



# Contested, Impractical, and Easily Forgotten? Analysing National-Level Decision-Makers' Interpretations of Lessons Learned From the COVID-19 Pandemic Through a Qualitative Follow-up Study

Kristiina Janhonen,<sup>1</sup> Marjaana Viita-aho,<sup>2</sup> Henna Paananen,<sup>3</sup> Laura Kihlström,<sup>4</sup> Soila Karreinen<sup>5</sup> and Liina-Kaisa Tynkkynen<sup>6</sup>

Scandinavian Journal of  
Public Administration  
Articles in Press

DOI:  
<https://doi.org/10.58235/sjpa.33349>

## Abstract

This article employs Dewey's pragmatist theory and a follow-up study design to explore how Finnish national-level decision-makers perceived and interpreted lessons learned at two different time points during the crisis: first during the acute stage in 2021 (n = 21) and later following the stage of high vaccination coverage and the conclusion of the acute stage in 2022–2023 (n = 16; 15 of which took part also in the first interview and 1 having transferred to a key role after 2021). Interviewees represent key ministries, other national governmental organizations with pandemic governance responsibilities, expert organizations, and authorities responsible for preparedness. Analyses aimed to construct a more comprehensive understanding of the COVID-19 pandemic, and explore lessons learned as situationally emerging, evolving, and processual. Results reveal how lessons were intertwined with political decision-making, experienced as temporally impractical and easily forgotten, and shaped through a dichotomy of crisis and normalcy. For further research on crisis lessons, we call for greater acknowledgement of the politicized nature of defining lessons learned, measures to overcome the tendency of lessons to fade, and management of continuity across the crisis-normalcy divide. Conclusions offer suggestions for overcoming these difficulties in preparation for future crises.

## Keywords:

pandemic;  
lessons learned;  
health systems;  
policymakers;  
follow-up study

## Practical Relevance

- Most existing analyses of lessons learned focus narrowly on the acute phase of the COVID-19 crisis, overlooking how interpretations evolve over time.
- A longitudinal, qualitative approach enables deeper insight into how national decision makers reinterpret lessons across different crisis stages.
- The timing of drawing lessons is fluid; lessons may emerge gradually, be reinterpreted, or fade from memory.
- Political dynamics shape both the framing and forgetting of lessons, making learning a contested process.
- Lessons learned are not static conclusions but evolving, context-dependent interpretations shaped by ongoing experience.

<sup>1</sup>*Corresponding Author:* [Kristiina Janhonen](#) , PhD, Docent, Senior Researcher, Finnish Institute for Health and Welfare. Research interests include learning, interaction, leadership, resilience.

<sup>2</sup>**Marjaana Viita-aho** , RN, MHS, Researcher, Finnish Institute for Health and Welfare. Research interests include health systems and policy, health workforce, health system resilience.

<sup>3</sup>**Henna Paananen** , PhD, University Lecturer, Tampere University. Research interests include public administration, leadership, public sector reform and governance.

<sup>4</sup>**Laura Kihlström** , PhD, Research Manager, Finnish Institute for Health and Welfare. Research interests include health systems and policy, health equity, power and politics.

<sup>5</sup>**Soila Karreinen** , MD, Doctoral researcher, Tampere University. Research interests include health systems and policy, change, resilience and leadership in healthcare.

<sup>6</sup>**Liina-Kaisa Tynkkynen**, PhD, Docent, Chief Researcher, Finnish Institute for Health and Welfare and senior researcher, Tampere University. Research interests include public policy, health systems, health policy.

Article first published as an article in press: November 21, 2025

## Introduction

The aim of this article is to advance a more comprehensive understanding of how lessons learned are framed during a crisis, with a particular focus on the evolving interpretations of national-level decision makers over time. While the COVID-19 pandemic has generated a vast body of research, much of it concentrates on the acute phase of the crisis. This temporal limitation risks overlooking how lessons are reinterpreted as the crisis unfolds and how such reinterpretations influence the implementation (or non-implementation) of those lessons. If scholarly inquiry remains confined to the immediate aftermath of disruption, it may fail to capture the dynamic, contested, and politically embedded nature of lessons learned in crisis contexts.

This challenge is particularly salient in the context of complex, long-duration crises such as the COVID-19 pandemic. Crises of this nature are not singular events, but extended processes marked by multiple waves, shifting intensities, and evolving institutional responses. As Boin, Ekengren & Rhinard (2020) argue, the COVID-19 pandemic exemplifies a “creeping crisis”, which signifies a protracted and ambiguous threat that resists clear temporal boundaries. In such crises, the framing of lessons learned is not static but shaped by changing political, institutional, and societal conditions. Consequently, understanding how lessons are framed at different stages of a crisis is essential for grasping the mechanisms of institutional learning and the barriers to reform.

Relatedly, preparedness, often invoked as a goal of crisis management, is typically defined as the capacity to anticipate, respond to, and recover from disruptions. It entails both planning and adaptability, requiring horizontal coordination across sectors (Pouru-Mikkola et al., 2023), vertical integration across levels of governance (Donahue et al., 2014), and continuous, anticipatory action (Staupe-Delgado & Kruke, 2017). Yet, despite its centrality, preparedness remains conceptually underdeveloped (Ansell, Sørensen & Torfing, 2021), and its operationalization is frequently hampered by institutional inertia, political contestation, and fragmented governance. Moreover, the interconnectedness of contemporary risks underscores the limitations of preparedness as a purely technical endeavor, highlighting the need for approaches that can accommodate uncertainty and complexity (Rantamäki, 2023; 2024; Rantamäki, Uusikylä & Jalonen, 2024).

In this article, we approach lessons learned as interpretive and evolving constructs, shaped by the perceptions and experiences of national-level decision makers situated within roles in which they can significantly affect the ways in which crisis measures are taken or lessons learned interpreted. We focus on the health system as a key site of crisis governance, broadly defined to include all actors and actions aimed at promoting, restoring, or maintaining health (WHO, 2007). This includes not only formal healthcare institutions but also informal networks, community actors, and the broader social determinants of health (Saulnier et al., 2021; Augustynowicz et al., 2022). Recent scholarship has emphasized the importance of recognizing the interdependencies between health systems and other societal systems—including phenomena such as food security, social protection, and mobility; particularly in crises with wide-ranging societal impacts (Zaki & Wayenberg, 2023). Effective crisis governance, therefore, requires not only the application of existing frameworks but also the development of new ones informed by empirical insights into how lessons learned are interpreted and framed (Christensen et al., 2016; Kapucu & Hu, 2022).

This article contributes to previous literature on drawing lessons learned from crises by analyzing how national-level decision makers in Finland interpreted lessons learned from the COVID-19 pandemic at two distinct stages: the acute phase in 2021 and the post-acute phase in 2022–2023, when high vaccination coverage had been achieved and the immediate crisis had subsided. Drawing on longitudinal interview data collected at these two time points, we examine how the framing of lessons evolved over time and what this reveals about the conditions under which understanding the lessons is enabled or constrained. We have no knowledge of previous studies that would have combined this kind of a temporal, follow-up research design with a focus on national-level crisis governance in the context of COVID-19. Thereby, the study offers novel insights into the dynamics of how lessons learned are framed by national-level leaders during protracted crises.

