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Time collapsed and space split: Navigating care under conditions of urgency

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Abstract
Purpose:
This paper investigates how nursing personnel experienced and dealt with disrupted temporal and spatial conditions during the COVID-19 crisis, and how these disruptions impacted on the core of care in healthcare organizations: the nurse–patient relationship.
Methodology:
We conducted sixteen semi-structured interviews with nurses and nurse assistants from two Italian regions and applied thematic analysis to capture how time and space were lived and navigated during the pandemic.
Findings:
The crisis fractured the foundations of care. Time collapsed (loss of structure), accelerated (relentless urgency), and suspended (uncertain horizons). Space split into unstable "clean" and "contaminated" worlds, continuously redefined through improvisation. The body emerged as a main resource for resilience: through fatigue, sensory cues, and boundary-crossing movements, it enabled continuity of care. Relational proximity, touch, and presence were constrained by protective equipment and spatial barriers.
Managerial implications:
Recognizing the temporal, spatial, and embodied nature of care is essential for designing resilient healthcare organizations and protecting relational quality under extreme pressure.
Research limitations:
Qualitative evidence from two Italian regions limits generalizability.
Originality:
The study reframes organizational resilience as an embodied process grounded in altered temporalities and spatial configurations, advancing organizational time–space research and expanding understanding of caring in crisis contexts.

Keywords: Healthcare; time; space; nursing personnel; COVID-19; caring relationship

1. Introduction

Healthcare organizations operate under constant pressure, yet they are still expected to guarantee high-quality care and sustain caring relationships with patients. Within this scenario, the idea of intelligences of care may gain renewed importance. These intelligences can be understood as forms of organizational wisdom that sustain compassionate, relational, and ethically grounded practices while balancing efficiency and human connection. In nursing, caring is not simply a clinical act but a holistic and relational process that integrates technical, emotional, and spiritual dimensions into a shared experience of healing (Motta, 2022). Nursing science has long emphasized that the caring relationship is a dynamic encounter capable of transforming both patient and professional.

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While the COVID-19 pandemic has generated extensive research on nurses' experiences, spanning workload, emotional exhaustion, ethical issues (e.g., Kelley et al., 2022), two foundational dimensions of care have remained almost underexplored: space and time. Nonetheless, classical nursing theorists, including Nightingale (1992), Alligood (2017), and Watson (2010, 2012), highlight that caring unfolds within temporal rhythms and spatial arrangements that shape presence, proximity, empathy, and the moral quality of the relationship. Recent organizational studies similarly show that crises alter temporal structures and reconfigure spatial boundaries (Williams et al., 2017; Christianson et al., 2009), yet, despite notable exceptions (Arcadi et al., 2021; Petry et al., 2023), these dimensions are still often treated as contextual backdrops rather than constitutive elements of crisis experience and care delivery. Consequently, little is known about how healthcare professionals actually perceived and navigated disrupted temporalities and spatial configurations during the pandemic (Kent and Dacin, 2025; Kateb et al., 2025), or how these disruptions reshaped the nurse–patient relationship. Even less attention has been devoted to the embodied nature of such experiences—i.e., how the body senses, interprets, and bridges fragmented time and space (Watson, 2012). Without understanding these lived, material, and relational dimensions, our comprehension of how resilience was built in healthcare organizations under extreme urgency remains incomplete.

To address this gap, we ask: How did nursing personnel perceive and navigate disrupted time and space during the COVID-19 pandemic?

Drawing on organizational resilience and nursing theory, the study is empirically based on sixteen interviews with registered nurses and nurse assistants in Italian public hospitals.

Our analysis identifies three disrupted temporal experiences—collapsed time (loss of structure), accelerated time (urgency and pace), and suspended time (prolonged uncertainty)—and three spatial conditions: dichotomized space (clean vs. contaminated), unstable architecture (shifting and improvised boundaries), and reconfigured relational space (distance, loss of proximity, and altered presence). Across these conditions, the body emerged as a central enabler of care: a sensor of temporal strain, a threshold connector across separated spaces, and a material medium sustaining presence, proximity, and communication despite severe constraints. Through its adaptive and relational capacities, the body played a central role in building resilience within disrupted temporal and spatial conditions.

The study contributes to three streams of literature. First, it advances understanding of the nurse–patient relationship by showing how time, space, and embodiment shape caring practices under crisis conditions. Second, it enriches organizational resilience research by illustrating how resilience was built through lived temporal and spatial disruptions rather than through stable capabilities (Hillmann and Guenther, 2021; Duchek, 2020). Third, it contributes to embodiment studies by revealing how bodily presence and materiality mediate care within reorganized spatial and temporal conditions.

