

# **Fostering the health care workforce during the COVID-19 pandemic: shared leadership, social capital, and contagion among health professionals**

**Andrés Salas-Vallina<sup>1</sup>, Anna Ferrer-Franco<sup>2\*</sup>, Justo Herrera-Gómez<sup>1</sup>**

<sup>1</sup>Department of Business Management, University of Valencia, Valencia, Spain

<sup>2</sup>Allergy and Immunology Section, Hospital Universitario Dr. Peset, Valencia, Spain

**\* Correspondence:**

Corresponding Author

andres.salas@uv.es

## **ACKNOWLEDGEMENTS**

This research has been financially supported by the Regional Government of Valencia (Conselleria d'Innovació, Universitats, Ciència i Societat Digital, research project GV/2019/159)

## **CONFLICT OF INTEREST**

The authors have no competing interests.

## **Abstract**

Health professionals managing patients with COVID-19 disease are at high risk of contagion. All medical personnel involved in caring for patients need coordination, knowledge and trust. Empirical work on human resources has tended to focus on the effects of human resource practices on performance, whereas leadership and social interactions have been overlooked. Based upon interviews with medical staff working in specialised medical units, this study uses the social capital theory to examine relationships among shared leadership, social capital, and contagion rates. First, shared leadership was found to positively affect COVID-19 contagion among health professionals. Second, by sharing information and a common language, and showing high levels of trust, namely social capital, medical units seem to reduce contagion rates of COVID-19. In other words, shared leadership plays a fundamental role in improving performance in healthcare by means of social capital.

**Keywords: Shared leadership, Social Capital, Human Resource Management, COVID-19.**

## **1. Introduction**

The crisis caused by the COVID-19 virus involves huge challenges for health systems across the world. As in many other countries, the Spanish healthcare system is suffering from a lack of resources, yet these are crucial to protect health workers from being infected. In fact, health professionals currently account for 20% of confirmed COVID-19 cases, which is an excessive figure. The lack of resources in other countries is similar. In the United Kingdom, the British Medical Association has reported a shortage of personal protection equipment (PPE) across the board in the National Health System (NHS) (Newman, 2020<sup>1</sup>).

Despite this deficit in healthcare equipment, there are medical units that have strikingly low contagion rates among their staff. In these units, healthcare professionals cope with heavy workloads, and operate in an environment characterised by emotionally demanding tasks.

Medical staff suffer from very high stress levels, compounded by constant protocol updates in an attempt to fight this new pathogen. Work contexts with stable relationships make employees feel more secure, and preserve relations and networks in times of uncertainty. Our argument is that the leader (head) of the medical unit makes the difference in the medical unit results, including contagion levels of COVID-19.

Leadership is considered fundamental for team effectiveness, although existing research has mainly focused on individual leadership, rather than leadership exercised by team members. As argued by Carson et al. (2007)<sup>2</sup>, team leadership is fundamental for several reasons. First, reality is complex and uncertain, and therefore a single person might not be able to deal with it. Second, knowledge-based jobs need employees with a high autonomy and expertise. Third, self-managed teams, which are non-hierarchical groups responsible for their own performance (Hackman, 1987)<sup>3</sup>, have been revealed to perform better because they are better connected and provide support to each other (Gill et al., 2020)<sup>4</sup>. Shared leadership can generate competitive advantage in organizations as it increases commitment, and openness to reciprocal influence from others. (Katz and Kahn, 1978)<sup>5</sup>. Shared leadership can be defined as a "distribution of leadership working relationships, where each member has a unique role that is firmly embedded within the contest of the group" (Conger and Pearce, 2003)<sup>6</sup>. Several research states that leadership is not solely an individual phenomenon, but studies remain sparse, and explicit features of shared leadership need to be established to improve healthcare service). Previous research has revealed that shared leadership increases team effectiveness (Wood, 2005)<sup>7</sup>, and is critical in driving improvement in safety and quality (Salas et al., 2015)<sup>8</sup>.

For all this, our first objective is to check if shared leadership negatively affects COVID-19 contagion among health professionals.

In turn, we argue that shared leadership positively interacts with social capital, to reduce COVID-19 contagion among health professionals. The key factor that sets low-contagion medical units apart might be its focus on individuals as parts of social groups.

Social capital is a managerial concept that examines how social connections affect different organisational outcomes. It is defined "as a resource reflecting the character of social relations within the organisation" (Leana and Van Buren, 1999)<sup>9</sup>. Social capital involves the combination of three different yet interconnected dimensions: structural, relational, and

cognitive social capital. Structural capital is related to the configuration of interrelations between individuals in a specific network, which enables them to share information. Relational capital focuses on trust and positive attitudes towards co-workers, and cognitive social capital involves shared language and objectives among group members.