## **Lessons learned as contextually emerging, continuous, and evolving**

This article contributes to the theoretical development of understanding lessons learned from a crisis by integrating pragmatist theory into the conceptualization of lessons learned during crises. While pragmatism has increasingly informed research on health systems resilience (e.g., Ansell, Sørensen & Torfing, 2021; Ansell & Boin 2019; Ansell & Greyer, 2016; Greenhalgh & Engebretsen, 2022), its core insights have not yet been fully incorporated into how lessons learned are defined, framed, and operationalized within crisis models. In particular, the dynamic, contested, and temporally unstable nature of lessons learned drawn from crises remains under-theorized. This article addresses that gap by drawing on pragmatist theory to conceptualize lessons learned as contextually emerging, continuously evolving, and shaped by the lived experiences and interpretations of decision makers. Importantly, the aim is not to analyze the learning process of individuals or a particular group (such as the national-level decision makers interviewed) but rather to examine how interpretations of lessons learned can shift across different stages of a crisis, and how these shifting interpretations can influence the ways in which lessons are ultimately implemented or neglected. The results of this article seek to provide empirical examples and further illustrations of what this means at the level of national decision making during a crisis, while the discussion section seeks to offer insights into the potential consequences for crisis preparedness and the further development of models that more effectively integrate lessons learned into evolving crisis frameworks.

In essence, pragmatist theory, rooted in the work of John Dewey (1896 [1996]; 1916 [1996]; 1938 [1996]), offers a relational and temporally sensitive understanding of lessons learned. Rather than viewing lessons learned as products of a discrete cognitive event, pragmatism allows their conceptualization as a transactional process between individuals and their ever-changing social and material environments. Lessons learned are not merely about acquiring knowledge but about navigating uncertainty, responding to disruptions, and reconfiguring practices considering new experiences. This perspective foregrounds the situatedness of lessons and its dependence on context, continuity, and collective meaning-making.

In the context of crisis governance, this theoretical lens provides an opportunity to move beyond linear or cyclical models of crisis response, which often treat lessons learned as isolated, retrospective insights. Instead, we approach lessons as interpretive constructs that are continuously negotiated, often politicized, and shaped by institutional memory and forgetting. As Greenhalgh and Engebretsen (2022) argue, implementing lessons learned in health systems is not only about technical adaptation but also about navigating conflicting values, interests, and narratives. This resonates with the idea that lessons learned are not neutral or universally agreed upon; they are contested, selective, and embedded in broader struggles over meaning and legitimacy.

Moreover, the pragmatist emphasis on temporal continuity challenges the assumption that lessons learned can be implemented only during or immediately after acute crisis phases. Lessons may emerge gradually, be reinterpreted over time, or fade from institutional memory altogether. The selective nature of remembering—shaped by what is politically salient, institutionally convenient, or socially acceptable—plays a crucial role in determining which lessons are retained and acted upon (Coraiola et al., 2023). In this sense, lessons learned are not only about what is known but also about what is remembered, forgotten, or deliberately sidelined.

Our theoretical position also aligns with scholarship on policy learning, which emphasizes the role of experience, analysis, and social interaction in shaping how knowledge is constructed and used by policy actors (Dunlop & Radaelli, 2018). Their definition of learning as “the updating of beliefs based on lived or witnessed experiences, analysis or social interaction” underscores the interpretive and non-linear nature of learning processes. Importantly, learning can be unintentional and may produce dysfunctional or counterproductive outcomes—what Dunlop and Radaelli (2018) refer to as “unwanted learning.” In our study, we adopt an open-ended approach to lessons learned, recognizing that not all learning leads to improvement and that some lessons may reinforce existing path dependencies or institutional blind spots (Heino et al., 2024).

Finally, our focus on national-level decision makers situates this study at the intersection of crisis governance and policy learning. By analyzing how these actors interpreted lessons at two distinct stages of the COVID-19 pandemic, we explore how the understanding of these lessons is shaped by evolving crisis dynamics, institutional constraints, and political considerations. This theoretical framing justifies our empirical delineation and supports the article's broader aim: to deepen understanding of how lessons learned are framed during crises, and how these framings evolve over time in ways that influence both policy and practice.

## Methods

This qualitative follow-up study uses interview data on Finnish national-level policymakers' interpretations of lessons learned during the COVID-19 pandemic. The data was collected at two time points: 1) at the acute stage of the COVID-19 crisis (in 2021,  $n = 21$ ) and 2) the post-acute stage following the high vaccination coverage and the end of the acute stage (in December 2022 to January 2023,  $n = 16$ ; 15 of which took part also in the first interview and 1 having transferred to a key role after 2021). Finland is a high-income country with a parliamentary democracy in Northern Europe. Its pandemic response was considered largely successful in terms of epidemic control, yet several regulative and structural challenges and tensions arose during the pandemic, especially regarding steering and the roles and responsibilities of different actors (Karreinen et al., 2023a).

We focus on the interpretations of national-level policymakers, since they are considered to have a crucial effect on how crisis responses are interpreted, what measures are taken, and what decisions concerning long-term development plans are made (e.g., Bayntun, 2012; Haldane et al., 2021; Klausen, 2024). Policymakers also have the power to decide when new lessons from a particular crisis are no longer relevant or needed and at what point other issues and agendas are deemed more important and brought to the forefront of political decision-making.

For the first dataset, purposive snowball sampling was used to recruit interviewees from key ministries and other national governmental organizations with pandemic governance responsibilities in Finland (Karreinen et al., 2023b), expert organizations, and authorities responsible for preparedness. These interviewees were chosen for informants in this study based on their crucial roles in national-level pandemic management and preparedness in Finland. In the collection of the follow-up interview data, invitations to participate in interviews were sent to all interviewees from 2021 and persons who had transferred to relevant positions after the first interview round.

All stages of the data collection followed the ethical guidelines of the Finnish National Board on Research Integrity (2021) for research completed with human participants. The participants were informed about the research study via e-mail, and they provided verbal informed consent at the beginning of the interview. Interviews were conducted remotely in Finnish via the Microsoft Teams application or by telephone with one to three interviewers.

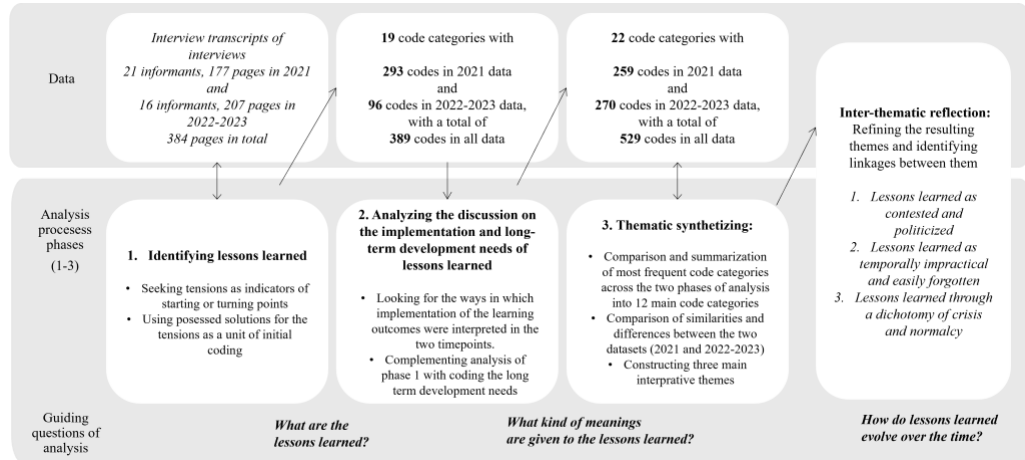
The semi-structured interview protocol used for both data collection rounds leaned on the same core themes, with the interview questions addressing the respondents' interpretations of the state of the COVID-19 crisis at the time of the interview, the roles and challenges of leadership and decision-making during the crisis, as well as identification of central lessons learned from COVID-19 to inform future preparedness. However, the ordering of the questions varied flexibly in the interviews, and all participant initiatives were encouraged. The duration of the interviews varied from 60 to 90 minutes, and all interviews were recorded and transcribed verbatim by a professional service provider.

