J. (2014). Knowledge formation and learning in the management of projects: a problem solving perspective. *International Journal of Project Management*, *32*(8), 1423–1431.

Al-Ali, A. A., Singh, S. K., Al-Nahyan, M., & Sohal, A. S. (2017). Change management through leadership: The mediating role of organizational culture. *International Journal of Organizational Analysis*, *25*(4), 723–739.

Alilyyani, B., Wong, C. A., & Cummings, G. (2018). Antecedents, mediators, and outcomes of authentic leadership in healthcare: A systematic review. *International Journal of Nursing Studies*, *83*, 34–64.

Alkhudary, R., & Gardiner, P. (2021). Stages in project managers' careers: Learning and growth opportunities. *International Journal of Project Management*, *39*(5).

Asiaei, K., Jusoh, R., & Bontis, N. (2018). Intellectual capital and performance measurement systems in Iran. *Journal of Intellectual Capital*, *19*(2), 294–320.

Bandura, A., & Walters, R. H. (1977). *Social learning theory*, Englewood Cliffs, NJ: Prentice-hall.

Barney, J. B. (2001). Resource-based theories of competitive advantage: a ten-year retrospective on the resource-based view. *Journal of Management*, *27*(6), 643–650.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173.

Bliese, P. D., & Halverson, R. R. (1998). Group consensus and psychological well-being: A large field study 1. *Journal of Applied Social Psychology*, *28*(7), 563–580.

Bliese, P. D., & Jex, S. M. (2002). Incorporating a mulitilevel perspective into occupational stress research: Theoretical, methodological, and practical implications. *Journal of Occupational Health Psychology*, *7*(3), 265.

Bligh Michelle, C., Pearce Craig, L., & Kohles Jeffrey, C. (2006). The importance of self- and shared leadership in team based knowledge work: a meso-level model of leadership dynamics. *Journal of Managerial Psychology*, *21*(4), 296–318.

Boak, G. (2016). Enabling team learning in healthcare. *Action Learning: Research and Practice*, *13*(2), 101–117.

Bontis, N. (1998). Intellectual capital: an exploratory study that develops measures and models. *Management Decision*, *36*(2), 63–76.

Bontis, N., & Fitz-Enz, J. (2002). Intellectual capital ROI: A causal map of human capital antecedents and consequents. *Journal of Intellectual Capital*, *3*(3), 223–247.

Churchill, G. A., Jr, (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, *16*(1), 64–73.

Creasy, T., & Carnes, A. (2017). The effects of workplace bullying on team learning, innovation and project success as mediated through virtual and traditional team dynamics. *International Journal of Project Management*, *35*(6), 964–977.

Dionne, S. D., Sayama, H., Hao, C., & Bush, B. J. (2010). The role of leadership in shared mental model convergence and team performance improvement: an agent-based computational model. *The Leadership Quarterly*, *21*(6), 1035–1049.

Dirani, K., Baldauf, J., Medina-Cetina, Z., Wowk, K., Herzka, S., Bello Bolio, R., . . . Munoz Ubando, L. A. (2021). Learning organization as a framework for networks' learning and collaboration. *The Learning Organization*, *28*(4), 428–443.

Duffield, S., & Whitty, S. J. (2015). Developing a systemic lessons learned knowledge model for organisational learning through projects. *International Journal of Project Management*, *33*(2), 311–324.

Ellinger, A. D., & Ellinger, A. E. (2021). Providing strategic leadership for learning: Optimizing managerial coaching to build learning organizations. *The Learning Organization*, *28*(4), 337–351.

Ensley, M. D., Hmieleski, K. M., & Pearce, C. L. (2006). The importance of vertical and shared leadership within new venture top management teams: Implications for the performance of startups. *The Leadership Quarterly*, *17*(3), 217–231.

Evans, J. M., Brown, A., & Baker, G. R. (2015). Intellectual capital in the healthcare sector: A systematic review and critique of the literature. *BMC Health Services Research*, *15*(1), 556.

Forsyth, C., & Mason, B. (2017). Shared leadership and group identification in healthcare: the leadership beliefs of clinicians working in interprofessional teams. *Journal of Interprofessional Care*, *31*(3), 291–299.