The remainder of the paper is organized as follows. We first discuss the literature on caring, temporality, spatiality and organizational resilience, before presenting the research design and methodological approach. We then introduce the main findings of the study, followed by a discussion of their implications. The paper closes with concluding reflections.

2. Theoretical background

2.1. Time and space in nursing theories

Classic nursing theories provide an interpretive foundation for understanding how space and time shape the quality of that relationship and the resilience of healthcare professionals, especially during periods of crisis. Florence Nightingale's (1992) environmental theory emphasized that healing depends not only on medical interventions but also on the spatial conditions that sustain life—fresh air, light, cleanliness, and quiet. The environment was seen as an extension of care itself, a material and moral ecosystem in which both patient and nurse can thrive (Marriner-Tomey

et al., 1989; Alligood, 2017). Recent research echoes Nightingale's insights, demonstrating that supportive environments, including reflective spaces for staff such as the "Room to Reflect" or the "Serenity room" projects, foster professional well-being, emotional regulation, and resilience (Pipe et al., 2022; Primavera et al., 2025). Thus, space emerges as both a physical and organizational intelligence: it structures relationships, mitigates stress, and allows the nursing personnel to be fully present.

Time, in Jean Watson's human caring theory, transcends the chronological sequence of tasks to become a sacred temporal dimension—the "caring moment" in which authentic human connection occurs. According to Watson (2010, 2012), time is not merely a matter of time management; rather, it constitutes the rhythm of empathy and presence. Time scarcity and fragmented work routines often erode the capacity for meaningful interaction, increasing emotional fatigue. This is evidenced by studies confirming that organizational policies facilitating protected time for reflection and connection improve resilience and patient outcomes (Brooks et al., 2025). Thus, the use of time in healthcare needs to be reconsidered from being a resource to optimize to a relational space to enter.

Hence, space and time can be understood as "interconnected intelligences", both organizational and personal, which nourish professional resilience and restore the ethical foundations of the nurse–patient relationship (Zanotti, 1998). Appreciation of these dimensions and their management are part of sustainable competitiveness in healthcare: human capital is valued, relational integrity is preserved, and the common good is promoted through compassionate, intelligent, and resilient care.

Within this theoretical tradition, time and space can be understood as intelligences of care because they constitute the very conditions through which caring is enacted. Caring theory shows that the nursing relationship does not rely solely on cognitive competence or emotional intelligence, but on the practical and situated wisdom that emerges from working within specific temporal rhythms and spatial configurations. For nursing personnel, the ability to create, interpret, and navigate these conditions is an essential form of professional intelligence: it enables presence, supports relational depth, and sustains the ethical and humanistic core of the caring encounter. In this sense, the practices through which nurses engage time and space represent a foundational expression of caring wisdom, complementing cognitive and emotional forms of intelligence.

This perspective also clarifies the link between caring and resilience in the healthcare context. During crises such as the COVID-19 pandemic, hospitals operate under extreme pressure, and maintaining high-quality caring practices becomes both more difficult and more essential. For frontline personnel, caring is not only a professional obligation but also a source of motivation, identity, and meaning, elements that buffer stress and sustain engagement (Huerta-González et al., 2021). Organizational resilience therefore cannot be separated from the preservation of caring relationships: when temporal conditions collapse or spatial arrangements are disrupted, the capacity to provide relationally rich care is threatened, undermining both patient experience and professional well-being (Petry et al., 2023). Understanding how time and space support or hinder caring is thus relevant for comprehending the foundations of resilience in hospital systems.

Building on these insights from caring theory, it becomes clear that time and space are not only just clinical and relational conditions, but also organizational dimensions that shape how professionals act, coordinate, and withstand adversity. When temporal rhythms collapse or spatial arrangements are reconfigured, as occurred during the COVID-19 crisis (Arcadi et al., 2021), the ability of nursing personnel to sustain caring practices depends on how these dimensions are structured, perceived, and navigated at the organizational level. To fully understand how disrupted time and space affect the nurse–patient relationship, it is therefore necessary to connect nursing theory with organizational perspectives on temporality, spatiality, and resilience (Williams et al., 2017). These streams of literature help illuminate how crises transform the temporal and spatial

conditions of organizing and work, and why such transformations are relevant for both care quality and organizational resilience (Duchek, 2020).

2.2. Temporal dimensions of organizational resilience

Although time and temporality have been theorized mainly in stable contexts, they are central to understanding crisis and resilience, which inherently unfold through sequential stages over time (Duchek, 2020; Hillmann and Guenther, 2021). Crises are characterized by altered temporalities, marked by urgency, acceleration, and discontinuity, which reshape the sequencing of resilience (Williams et al., 2017).