The participants in the following excerpts are identified with numbers (1–22) from the first dataset. The second dataset uses the same numbers, with follow-up interviews indicated by “\_2.” Participant 22\_2 only participated in the second interview round (2022–2023) due to being assigned to their key professional role after the initial interviews in 2021. The analyses include abductive and thematic content analyses (Gibbs, 2012; Timmermans & Tavory, 2012), and the ATLAS.ti software (version 9.1) was used as an aid. Overall, the aim of the analyses was to identify how lessons learned from the COVID-19 crisis were interpreted by national-level decision makers at the two different stages of the crisis. The word ‘stages’ refers to the two time

points in which the interview data was collected in this study: first during the acute stage in 2021 ( $n = 21$ ) and post-acute stage later following the stage of high level of vaccination coverage and the conclusion of the acute stage in 2022–2023.

The analysis process unfolded in three phases (see Figure 1) and was conducted in close collaboration between authors 1 and 2 of this article. As referred to and described in more detail below, the conceptualization and operationalization of lessons learned (i.e. the way in which lessons learned were coded and interpreted in the data) is drawn directly from previous research applying pragmatist theorizations for empirical analyses.

*Figure 1. Summary of the analysis process*



### Phase 1 of analyses: open coding based on starting points drawn from pragmatist theory

The first round of analysis was conducted by author 2 and focused on identifying lessons learned, as interpreted by the participants at the two different stages of the crisis, that is, the two earlier defined time periods in which the data of this study was collected. In this phase, we took emerging tensions as a starting point for the analyses based on the pragmatist view that they constituted potential turning points in which old routines broke down and that the need arose for an evaluation or change in habitual activities (Elkjaer, 2008; Miettinen, 2000). Such turning points can be interpreted to potentially produce lessons learned because they may redirect courses of action (Ibid.). This analytical starting point and focus on tensions as potential markers for lessons learned is typical and characteristic for operationalization in many studies applying pragmatism (Ibid.), and it can be said to influence how lessons learned is approached, defined, and operationalized for the purpose of coding of qualitative interview data. An understanding of lessons learned as something that potentially breaks down old routines and as responses to needs to change habitual activities further allows a shift from seeing lessons learned not only as something that take place at the recovery stage of a crisis (e.g., Thomas et al., 2020), but as evolving outcomes of continuous processes and adaptive transactions with changing circumstances (e.g., Ansell & Boin, 2016; 2019; Greenhalgh and Engebretsen, 2022).

In accordance, leaning on our pragmatist theoretical background, tensions were defined as instances that bring about the need to question prevalent ways of thinking and/or acting. Based on these theoretical underpinnings and conceptual definitions, the analysis began as a process of open coding, where the core aim was to identify key code categories around how the lessons learned were interpreted, with an acknowledgement of similarities and differences between the two interview datasets collected in 2021 and 2022–2023. Notably, instead of an analysis of the nature of different kinds of learning processes during the COVID-19 crisis, we directed our analytical focus to the learning outcomes (i.e., lessons learned) that were reached after the emergence and based on the tensions. In this phase, then, lessons learned were interpreted and traced across the data as solutions to tensions as defined above; solutions referring here to novel forms of understanding; decisions, and/or conclusions that informed reorganization of action,

or transformed structures of the health system. In sum, this phase produced knowledge of what the lessons learned were, as interpreted by the interviewees (see Figure 1).

### **Phase 2 of analyses: complementary analysis of implementation of lessons learned**

In the second phase, author 1 focused on analyzing the way in which the implementation of the identified lessons and long-term development needs were discussed by the interviewees in the two datasets. The aim was to support analyses conducted in phase 1 and to produce complementary knowledge of how and the extent to which the implementation of the learning outcomes (i.e., lessons learned) was described by the participants and how the understanding of implementation was interpreted at the two time points (in 2021 and 2022–2023). In addition, the long-term development needs discussed by the participants were coded, with particular attention paid to their level of specificity (e.g., what, how, when, and who should act in relation to the referenced development needs). In sum, this phase of the analyses produced complementary knowledge of the meanings given to the lessons learned by the interviewees (see Figure 1).

### **Phase 3 of analyses: thematic synthesis of coding**

Finally, in the third phase, a thematical synthesis of the open coding from phases 1 and 2 was conducted collaboratively by authors 1 and 2. This aimed to deepen our interpretations of the evolving nature of the lessons learned through comparisons of similarities and differences between the two datasets (Ryan & Bernard, 2003). Based on this final integrative phase, the following three interpretive themes were constructed: 1) *lessons learned as contested and politicized*, 2) *lessons learned as temporally impractical and easily forgotten*, and 3) *lessons learned through a dichotomy of crisis and normalcy*. These three themes summarize the central ways in which the lessons learned were interpreted across the two different points in time of the analyzed data. In sum, the three interpretive themes produced knowledge of how the lessons learned evolved over time (see Figure 1). The following results section is structured according to these three interpretive themes.

## **Results**

### **Overview of results**

The three interpretive themes produced in the analyses are summarized in Table 1, providing an overview of the key results of this study and illustrating how lessons learned from a pandemic such as COVID-19 cannot be taken as a self-evident or simple process. The interpretation and framing of lessons learned does not take place only in a technical or rational manner but is also a social and political process. Accordingly, national-level decision makers' interpretations of lessons learned demonstrate reconciliation of competing viewpoints, the formation (and perishableness) of collective memory as a product of historical reality and current politics, and the balancing act between points of normalcy and crisis.

*Table 1. Identified potential challenges for the implementation of lessons learned from a crisis*

<b>Lessons learned as contested and politicized</b>	<b>Lessons learned as temporally impractical and easily forgotten</b>	<b>Lessons learned through a dichotomy of crisis and normalcy</b>
Tensions between knowledge production and decision-making at the face of uncertainty	Implementation affected by political timeframe, scant resources, and outsourcing of professionals	Treating the crisis-normalcy-continuum as a binary dichotomy to be crossed as fast as possible
Tendency to focus on the successfulness of crisis measures	Lessons learned that are unclearly translated into development needs	Appropriateness of models for leadership and governance across the crisis-normalcy continuum
Understating the severity of the pandemics after the acute stage	Impracticality of preparedness plans	Understanding crises as inevitably unpredictable, hence, impossible to fully prepare for
Discomfort toward external evaluations		

In what follows, each of these three interpretive themes are presented in more detail with extracts from data to provide empirical illustrations.