Fransen, K., Mertens, N., Cotterill, S. T., Vande Broek, G., & Boen, F. (2020). From autocracy to empowerment: Teams with shared leadership perceive their coaches to be better leaders. *Journal of Applied Sport Psychology*, *32*(1), 5–27.

Gallego, C., Mejía, G. M., & Calderón, G. (2020). Strategic design: origins and contributions to intellectual capital in organizations. *Journal of Intellectual Capital*, *21*(6), 873–891.

Greer, T. W., & Carden, L. L. (2021). Exploring the gender wage gap among project managers: A multi-national analysis of human capital and national policies. *International Journal of Project Management*, *39*(1), 21–31.

Grille, A., & Kauffeld, S. (2015). Development and preliminary validation of the shared professional leadership inventory for teams (SPLIT.)*Psychology*, *06*(1), 75.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24.

Han, J., Yoon, J., Choi, W., & Hong, G. (2021). The effects of shared leadership on team performance. *Leadership & Organization Development Journal*, *42*(4).

Hans, S., & Gupta, R. (2018). Job characteristics affect shared leadership. *Leadership & Organization Development Journal*, *39*(6), 730–744.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135.

Hoch, J. E., & Dulebohn, J. H. (2017). Team personality composition, emergent leadership and shared leadership in virtual teams: a theoretical framework. *Human Resource Management Review*, *27*(4), 678–693.

Hoch, J. E., Pearce, C. L., & Welzel, L. (2010). Is the most effective team leadership shared? The impact of shared leadership, age diversity, and coordination on team performance. *Journal of Personnel Psychology*, *9*(3), 105–116.

Hoon Song, J., Hun Lim, D., Gu Kang, I., & Kim, W. (2014). Team performance in learning organizations: mediating effect of employee engagement. *The Learning Organization*, *21*(5), 290–309.

Hsu, J. S.-C., Li, Y., & Sun, H. (2017). Exploring the interaction between vertical and shared leadership in information systems development projects. *International Journal of Project Management*, *35*(8), 1557–1572.

Huang, H., Leone, D., Caporuscio, A., & Kraus, S. (2021). Managing intellectual capital in healthcare organizations. A conceptual proposal to promote innovation. *Journal of Intellectual Capital*, *22*(2), 290–310.

Imam, H., & Zaheer, M. K. (2021). Shared leadership and project success: The roles of knowledge sharing, cohesion and trust in the team. *International Journal of Project Management*, *39*(5)

Imran, M. K., Ilyas, M., Aslam., U., & Ubaid-Ur-Rahman, U. (2016). Organizational learning through transformational leadership. *The Learning Organization*, *23*(4), 232–248.

Iqbal, A., Latif, F., Marimon, F., Sahibzada Umar, F., & Hussain, S. (2019). From knowledge management to organizational performance: Modelling the mediating role of innovation and intellectual capital in higher education. *Journal of Enterprise Information Management*, *32*(1), 36–59.

Issahaka Abdallah, W., & Lines, R. (2020). Research literature on leadership of knowledge workers: where are we, and where should we be heading? *Journal of Intellectual Capital*, *22*(1), 122–148.

Jamshed, S., & Majeed, N. (2019). Relationship between team culture and team performance through lens of knowledge sharing and team emotional intelligence. *Journal of Knowledge Management*, *23*(1), 90–109.

James, L.R., Demaree, R.G., & Wolf, G. (1984). Estimating within-group interrater reliability with and without response bias. *Journal of applied psychology*, *69*(1), 85.

Janssens, S., Simon, R., Beckmann, M., & Marshall, S. (2018). Shared leadership in healthcare action teams: a systematic review. *Journal of Patient Safety*.

Joo, B.-K., Lim, D. H., & Kim, S. (2016). Enhancing work engagement. *Leadership & Organization Development Journal*, *37*(8), 1117–1134.

Kellogg, K. C., Gainer, L. A., Allen, A. S., O'Sullivan, T., & Singer, S. J. (2017). An intraorganizational model for developing and spreading quality improvement innovations. *Health Care Management Review*, *42*(4), 292.

Kérivel, T., Bossard, C., & Kermarrec, G. (2021). Team learning process: a longitudinal study in dynamic situation. *The Learning Organization*,

Latif, K. F., & Williams, N. (2017). Team effectiveness in non-governmental organizations (NGOs) projects. *Evaluation and Program Planning*, *64*, 20–32.