Organization and management studies conceptualized time as a controllable resource, emphasizing planning, scheduling, and efficiency (Macan, 1994; Claessens et al., 2007). More recent research has moved beyond this instrumental view. Scholars such as Aeon and Aguinis (2019) and Blagoev et al. (2024) highlight temporal structures, rhythms, and pluralities, portraying time as a socially embedded process shaped by coordination, pacing, and collective sensemaking.

During crises, temporal structures are disrupted. Urgency compresses temporal horizons, while exhaustion and uncertainty stretch them. Recent studies show that adversity deforms rhythms and reorders temporalities (Kent and Dacin, 2025; Kateb et al., 2025; Kodeih et al., 2023). The limited research that explicitly examines temporality in crises, as an object of study rather than merely a contextual factor, offers several conceptual lenses to understand it, including temporal structures, pace, alignment between organizations and their environments (Kateb et al., 2025), biographical time (Kent and Dacin, 2025), and timeless horizons (Kodeih et al., 2023). Yet, these contributions remain theoretically incoherent (Kent and Dacin, 2025) and empirically scarce.

As crises disrupt temporal structures, they often simultaneously unsettle the spatial arrangements through which work and interaction unfold. Temporal and spatial disruptions typically co-occur, altering how professionals move, coordinate, and sustain relational practices (Williams et al., 2017; Christianson et al., 2009). For nursing personnel in particular, changes in temporal rhythms—such as reduced time available for each patient, intensified pace, or rigidly sequenced shifts—directly shape how space is experienced and inhabited (Watson, 2012; Alligood, 2017). Limited time can make physical distance feel more pronounced and obstructive, as nurses must navigate separated environments without the temporal margin needed to bridge them. Likewise, temporal rigidity influences how nurses circulate across different care settings, affecting how boundaries, proximities, and zones of action are perceived and managed. Conversely, in emergency conditions, space-related behaviors may become less predictable, disrupting the usual care delivery (Dacin et al., 2024). This interdependence suggests that understanding crisis-related transformations in caring work requires examining not only how time is reorganized, but also how space is reconfigured, sensed, and experienced under extreme pressure.

2. 3. Spatial dimensions of organizational resilience

Although space and place have been examined in organization studies, they have often been treated as contextual conditions rather than as analytical objects in their own right, an oversight that becomes particularly visible in times of crisis. The “spatial turn” (van Marrewijk and Yanow, 2010; Stephenson et al., 2020; Clegg and Kornberger, 2004) challenged this view by showing that space is not a neutral setting but a constitutive dimension of organizing, shaping how people interact, coordinate, and make sense of their work.

During crises, spatial arrangements are profoundly reconfigured. Christianson et al. (2009) show how, following a sudden shock, organizational members collectively remade their work

environment both symbolically and physically. Likewise, Davoudi (2012) conceptualizes resilience as a spatial process through which actors reconstruct places of meaning and security in response to disruption.

These insights are particularly relevant in healthcare settings, where spatial configurations shape proximity, access, and the enactment of intimacy within caring relationships. The pandemic radically altered these dynamics: isolation rooms, restricted mobility, and protective barriers reshaped the very texture of care. As Dacin et al. (2024, p. 1206) note, it is "only once places are shattered or profoundly changed by natural or person-made disruptions – like epidemics (…) – do we come to appreciate the importance of place to our daily lives, to organizations, communities and nations."

Yet, despite this growing awareness, empirical research offers limited insight into how spatial reconfigurations are experienced and navigated by actors (Weick, 1993; Christianson et al., 2009; Davoudi, 2012). As with research on temporality, studies have tended to focus on structural or procedural changes rather than on how frontline professionals perceived and experienced changed spatial conditions during crises.

Taken together, these bodies of literature — on caring, temporality, spatiality and organizational resilience — offer partial insights into how crises affect nursing work in healthcare organizations. Although the COVID-19 pandemic has been widely studied from the nursing perspective, time and space have rarely been placed at the centre of analysis.

Research on nurses during the pandemic has focused primarily on psychological distress, consistently documenting elevated levels of stress, anxiety, burnout and trauma among frontline personnel (Chen et al., 2021; Huerta-González et al., 2021). Within this stream, time and space appear mainly as contextual factors such as long shifts, workload peaks or COVID-dedicated wards, rather than as lived dimensions that shape how care is experienced.

When studies explore the caring relationship, they highlight the emotions, the sense of calling, communication barriers and the ethical challenges of supporting isolated patients (Kelley et al., 2022; Zipf et al., 2022). Yet even here, temporal and spatial dynamics remain largely in the background. They are treated without emphasis on how they structure presence and interaction.