### **Lessons learned as contested and politicized**

The contested and politicized nature of the lessons learned was illustrated in the data through tensions emerging between knowledge production and decision-making, the interviewees' tendency to focus on the successfulness of the measures taken, their experiences of the severity of the pandemic having been undermined after the acute stage of the crisis, and overall critical perspectives to broad-scale external evaluations.

The tensions between knowledge production and decision-making were evident especially in the interviews during the acute stage, which denotes a time of heightened uncertainty. Some interviewees (e.g., 2, 16, 29) had experienced the diversity of expert voices or the reconciling of a variety of scientific interpretations with political decision-making as challenging, while others stated that their experience and frustration over decision-making had become politicized, with expert views having been bypassed during the pandemic (e.g., 2, 3\_2, 7, 8, 11, 28\_2). In particular, the interviewees from the central government (23, 13) emphasized the importance of political decision-making in managing crises affecting the whole society. Others problematized political influence, for example, because of the lobbying power of industry in politics, which can result in resolutions in which some voices are marginalized:

...those whose voices are the loudest [because of lobbying] often find most suitable solutions for themselves in decision-making in comparison to those whose voices aren't loud and therefore heard. (11)

Notably, the interviewees' considerations of political influence in terms of lessons learned were not as widespread as in the follow-up interviews (2022–2023) as they were in the interviews conducted during the acute stage of the pandemic (2021). In contrast, the follow-up interviews emphasized a stronger tendency to focus on the successfulness of crisis measures:

That we pay attention not only to failure but focus on what did go well. Because strengthening issues that were handled successfully is at least as important as failures, wallowing in failures. (18)

This discrepancy between the two interview sets can be interpreted as a desire to conclude discussions of the crisis or an unwillingness to question decisions made during the acute stage, as other issues were already in focus at the time of the follow-up interviews. This was also illustrated as decreased questioning regarding political steering, which could also be connected to the fact that major restrictive measures leading to broad societal discussions had already been dismantled by the time of the follow-up interviews. Furthermore, the data included examples

where the interviewees wanted to underline that the decisions made during the pandemic should always be interpreted situationally—that is, based on an understanding of the contextual and temporal situation in which the decisions were made—and that any criticism of these decisions should be made through the vocabulary of development needs rather than highlighting potential failures:

In fact, now I want to first highlight that all decisions and operations are made in a specific moment of time. And in a way, critical thinking, if we examine something [in retrospect], we must look at it as a need for development. (13)

Paired with the imprecise nature of many of the development ideas, this, too, can be interpreted as enforcing the tendency to focus on the success stories of pandemic management. As referred, some of the participants (e.g., 18\_2) maintained that the severity of the pandemic had been understated and downplayed in discussions after the acute stage. The follow-up interview data also revealed that the political time frame for analyzing the lessons learned was ending, and some of the interviewees were of the mindset that the most important lessons had already been learned and that it was now time to move on to other more pressing issues:

I don't really think that transillumination of the corona crisis on a detailed level would any longer bring us more abilities to prepare for the future. This has been dealt with already and it would be more worthwhile to move to more generic investigations on preparedness, as we have, as a matter of fact, already done in public service work. Corona is already behind us. (16\_2)

The contested and political nature of the lessons learned was further illustrated in how the interviewees deliberated on the evaluative measures. By the time of the follow-up interviews, many organizations had already carried out internal evaluations or launched development projects based on lessons learned. While some interviewees highlighted the importance of broad-scale external evaluations because of the tendency of civil servants to always explain things in a positive light (21\_2), others spoke of discomfort about external evaluations of measures taken during the crisis and stated that this would not be necessary because of existing internal evaluations (3\_2). The interviewees also revealed that evaluations of measures taken during the pandemic had already become highly politicized, making them challenging to execute (11\_2):

... [T]his [broad-ranging external evaluation of operations and decisions made during the crisis] is a difficult subject. And it is very difficult politically, this evaluation, because it is probable that it will follow and come at you from all different directions.

When an external evaluation was seen as important and worthwhile, emphasis was often placed on the consequences of restrictive measures, as this was seen as beneficial for preparing for future crises (2, 9\_2, 18\_2, 23\_2, 28\_2).

### **Lessons learned as temporally impractical and easily forgotten**

The temporally impractical and easily forgotten tendencies of lessons learned were illustrated in the data through the notion that there never seemed to be “a right time” for their implementation. Many interviewees (8\_2, 16\_2, 26, 26\_2) further highlighted that both the collective experiences of a crisis and lessons learned from it were easily erased from memory. Attempts at managing continuity in terms of preparedness were seen as a counterforce to these tendencies, while scant resources and the impracticality of preparedness plans were highlighted as hindrances to implementing lessons learned in practice.

At the follow-up interviews (2022–2023), several participants (13\_2, 14\_2, 21\_2, 26\_2) estimated that recovery from COVID-19 pandemic had not yet begun; that organizations and people working at different levels of the health system were experiencing ongoing stress because of other crises and challenges that had followed COVID-19 pandemic; and that an eventual recovery would take years. These issues are noteworthy, since many crisis models (e.g., Thomas et al., 2020) see the collection and implementation of lessons learned at the acute stage of a crisis as challenging and, consequently, define the recovery from a crisis as particularly important from the perspective of the analysis and implementation of lessons. Against this backdrop, the data represented lessons learned as temporally impractical: Their analysis and implementation were still undetermined, even elusive. Alternatively, from the perspective of the above-exemplified political reasons, it was probably already over.



While the general importance of analyzing and implementing lessons learned was widely acknowledged among the participants (e.g., 17), the inability to see the permanence of their effects in the now was also highlighted and as referred, their nature to be easily forgotten after a crisis:

So, the risk probably is that we then return somewhat to how things were before and forget all the lessons that this [crisis] has brought up. And it might be something that is quite typical in such crises, and that these lessons, then become learned, are forgotten. Certainly, some things have had an influence and might later be seen as more permanent changes. (8\_2)

Overall, the development ideas represented in the data were typically not stated very concretely or clearly (i.e., the specific ways in which the referenced issues should be changed; who should oversee the change process; or how the development work should be funded, implemented, and assessed). There were also some exceptions to this. For example, telehealth solutions (e.g., remote consultation) representing a concrete change process that was regarded as having been expedited by COVID-19, with possible long-reaching consequences (8\_2). Generally, limited resources and outsourcing of professionals were often experienced by the interviewees as connected to the lack of implementation of lessons learned. The tendency to forget was paired with scant resources by some of the interviewees:

So, if material preparedness is provided with zero euros, it is completely certain that the end result is accordingly worth it. (26)

Complementarily, scant resources were seen as a significant threat and a future crisis scenario for the health system (23).

In the data, the implementation of lessons learned was also deliberated from the perspective of managing continuity (13). This was discussed, for example, through developing preparedness plans and the need for more frequent and hands-on practice (14) as well as active monitoring and evaluation of plans (23). The notion of inadequate preparedness plans was also illustrated through descriptions of the plans being of little use in practice during crisis management (14). Still, others saw a carefully and more holistically executed crisis management plan as important in terms of directing resources (11\_2). The courage to analyze not only well-functioning models but also unpleasant crisis events was regarded as a potential tool for supporting continuity and looking at crises and shocks in a broader timeframe (14\_2).