Leicher, V., & Mulder Regina, H. (2016). Team learning, team performance and safe team climate in elder care nursing. *Team Performance Management*, *22*(7/8), 399–414.

Liu, S., Hu, J., Li, Y., Wang, Z., & Lin, X. (2014). Examining the cross-level relationship between shared leadership and learning in teams: evidence from China. *The Leadership Quarterly*, *25*(2), 282–295.

Lloyd-Walker, B., & Walker, D. (2011). Authentic leadership for 21st century project delivery. *International Journal of Project Management*, *29*(4), 383–395.

Meghani, S. T., Sehar, S., & Punjani, N. S. (2014). Comparison and analysis of health care delivery system: Pakistan versus China. *International Journal of Endorsing Health Science Research (Ijehsr)*, *2*(1), 46–50.

Mitchell, R., & Boyle, B. (2021). Too many cooks in the kitchen? The contingent curvilinear effect of shared leadership on multidisciplinary healthcare team innovation. *Human Resource Management Journal*, *31*(1), 358–374.

Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *The Academy of Management Review*, *23*(2), 242–266.

Nicolaides, V. C., LaPort, K. A., Chen, T. R., Tomassetti, A. J., Weis, E. J., Zaccaro, S. J., & Cortina, J. M. (2014). The shared leadership of teams: a meta-analysis of proximal, distal, and moderating relationships. *The Leadership Quarterly*, *25*(5), 923–942.

Ong, Y. H., Koh, M. Y. H., & Lim, W. S. (2020). Shared leadership in interprofessional teams: beyond team characteristics to team conditions. *Journal of Interprofessional Care*, *34*(4), 444–452.

Pandey, A., Gupta, V., & Gupta, R. K. (2019). Spirituality and innovative behaviour in teams: Examining the mediating role of team learning. *IIMB Management Review*, *31*(2), 116–126.

Pearce, C. L. (2004). The future of leadership: Combining vertical and shared leadership to transform knowledge work. *Academy of Management Perspectives*, *18*(1), 47–57.

Pearce, C. L., & Sims, H. P. (2002). Vertical versus shared leadership as predictors of the effectiveness of change management teams: an examination of aversive, directive, transactional, transformational, and empowering leader behaviors. *Group Dynamics: Theory, Research, and Practice*, *6*(2), 172.

Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, *63*(1), 539–569.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, Vol*, *88*(5), 879–889.

Qurashi, I. A., Khalique, M., Ramayah, T., Bontis, N., & Yaacob, M. R. (2020). Impact of intellectual capital on innovation in pharmaceutical manufacturing SMEs in Pakistan. *International Journal of Learning and Intellectual Capital*, *17*(1), 61–76.

Saber, M. S., Shoukat, M. H., Shah, S. A., Selem, K. M., & Shaukat, H. (2022). Linking shared leadership with pharmaceutical team sales performance in Pakistan: a dual mediation model. *Team Performance Management: An International Journal*, *28*(7/8)

Scott-Young, C. M., Georgy, M., & Grisinger, A. (2019). Shared leadership in project teams: an integrative multi-level conceptual model and research agenda. *International Journal of Project Management*, *37*(4), 565–581.

Shafique, I., Rafi, N, & Kalyar, M. N. (2021). Managing intellectual capital through strategic leadership: a complementary approach. In M. Shahbaz, M. S. Mubarik, T. Mahmood, (Eds.), *The dynamics of intellectual capital in current era*, pp. 257–274. Singapore, Singapore: Springer.

Sharabati Abdel-Aziz, A., Naji Jawad, S., & Bontis, N. (2010). Intellectual capital and business performance in the pharmaceutical sector of Jordan. *Management Decision*, *48*(1), 105–131.

Shoukat, M. H., Elgammal, I., Shah, S. A., & Shaukat, H. (2022). Nexus between shared leadership, workplace bullying, team learning, job insecurity and team performance in health care. *Team Performance Management: An International Journal*, *28*s(3/4)

Song, Z., Gu, Q., & Cooke, F. L. (2020). The effects of high-involvement work systems and shared leadership on team creativity: A multilevel investigation. *Human Resource Management*, *59*(2), 201–213.