Shared leadership distributes leadership across multiple team members, thus fostering autonomy in non-hierarchical groups. In turn, it provides commitment and trust, as the leader trusts on his or her team members when distributing the capacity of decision taking. Shared leadership increases collaboration and coordination (Yeatts and Hyten, 1998)<sup>10</sup>, thus strengthening relationships and creating a shared language. In sum, shared leadership is a potential antecedent of social capital.

Social capital improves the exchange of information and performance, and is especially effective when every member feels attached to the group. On this basis, we explored if social capital is enhanced by shared leadership, in turn reducing COVID-19 contagion levels among health professionals.

## **2. Method and results**

In this research, we combined three methods: inductively developed meanings, extensive explorations of these meanings based on hermeneutical foundations, and crosschecking of reliability of findings by means of interviews with medical staff in job positions where they can observe the actions of other participants.

This study is based on 42 intentionally interviews made to heads of medical units and nurses, from Spanish medical services attending COVID-19 patients, where contagion rates were particularly high or low. We also interviewed a reduced number of heads and nurses from other units to ensure additional observations and views of how the medical units managed their human resources. This allowed us to crosscheck information and gain reliability. Ten heads were interviewed twice, which helped us to have a deeper look into relevant findings.

The interviews were semi-structured, asking the head of the medical unit about their leadership actions, the type of interactions among medical staff in their unit, and the number of contagions from the beginning of the alarm state. We compared these self-responses to other people's observations, which allowed us to gain a rich understanding of what heads of medical units do in their leadership role, and how their acts affect medical staff interactions.

Interviews in low COVID-19 contagion units revealed that heads of these units promoted participative decision making, trust, and autonomy. As a result, physicians demonstrated a high degree of information exchange, high levels of trust, and a perfect understanding of priorities and common objectives. Physicians in these units agreed that they felt they were fundamental resources, but from a collective point of view: they were important to complement each other. A sense of collective coordination and collective support was a noticeable term employed explicitly by several of the interviewees to portray the working climate in medical units with very low levels of contagion. Thus, medical staff working in these low-contagion units had fluent relationships promoted by their head.

In contrast, interviews in high COVID-19 contagion were in an opposite direction. They revealed heads' acts aimed to stop proactive behaviors, and in some cases, the head avoided exercising the role of leader. They showed frequent conflict situations, revealing a lack of trust, and a lack of willingness to cooperate and provide support to each other. The reality demonstrated lower team efficacy through higher contagion rates.

Our findings on the effects of shared leadership on improved connections among medical staff, suggest a new perspective of human resource management for medical units in extreme circumstances. The way heads of medical units attempt to improve the unit functioning through improved relationships lead us to further investigate details of these connections. Interviewees agreed that the unit had a strong network, thus revealing that shared leadership positively relates to structural capital.

Most interviewed physicians thought that trust was essential, and we confirmed it by crosschecking with heads of medical units and nurses. Some of the managerial aspects that were observed in the medical units mentioned above included a shared understanding of the task, involvement, and input of each team member. In short, the managerial aspects that were observed in the medical units mentioned led us to detect an effect of shared leadership on low contagion rates. But also, heads of medical units demonstrate a positive influence on social capital, thus improving contagion among health professionals.

#### **4. Discussion**

Our main research question was: how do medical units deal with COVID-19 to avoid contagion among health professionals? Our carefully chosen example showed that there is variation in how heads of medical units manage their units and in the COVID-19 contagion rates.

This makes two main contributions to the literature on public healthcare management. First, this article reveals that shared leadership among team members plays an important role in low COVID-19 contagion rates among health professionals. Second, we have observed the emergence of two concepts from human resource management literature that positively interact on medical units' contagion rates: shared leadership and social capital. These concepts emerged from a qualitative study, which allowed us to explore in detail what involves shared leadership and social capital in a healthcare context. The evidence showed that shared leadership enables social capital, in turn creating a work context with low COVID-19 contagion.

Leadership work better in medical units when it is shared among the work unit. It does not involve a lack of leadership from the head, but a leadership behavior that promotes teams relying on multiple members. Working as a member of a healthcare team involves a variety of complex and interdisciplinary relationships between knowledge-intensive professionals. Team members require a shared understanding in their functions and responsibilities (Undre et al., 2006)<sup>11</sup>.

This research proposed shared leadership as a means of boosting effective team performance in contexts of such high pressure and uncertainty as can be found in COVID-19 crisis. The results revealed that team with a shared leadership possess a collective knowledge structure, which involves an enhanced information processing and planning. This enables reduction of COVID-19 contagion rates, through strategic coordination and delegation of tasks.