### **Lessons learned through a dichotomy of crisis and normalcy**

As the third and final interpretive theme resulting based on analyses, lessons learned were often interpreted in the data through a crisis–normalcy dichotomy; a crisis operation mode appearing at times as something to be restored back to a normal state as fast as possible. Furthermore, many of the lessons learned and their implementation could be characterized in light of the data as short-term and temporary, while only a few themes could be interpreted as potentially including long-term effects. Crises were also repeatedly described as inevitably unpredictable, hence, impossible to fully prepare for in advance.

At the time of the follow-up interviews (December 2022 to January 2023), most of the interviewees expressed that COVID-19 was no longer the most pressing issue on their work agenda. By that time, COVID-19 pandemic had been followed by and become entangled with other crises, such as the Russian war in Ukraine, challenges concerning the economy and sustainability, and the extensive health and social sector reform in Finland. Nevertheless, many of the interviewees still experienced COVID-19 as a crisis that could not yet be said to have ended. Therefore, the transition from “crisis mode” to “normalcy” could not be interpreted in the data as having fully taken place, nor could it be described as a clearcut or swift process. Rather, it seemed to be taking place gradually and during a vaguely identifiable time frame. Although interpretations of “crisis” and “normalcy” could be said to be illustrated in the data as overlapping and intertwined, the said dichotomy was often the starting point of the interviewees’ reflections of the lessons learned.

From the perspective of a “crisis mode”, crisis action measures were repeatedly referred to as issues that were impossible to decide on in advance and, therefore, inevitably something that must at least partly be dealt with reactively and in the moment, particularly in the interviews during the acute stage. In these deliberations, the interviewees (e.g., 12, 18, 25) often highlighted

the importance of basic preparedness during normal times and the impossibility of preparing for every crisis beforehand based on preparedness plans or prescribed crisis operation models. As illustrated below, this highlighted the importance of leadership (12), which in the broader context of the data can relate to such themes as clear mandates, responsibilities, jurisdiction, and role division:

There is no way of preparing for everything. Basic preparedness must be in order, and this provides readiness to respond to any risk. And we must be able to lead and steer this [process of crisis response].

Notably, lessons learned interpreted through the crisis–normalcy dichotomy were not seen by the participants in identical ways. To exemplify, the participants reflected in varying ways on how crisis leadership should be organized compared to leadership during normal times: Some participants believed crisis leadership should be built based on models of normal times (3\_2, 22\_2, 8), while others stated that crisis responses can effectively lean on distinct leadership models. Decentralized governance in Finland represented another example of a tension between normal times and crisis responses; this was seen as a positive issue during normal times but as a challenge from the perspective of crisis leadership (13). Furthermore, scant resources emerged in the data as a challenge also across the normal–crisis continuum: A highly resource-efficient system was seen as incapable of offering adequate flexibility and a buffer effect in times of crisis (22\_2). Concerns regarding scant resources did not appear to have faded at the time of the follow-up interviews but constituted points of reflection in the follow-up data through examples such as intensive care unit capacity and lack of human resources throughout the health system. Nevertheless, the interviewees generally did not provide very concrete deliberations as to what should be done to solve the challenge of limited resources.

Interestingly, comparisons between the two datasets showcased the deconstruction of some of the lessons learned and implemented. In other words, many of the key measures taken at the acute stage appeared in the data as temporary, as they had already been reversed or dismantled by the time of the follow-up interviews. The most frequently appearing example of this was the dismantling of structures concerning collaboration and communication (14\_2):

So, kind of, the structures and mechanisms are largely run down and now, as a matter of fact, at the end of last year, decisions were made about discontinuing the corona working groups. We'll get them up and running fast then...

Notably, many of the interviewees reported having experienced challenges in reference to collaboration and interaction between different levels of the health system but saw these challenges as potentially solvable through the extensive social and health system reform implemented from the beginning of 2023 onward (8\_2). However, the realization of these expectations was not yet fully predictable or easy to evaluate at the time of the second data collection round.

Finally, although many of the crisis measures based on lessons learned were both implemented and deconstructed during the timespan of this study, there were also examples that could be interpreted as potentially having more long-term effects. In other words, they could have had impacts that would traverse the transition from “crisis” to “normal” mode. Some of these examples included the development of legislation and preparedness plans, with some interviewees pointing out that they had experienced that the legislation and responsibilities of different actors had not been followed due to a complicated steering system, despite being clear to the interviewees themselves (11).

## Discussion

In May 2023, the World Health Organization declared an end to the global emergency status of the COVID-19 pandemic after more than three years. As we have transitioned from crisis management to addressing the lasting effects of the pandemic and preparedness for future crises, it is crucial to critically assess how lessons learned were interpreted by national level decision-makers, since this crucially affects how the legacy of COVID-19 crisis will be interpreted. The acknowledgement of these interpretations will also help us better understand the context-

dependent crisis environment from which lessons learned are drawn and facilitate application of lessons in future crises.

Against this background, the aim of this study was to analyze how lessons learned from COVID-19 pandemic were interpreted by national-level decision-makers at two points of time during the crisis (i.e. the acute stage in 2021 and the stage of high level of vaccination coverage and the conclusion of the acute stage in 2022–2023). Based on pragmatist theorizations (Elkjaer, 2008; Miettinen, 2000), we defined, operationalized, and analyzed lessons learned as solutions to emerging tensions, thus marking potential turning points in which old routines break down and needs arise for an evaluation or change in habitual activities. Such a definition allows a shift from seeing lessons being learned beyond the recovery stage of a crisis (e.g., Thomas et al., 2020). Instead, they are understood as evolving outcomes in changing circumstances (e.g., Ansell & Boin, 2016; 2019; Greenhalgh and Engebretsen, 2022). This approach to lessons learned is especially important when examining a complex and uncertain situation, where different values, interests, and viewpoints are in constant interaction.

Table 1 brought together the three interpretive themes summarizing the main results of this study: 1. Lessons learned as contested and politicized, 2. Lessons learned as temporally impractical and easily forgotten, 3. Lessons learned through a dichotomy of crisis and normalcy. In what follows, we discuss the implications of these results particularly from the perspective of health systems' preparedness to future shocks and crises.

### **The first interpretive theme: lessons learned as contested and politicized**

Previous research has highlighted how power and politics shape outcomes and processes across all levels of health systems (e.g., Kihlström et al., 2023a; see also Bozorgmehr, Zick & Hecker, 2022). In line with this, our first interpretive theme ("Lessons learned as contested and politicized") reveals how interpretations of lessons learned were deeply intertwined with competing perspectives, political decision-making, and questions of authority and influence.

While earlier studies have emphasized the importance of leaders taking responsibility for crisis outcomes (e.g., Greenhalgh & Engebretsen, 2022; Kapucu & Ustun, 2017; Christensen et al., 2016), our interviewees predominantly focused on the perceived success of measures implemented during the acute phase of the pandemic. This emphasis was accompanied by reflections on how the severity of the pandemic was downplayed in the post-acute phase, and by tensions between knowledge production and decision-making under conditions of uncertainty. Interviewees also expressed critical views toward broad-scale external evaluations, which were often seen as redundant due to existing internal self-evaluation mechanisms.