Stephens, J. P., & Carmeli, A. (2016). The positive effect of expressing negative emotions on knowledge creation capability and performance of project teams. *International Journal of Project Management*, *34*(5), 862–873.

Surace, A. (2019). Complexity and leadership: The case of a military organization. *International Journal of Organizational Analysis*, *27*(5), 1522–1541.

Sweeney, A., Clarke, N., & Higgs, M. (2019). Shared leadership in commercial organizations: a systematic review of definitions, theoretical frameworks and organizational outcomes. *International Journal of Management Reviews*, *21*(1), 115–136.

Tehseen, S., Ramayah, T., & Sajilan, S. (2017). Testing and controlling for common method variance: a review of available methods. *Journal of Management Sciences*, *4*(2), 142–168.

Turner, N., Maylor, H., & Swart, J. (2015). Ambidexterity in projects: an intellectual capital perspective. *International Journal of Project Management*, *33*(1), 177–188.

Vashdi, D. R., Levitats, Z. S., & Grimland, S. (2019). Which transformational leadership behaviors relate to organizational learning processes? *The Learning Organization*, *26*(2), 176–189.

von Danwitz, S. (2018). Managing inter-firm projects: a systematic review and directions for future research. *International Journal of Project Management*, *36*(3), 525–541.

Wang, Z., Wang, N., & Liang, H. (2014). Knowledge sharing, intellectual capital and firm performance. *Management Decision*, *52*(2), 230–258.

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, *5*(2), 171–180.

Wu, Q., Cormican, K., & Chen, G. (2020). A meta-analysis of shared leadership: Antecedents, consequences, and moderators. *Journal of Leadership & Organizational Studies*, *27*(1), 49–64.

Zellmer-Bruhn, M., & Gibson, C. (2006). Multinational organization context: Implications for team learning and performance. *Academy of Management Journal*, *49*(3), 501–518.

Zhang, L., Cao, T., & Wang, Y. (2018). The mediation role of leadership styles in integrated project collaboration: an emotional intelligence perspective. *International Journal of Project Management*, *36*(2), 317–330.

Zhao, X., Lynch, J. G., Jr., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, *37*(2), 197–206.

Zhou, W., Vredenburgh, D., & Rogoff, E. G. (2015). Informational diversity and entrepreneurial team performance: moderating effect of shared leadership. *International Entrepreneurship and Management Journal*, *11*(1), 39–55.

Zhu, J., Liao, Z., Yam, K. C., & Johnson, R. E. (2018). Shared leadership: a state-of-the-art review and future research agenda. *Journal of Organizational Behavior*, *39*(7), 834–852.

About the authors

Muhammad Haroon Shoukat is a student of leadership management at the Department of Management Sciences, COMSATS University, Islamabad, Pakistan. His research interests include health-care marketing, leadership management, Green HRM, adoption of digital technologies, e-commerce/m-commerce behavior and strategies and social CRM role in higher education. He received his MS degree in Management Sciences (Marketing) from the COMSATS University, Islamabad, Pakistan. His research articles are published in the *Journal of Marketing for Higher Education* and *Journal of Business research*. ORCID https://orcid.org/0000-0003-1992-6180 Muhammad Haroon Shoukat is the corresponding author and can be contacted at: haroonshaukat29@gmail.com

Syed Asim Shah is Assistant Professor at the Department of Management Sciences, COMSATS University, Islamabad, Pakistan. He holds a PhD in marketing from the Iqra University Peshawar, Pakistan. His research focuses on health-care marketing, digital business, strategic management of business processes, public health, Green HRM, health informatics and user acceptance of technology. He has published in various journals and international conferences in information systems research, including *Journal of Knowledge Management Research and Practice*, *Technological Forecasting and Social Change*, *Journal of Environmental Research and Public Health* and *International Journal of Technology Assessment in Healthcare*. ORCID https://orcid.org/0000-0002-9312-0671

Dilnaz Muneeb is Associate Professor at the College of Business, Abu Dhabi University, UAE. Her research focuses on leadership, strategic management of business processes and user acceptance of technology. She has published in various journals and international conferences in information systems research, including *Computers in Human Behavior*, *International Journal of Technology Assessment in Health Care* and *Journal of Systems and Information Technology*. ORICID https://orcid.org/0000-0003-4925-7504