In addition, the social support and shared situational awareness, promoted by shared leadership behaviors from heads of medical units, are found to be crucial in reducing COVID-19 contagion among health professionals. We found positive connections between shared leadership, social capital, and COVID-19 contagion. It suggests that a social perspective supports improved performance. And it is shared leadership which fosters these behavioral process of autonomy and positive attitudes among team members, namely, social capital. Social capital relates to the development of the relationships between people and among people (Nahapiet and Ghosal, 1998)<sup>12</sup>. High-quality relationships among employees working together should have a positive effect on the overall performance of the unit (Leana and Van Buren, 1999)<sup>9</sup>.

But in turn, social capital provides a social support. It generates a work environment where medical staff feel valued and appreciated, thus working more cooperatively joint with a sense of shared responsibility (Marks et al., 2001)<sup>13</sup>. Social networks, trust, a shared language and objectives promotes situational awareness, which facilitates an understanding of the high-risk situation, and the projection of future issues (Endsley, 1995)<sup>14</sup>. Our findings reveal that extreme pressures at work require a high level of coordination among team members working together, which is reinforced by solid network ties and positive attitudes such as trust.

In sum, the presented insights shed light on leadership studies that address the relationship between leadership and performance in healthcare (Alilyyani et al., 2018)<sup>15</sup>. In general, we found evidence that support and extend theorising on the human resource management black-box, by shedding light on how managing human resources lead to improved performance.

## 6. References

1. Newman M. (2020). COVID-19: doctors' leaders warn that staff could quit and may die over lack of protective equipment. *BMJ Brit Med J*. 2020;368: m1257. <https://doi.org/10.1136/bmj.m1257>
2. Carson JB, Tesluk PE, Marrone JA. Shared leadership in teams: An investigation of antecedent conditions and performance. *Acad Manage J*. 2007;50(5):1217-1234. <https://doi.org/10.5465/amj.2007.20159921>
3. Hackman JR. *The design of work teams*. In: Lorsch JV, editor. Handbook of organizational behavior. Englewood Cliffs, NJ: Prentice Hall; 1987. p. 315-342.
4. Gill C., Metz I, Tekleab AG, Williamson IO. The combined role of conscientiousness, social networks, and gender diversity in explaining individual performance in self-managed teams. *J Bus Res*. 2020;106: 250-260. <https://doi.org/10.1016/j.jbusres.2018.09.003>

5. Katz D, Kahn RL. *The social psychology of organizations*. 2nd ed. New York: Wiley; 1978.
6. Conger JA, Pearce CL. A landscape of opportunities. Future research on shared leadership. In: Pearce CL, Conger JA, editors. *Shared Leadership: Reframing the Hows and Whys of Leadership*. Thousand Oaks, CA: SAGE Publications; 2003. p. 285-303.
7. Wood MS. Determinants of shared leadership in management teams. *Int J Lead Stud*. 2005;1(1): 64-85.
8. Salas E, Shuffler ML, Thayer AL, Bedwell WL, Lazzara EH. Understanding and improving teamwork in organizations: a scientifically based practical guide. *Hum Resour Manage*. 2015; 54(4): 599-622. <https://doi.org/10.1002/hrm.21628>
9. Leana C, Van Buren H. Organizational Social Capital and Employment Practices. *Acad Manage Rev*. 1999; 24(3): 538–55. <https://doi.org/10.5465/amr.1999.2202136>.
10. Yeatts DE, Hyten C. *High-performing Self-managed Work Teams: A Comparison of Theory to Practice*. Thousand Oaks, CA: Sage Publications; 1998.
11. Undre S, Sevdalis N, Healey, AN, Darzi S, Vincent CA. Teamwork in the operating theatre: cohesion or confusion? *J Eval Clin Pract*. 2006;12(2):182-189. <https://doi.org/10.1111/j.1365-2753.2006.00614.x>
12. Nahapiet J, Ghoshal S. Social capital, intellectual capital, and the organizational advantage. *Acad Manage Rev*. 1998; 23(2):242–266. <https://doi.org/10.5465/amr.1998.533225>
13. Marks MA, Mathieu JE, Zaccaro SJ. A temporally based framework and taxonomy of team processes. *Acad Manage Rev*. 2001; 26(3): 356-376. <https://doi.org/10.5465/amr.2001.4845785>
14. Endsley MR. Toward a theory of situation awareness in dynamic systems. *Hum Factors*. 1995;37(1): 32-64.
15. Alilyyani B, Wong CA., Cummings G. Antecedents, mediators, and outcomes of authentic leadership in healthcare: A systematic review. *Int J Nurs Stud*. 2018;83: 34-64. <https://doi.org/10.1016/j.ijnurstu.2018.04.001>