However, it is not self-evident that internal and external evaluations address the same concerns. This distinction underscores the inherently political nature of evaluation processes and their influence on how lessons are interpreted, remembered, or dismissed. National reports in Finland (e.g., Stenvall et al., 2022) have similarly pointed to the limited extent to which failures and accountability have been addressed, which is an omission that poses a significant barrier to identifying meaningful lessons and fostering development.

Moreover, a strong focus on successful responses can reinforce the perceived adequacy of existing preparedness systems, thereby reducing the perceived need for critical review or innovation. These dynamic risks entrenching vulnerabilities and obstructing adaptive responses to future threats (Heino & Huotari, 2022). In alignment with Perghel and Psychogios (2013), we argue that despite their challenges, broad-ranging external evaluations are essential for ensuring that diverse voices are heard—including those that were marginalized or silenced during the acute phase of the crisis.

Finally, improving how information is processed during crises, and clarifying who holds responsibility for communication and decision-making, are vital steps toward addressing power imbalances in crisis governance. These measures are crucial not only for fostering transparency and trust but also for enabling more inclusive and reflective learning processes.

## **The second interpretive theme: Lessons learned as temporally impractical and easily forgotten**

The second interpretive theme (“Lessons learned as temporally impractical and easily forgotten”) illustrated how the appropriate timing of implementing lessons learned was elusive, contributing to their tendency to fade from memory. Interviewees described how limited resources and the impracticality of preparedness plans, particularly the low-level nature of hands-on rehearsals and the lack of concrete implementation measures, hindered the translation of lessons into practice. This finding resonates with previous research suggesting that rigid hierarchies and strictly defined roles, when paired with full compliance to preparedness plans, may inhibit the reinterpretation of lessons in novel ways (Dunlop & Radaelli, 2018). As Heino and Huotari (2022) argue, preparedness should be approached as a reflective practice, in other words, a process that allows space for doubt and the exploration of unimagined possibilities. This perspective aligns with Dunlop and Radaelli’s (2018) call to acknowledge not only successful outcomes but also unwanted or dysfunctional ones, thereby avoiding the pitfalls of crisis narratives that focus exclusively on success while neglecting critical analysis of failures.

Our findings also support prior research on collective memory, particularly the work of Coraiola et al. (2023), which emphasizes the selective nature of remembering and the contested terrain of what is retained or forgotten. In line with their argument, we propose that future research should more seriously engage with how memory is constructed and used, especially in relation to the politics of recognition and the creation of memorable experiences.

Additionally, our results underscore the importance of basic preparedness considering the inherent unpredictability of crises (see also Karreinen et al., 2023b). Since crises often involve unknown characteristics that defy full anticipation, we advocate for a complementary focus in preparedness training—particularly for leaders—on how to act, build trust, and collaborate in the face of uncertainty. As the COVID-19 pandemic has reshaped understandings of what constitutes a crisis (e.g., Boin, Ekengren & Rhinard, 2020), we argue that definitions and practices related to collecting, analyzing, and implementing lessons learned must also evolve. Specifically, crisis models and preparedness plans should acknowledge the prolonged nature of recovery following long-lasting crises and recognize that the recovery phase is not the sole moment for learning. Instead, lessons may emerge and require implementation across multiple stages of a crisis, reinforcing the need for temporally sensitive and adaptive learning frameworks.

## **The third interpretive theme: Lessons learned through a dichotomy of crisis and normalcy**

The third interpretive theme (“Lessons learned through a dichotomy of crisis and normalcy”) highlighted how the framing of lessons learned was shaped by a perceived divide between crisis and normalcy. When lessons are (forgotten or) implemented in fragmented or gradual ways, preparedness becomes increasingly complex and difficult to manage (Heino & Huotari, 2022). Interviewees emphasized the importance of managing continuity, defined as the ongoing cycle of planning, implementation, and practical rehearsal, as a counterforce to the tendency for lessons to fade over time.

As noted also by Kihlström et al. (2023b), our findings underscore the significance of context-dependent and emergent leadership during crises, as well as the role of collaborative networks in effective crisis management. While collaborative structures were widely acknowledged as essential, most of these networks had been dismantled by the time of the follow-up interviews. This raises important questions about whether such networks should remain temporary constructs or be institutionalized within health systems to support long-term resilience.

In particular, the continuity of cross-sector collaboration demands reflexivity and ongoing adaptation to maintain the relevance and functionality of established partnerships (e.g., Högberg, 2024). Our data also revealed divergent views on appropriate leadership models across the crisis–normalcy continuum, as well as mixed assessments of the benefits and limitations of decentralized systems in this context. These findings suggest that comparative analyses of leadership practices during crises and in times of normalcy could offer valuable insights for

future research. Finally, the generally unspecified nature of development ideas expressed by interviewees, combined with the persistent issue of limited resources, underlines the need to translate lessons learned into clearly targeted action plans. These plans should include well-defined responsibilities and mechanisms for accountability to ensure that lessons are not only identified but also effectively implemented.

### **Limitations of the study**

This study has specific limitations. While having high-level and/or elite health system leaders as informants can be considered a strength, it may also limit pluralism, as those with less power and influence remain absent from the data. Additionally, our data were constrained by recall bias. We acknowledge that many ideas and lessons learned may have already faded in the midst of the acute and post-acute stages of the pandemic, which could have been better covered with a study design using more frequent follow-up data collection points. Finally, it is important to note that data in this study consist of interviews collected at two separate timepoints during the COVID-19 pandemic, thus excluding opportunities to analyze participants' on-site activities based on data like observational or video materials (e.g., Bechky, 2003). This is a central limitation and an important aspect to be considered in further research. Nevertheless, despite these limitations, our results shed light on the contested nature of lessons learned. This is particularly important during a time when COVID-19 is no longer considered an urgent issue on the political agenda.

### **Conclusion**

This article demonstrates how national-level decision makers' interpretations of lessons learned during crises are not static reflections but evolving, context-dependent constructs that shape both immediate responses and long-term development goals. Drawing on longitudinal interview data from two stages of the COVID-19 pandemic in Finland, and informed by pragmatist theory, we conceptualized lessons learned as dynamic responses to emerging tensions, continuously reframed as crises unfold. This approach challenges linear models of crisis learning and highlights how political, institutional, and societal factors influence what is remembered, forgotten, or sidelined.

The core contributions of this study are threefold. Empirically, we provide rare longitudinal insight into how crisis lessons were framed over time. Theoretically, we extend pragmatist thinking into the domain of crisis governance. Practically, we identify key challenges, such as power imbalances, selective memory, and the fading of lessons, that can hinder implementation of the lessons. We argue for preparedness models that are inclusive, temporally sensitive, and responsive to the complex, ambiguous nature of real-world crises. These insights are brought together in Table 2, which outlines concrete conclusions and recommendations for strengthening crisis preparedness, supporting continuity across the crisis-normalcy divide, and translating evolving lessons into actionable reforms.

Table 2. Conclusions for crisis preparedness

Acknowledging power imbalances	Overcoming the tendency of fading lessons learned	Managing continuity across the crisis-normalcy divide
Developing processes of how and by whom information is handled during a crisis; and how decisions made are communicated	Developing crisis models and preparedness plans that acknowledge prolonged need for recovery after a long-lasting crisis	Developing crisis models and plans that acknowledge also the dynamic, complex, and messy aspects of crises
Making sure that a plurality of voices, especially those of vulnerable groups, are heard when the successfulness of crisis management is evaluated	Maintaining efforts to analyze and implement lessons learned even when the acute crisis is over, as well as updating of preparedness plans during so called normal times	Evaluating appropriateness of models for operations, leadership and governance across the crisis-normalcy continuum
	Analyzing not only well-functioning models, but also unpleasant and ambiguous crisis events	Instead of being limited to general (basic) preparedness, focusing also on (leadership) training about how to act, communicate, build trust and collaborate at the face of the unknown
	Translating lessons learned into development needs that are clearly targeted, and that identify distribution of responsibility	
	Complementing general preparedness plans with hands-on crisis training	

## Acknowledgements/Funding

This work was supported by the Academy of Finland (Grant nr 340501) and the Strategic Research Council, Academy of Finland (Grant nr 345349 and Grant nr 345300).

## References

- Ansell, C. & Boin, A. (2019) Taming deep uncertainty: The potential of pragmatist principles for understanding and improving strategic crisis management, *Administration & Society*, 51 (7): 1079–1112. <https://doi.org/10.1177/0095399717747655>
- Ansell, C. & Geyer, R. (2016) ‘Pragmatic complexity’ a new foundation for moving beyond ‘evidence-based policy making’? *Policy Studies*, 38 (2): 149–167. <https://doi.org/10.1080/01442872.2016.1219033>
- Ansell, C. & Sørensen, E. & Torfing, J. (2021) The COVID-19 pandemic as a game changer for public administration and leadership? The need for robust governance responses to turbulent problems. *Public Management Review*, 23 (7): 949–960. <https://doi.org/10.1080/14719037.2020.1820272>
- Augustynowicz, A. & Opolski, J. & Waszkiewicz, M., (2022) Resilient Health and the Healthcare System. A Few Introductory Remarks in Times of the COVID-19 Pandemic, *International Journal of Environmental Research and Public Health*. 19 (6): 3603. <https://doi.org/10.3390/ijerph19063603>
- Bayntun, C., (2012) A health system approach to all-hazards disaster management: A systematic review. *PLoS Curr.* 4, e50081cad5861d. ISSN 2157-3999. <https://doi.org/10.1371/50081cad5861d>

- Bechky, B. A. (2003). Sharing meaning across occupational communities: The transformation of understanding on a production floor. *Organization Science*, 14(3), 312–330. <https://www.jstor.org/stable/4135139>
- Boin, A. & Ekengren, M. & Rhinard, M., (2020) Hiding in plain sight: conceptualizing the creeping crisis, *Risks, Hazards, & Crisis in Public Policy*. 11 (2): 116–38. <https://doi.org/10.1002/rhc3.12193>
- Bozorgmehr, K. & Zick, A. & Hecker, T., (2022) Resilience of health systems: understanding uncertainty uses, intersecting crises and cross-level interactions, *International Journal of Health Policy and Management*, 11 (9): 1956–1959. <https://doi.org/10.34172/ijhpm.2022.7279>
- Christensen, T. & Lægheid, P. & Rykkja, L. H. (2016) Organizing for Crisis Management: Building Governance Capacity and Legitimacy, *Public Administration Review*, 76 (6): 887–897. <https://doi.org/10.1111/puar.12558>
- Coraiola, D. M. & Foster, W. M. & Mena, S., Foroughi, H. & Rintamäki, J., (2023) Ecologies of Memories: Memory Work Within and Between Organizations and Communities, *Academy of Management Annals*, 17 (1): 373–404. <https://doi.org/10.5465/annals.2021.0088>
- Dewey J. (1896 [1996]) The reflex arch concept in psychology, in: Boydston, J. A., & Hickman, L. (Eds.), The collected works of John Dewey. The Early Works of John Dewey, 1882–1898. Volume 5: 1895–1898, Essays, Early Essays. IntelLex Corporation, 2nd electronic ed., pp. 96–112.
- Dewey J. (1916 [1996]) Democracy and education, in: Boydston, J. A., & Hickman, L. (Eds.), The collected works of John Dewey, 1882–1953. The Middle Works of John Dewey, 1899–1924 (Vol. 9: 1916), Democracy and Education. An Introduction to the Philosophy of Education. IntelLex Corporation. 2nd electronic ed., pp. 1–370.
- Dewey J. (1938 [1996]) Experience and education, in: Boydston J. A., & Hickman L. (Eds.), The collected works of John Dewey, 1882–1953. The Later Works of John Dewey (Vol. 13). Essays, Experience and Education, Freedom and Culture, and Theory of Valuation. IntelLex Corporation, 2nd electronic ed., pp. 1938–1939.
- Donahue, A. & Eckel, C. & Wilson, R. (2014) Ready or not? How citizens and public officials perceive risk and preparedness. *American Review of Public Administration*, 44 (4S): 89–111. <https://doi.org/10.1177/0275074013506517>
- Dunlop, C. A. & Radaelli, C. M. (2018) The lessons of policy learning: Types, triggers, hindrances and pathologies, *Policy & Politics*, 46 (2): 255–272. <https://doi.org/10.1332/030557318X15230059735521>
- Elkjaer, E., (2008) Pragmatism - A learning theory for the future. In: Illeris, K. (Ed.), Contemporary theories of learning: learning theorists ... in their own words, London: Routledge, pp. 74–89.
- Finnish National Board on Research Integrity (2021) (TENK), (2021). Ethical Review in Human Sciences. <https://tenk.fi/en/ethical-review/ethical-review-human-sciences>. Accessed: 1.11.2022
- Gibbs, G., (2012) Thematic Coding and Categorizing. Analysing Qualitative Data. Sage Research Methods Online. London SAGE Publications, Ltd. <https://doi.org/10.4135/9781849208574>
- Greenhalgh, T. & Eivind Engebretsen, E., (2022) The science-policy relationship in times of crisis: An urgent call for a pragmatist turn, *Social Science & Medicine*. 306, 115140, <https://doi.org/10.1016/j.socscimed.2022.115140>
- Haldane, V. & De Foo, C. & Abdalla, S. M. & Jung, A.-S. & Tan, M. & Wu, S. & Chua, A. & Verma, M. & Shrestha, P. & Singh, S. & Perez, T. & Tan, S. M. & Bartos, M. & Mabuchi, S. & Bonk, M. & McNab, C. & Werner, G. K. & Panjabi, R. & Nordström, A. & Legido-Quigley, H. (2021) Health systems resilience in managing the COVID-19 pandemic: Lessons from 28 countries. *Nature Medicine*, 27 (6): 964–980. <https://doi.org/10.1038/s41591-021-01381-y>

- Heino, O. & Huotari, V., (2022) How considering memory as an analogy to preparedness reveals its weaknesses, *Risk, Hazards & Crisis in Public Policy*, rhc3.12257. <https://doi.org/10.1002/rhc3.12257>
- Heino, O. & Kihlström, L. & Rautiainen, P. & Viita-aho, M. & Keskimäki, I. & Tynkkynen, L.-K. (2024). Into the unknown—Preparing for and learning from health system shocks. In S. Thomas & P. Fleming (Eds.), *Handbook of Health System Resilience* (pp. 452–464). Edward Elgar Publishing. <https://doi.org/10.4337/9781803925936.00041>
- Högborg, (L). (2024) Boundary Spanning in Cross-Sector Collaboration: Sensemaking and Framing in a Civil Society Public Partnership Beyond the Crossroads. *Scandinavian Journal of Public Administration*, 28(1): 60–77. <https://doi.org/10.58235/sjpa.2023.16429>
- Kihlström L. & Siemes, L., Huhtakangas, M., Keskimäki, I. & Tynkkynen, L.-K. (2023a). Power and politics in a pandemic: Insights from Finnish health system leaders during COVID-19. *Social Science & Medicine*, 321: 115783. <https://doi.org/10.1016/j.socscimed.2023.115783>
- Kihlström, L. & Huhtakangas, M. & Karreinen, S. & Viita-aho, M. & Keskimäki, I. & Tynkkynen, L.-K. (2023b). “Local cooperation has been the cornerstone”: facilitators and barriers to resilience in a decentralized health system during COVID-19 in Finland. *Journal of Health Organization & Management*, 37(1), 35–52. <https://doi.org/10.1108/JHOM-02-2022-0069>
- Klausen, K. (2024) Crisis Management as Strategic Coping. *Scandinavian Journal of Public Administration*, 28(1): 25–42. <https://doi.org/10.58235/sjpa.2023.12580>
- Kapucu, N. & Hu, Q. (2022) ‘An old puzzle and unprecedented challenges: Coordination in response to the COVID-19 pandemic in the US’, *Public Performance & Management Review*, 45 (4): 773–798. <https://doi.org/10.1080/15309576.2022.2040039>
- Kapucu, N. & Ustun, Y. (2018) Collaborative crisis management and leadership in the public sector. *International Journal of Public Administration*, 41 (7): 548–561. <https://doi.org/10.1080/01900692.2017.1280819>
- Karreinen, S. & Rautiainen, P. & Keskimäki, I. & Satokangas, M. & Viita-aho, M. & Tynkkynen, L.-K. (2023a) Pandemic preparedness and response regulations in Finland: Experiences and implications for post-COVID-19 reforms, *Health Policy*, 132, 104802. <https://doi.org/10.1016/j.healthpol.2023.104802>
- Karreinen, S. & Paananen, H. & Kihlström, L. & Janhonen, K. & Huhtakangas, M. & Viita-aho, M. & Tynkkynen, L.-K. (2023b) Living through uncertainty: a qualitative study on leadership and resilience in primary healthcare during COVID-19. *BMC Health Services Research*, 23(1), 1–13. <https://doi.org/10.1186/s12913-023-09223-y>
- Miettinen, R., (2000) The concept of experiential learning and John Dewey’s theory of reflective thought and action, *International Journal of Lifelong Education*, 19 (1): 54–71. <https://doi.org/10.1080/026013700293458>
- Perghel, R., & Psychogios, A. G., (2013) Making Sense of Crisis: Cognitive Barriers of Learning in Critical Situations, *Management Dynamics in the Knowledge Economy*, 1 (2): 179. <https://www.managementdynamics.ro/index.php/journal/article/view/20>
- Pouru-Mikkola, L. & Minkinen, M. & Malho, M.. & Neuvonen, A. (2023) Exploring knowledge creation, capabilities, and relations in a distributed policy foresight system: Case Finland, *Technological Forecasting & Social Change*, 186 (1B), 1–14. <https://doi.org/10.1016/j.techfore.2022.122190>
- Rantamäki, A. (2023) Informaatioresilienssin rakentumiseen vaikuttavien tekijöiden ilmentyminen varautumista koskevassa asiantuntijapuheessa [*The manifestation of factors influencing the development of information resilience in expert discourse on preparedness*], Hallinnon tutkimus, 42 (5), 492–510. <https://doi.org/10.37450/ht.127936>
- Rantamäki, A. (2024). Hallintaa epävarmuudessa: Informaatioresilienssi kriiseissä ja niihin varautumisessa [*Managing Uncertainty: Information Resilience in Crises and Preparedness*]. Acta Wasaensia 530.



- Rantamäki, A. & Uusikylä, P. & Jalonen, H. (2024) Information Resilience in Networks: An Analysis of a National Security Legislation Evidence Base. *Scandinavian Journal of Public Administration*, 28(2): 1–20. <https://doi.org/10.58235/sjpa.2023.14068>
- Ryan, G. & Bernard, R., (2003) Techniques to identify themes, *Field methods*, 15 (1): 85-109. <https://doi.org/10.1177/1525822X0223956>
- Saulnier, D. & Blanchet, K. & Canila C. & et al., (2021) A health systems resilience research agenda: moving from concept to practice, *BMJ Glob Health*, 6 (8), e006779. <https://doi.org/10.1136/bmjgh-2021-006779>
- Staupe-Delgado, R. & Kruke, B. I. (2017) Developing a Typology of Crisis Preparedness. In Cepin & Bris (Eds.) *Safety and Reliability – Theory and Applications*. London: Taylor & Francis Group. <https://doi.org/10.1201/9781315210469>
- Stenvall, J., Leskelä, R.-L., Rannisto, P.-H., Tolkki, H., Cansel, A., Leponiemi, U., Johansson, J.-E., Pekkola, E. & Tupala, T., (2022) Koronajohtaminen Suomessa. Arvio covid-19-pandemian johtamisesta ja hallinnosta syksystä 2020 syksyyn 2021 [*Corona Management in Finland. An assessment of the management and administration of the COVID-19 pandemic from autumn 2020 to autumn 2021*]. Valtioneuvoston selvitys- ja tutkimustoiminnan julkaisusarja 2022:34. Valtioneuvoston kanslia, Helsinki 2022. <https://julkaisut.valtioneuvosto.fi/handle/10024/163995>
- Thomas, S. & Sagan, A. & Larkin, J. & Cylus, J. & Figueras, J. & Karanikolos, M., (2020) Strengthening health systems resilience: key concepts and strategies. World Health Organization. Regional Office for Europe. <https://apps.who.int/iris/handle/10665/332441>.
- Timmermans, S. & Tavory, I., (2012) Theory construction in qualitative research: From grounded theory to abductive analysis, *Sociological Theory*, 30 (3): 167–186. <https://doi.org/10.1177/0735275112457914>
- World Health Organization. (2007) Everybody's business--strengthening health systems to improve health outcomes: WHO's framework for action. [https://iris.who.int/bitstream/handle/10665/43918/9789241596077\\_eng.pdf](https://iris.who.int/bitstream/handle/10665/43918/9789241596077_eng.pdf). [cited 2024 Jan 22].
- Zaki, B. & Wayenberg, E. (2023) How does policy learning take place across a multilevel governance architecture during crises? *Policy and Politics*, 51 (1): 131–155. <https://doi.org/10.1332/030557321x16680922931773>