A few contributions acknowledge disruptions in temporal and spatial experience. Arcadi et al. (2021) describe altered perceptions of time and disorientation within reconfigured environments, while Petry et al. (2023) show how nurses attempted to sustain an interactive space of care despite distancing practices and protective equipment. These insights, however, remain mostly descriptive and do not develop a theoretical understanding of temporality, space or embodiment as foundations of caring.

Conversely, organization studies have developed rich conceptualizations of time and space (van Marrewijk and Yanow, 2010; Aeon and Aguinis, 2019), but these perspectives have been elaborated predominantly in stable contexts and only recently extended to crisis settings.

3. Methodology

3.1. Research design

To address this gap, we investigate the nursing personnel perspective on time and space during crisis to explore how these dimensions affected the nurse–patient relationship. Throughout this paper, the term "nursing personnel perspective" designates both the professional and theoretical perspective of registered nurses (RNs), as developed within nursing science and caring theories. However, because healthcare delivery is integrated, this analysis also includes the experience of nurse assistants (NAs), who make a large contribution to relational, bodily, and environmental dimensions of care. Their inclusion acknowledges that resilience, presence, and relational competence are collective outcomes arising from the collaborative processes between the RNs and NAs within organizational settings (Kalisch, 2009).

The empirical material consisted of 16 semi-structured interviews, conducted between July and September 2025, with RNs and NAs who had worked during the COVID-19 pandemic in public hospitals across Emilia-Romagna and Abruzzo regions, Italy.

The Italian National Health Service was established in 1978 as a universal and publicly funded system inspired by the Beveridge model (Beveridge, 1942; Nuti et al., 2012). It guarantees essential levels of care to all citizens through a combination of national funding and regional administration. Since the 1990s, decentralization reforms have progressively expanded the autonomy of regional governments in planning, financing, and organizing healthcare delivery (Ferrè et al., 2012; Longo, 2016). Regions manage local health authorities and hospitals, oversee personnel recruitment, and allocate resources (Garattini et al., 2022). This autonomy has produced a marked territorial heterogeneity in both efficiency and quality of services (France et al., 2005; World Health Organisation, 2009).

Emilia-Romagna is widely recognized as one of the most virtuous regions in the Italian healthcare system (Elba, 2018). It combines strong managerial coordination, continuous professional training, and a tradition of participatory governance with high levels of integration between hospital and community care (Meda et al., 2024). Its regional health budget is stable, and workforce planning is proactive, ensuring relatively high staffing ratios and resilience capacity during crises (Betti et al., 2023). By contrast, Abruzzo has faced long-standing structural and financial challenges. Entering the national recovery plan for deficit reduction in the late 2000s, the region experienced tight fiscal constraints and a reduction in workforce and hospital beds (Manzoli et al., 2012). This produced a more bureaucratic and resource-constrained environment, often perceived by frontline staff as rigid and reactive (De Belvis et al., 2012). Despite recent improvements, limited managerial flexibility and persistent shortages in qualified personnel continue to affect its ability to anticipate and adapt to systemic shocks.

3.2. Data collection

Interviews lasted between 25 and 50 minutes and followed a flexible conversational format aimed at eliciting personal narratives, situational accounts, and reflections on professional experience during the COVID-19 pandemic crises. All interviews were recorded, transcribed verbatim, and anonymized.

Table 1 summarizes the demographic characteristics of the 16 participants involved in the study. The sample includes both Registered Nurses (n=10, 62.50%) and Nurse Assistants (n=6, 37.50%), working in public hospitals in the regions of Abruzzo and Emilia-Romagna (n=8, each). Most participants were female (n=15, 93.80%), with only one male respondent. The age distribution shows a balanced representation across career stages, with 31.30% aged less than 35, 43.80% aged between 36 and 45, and 25.00% aged more than 46 years old. This composition reflects the broader demographics of the Italian healthcare workforce, which is predominantly female and concentrated in the 35–55 age range (AGENAS, 2025; FNOPI, 2025; OECD, 2023). Finally, participants were employed across different wards, including internal medicine (n=7, 43.80%), orthopedics (n=5, 31.30%), COVID-19 hospital (n=2, 12.50%), surgery and intensive care (n=1, 6.30%, each).

	n	**%**		**n**	**%**
Gender			**Profession**		
Male	1	6.25	Registered Nurses	10	62.50
Female	15	93.75	Nurse Assistants	6	37.50
Tot	16	100.00	Tot	16	100.00

			Wards		
Age			Internal medicine	7	43.75
≤ 35 years old	5	31.25	Orthopedics	5	31.25
36 - 45 years old	7	43.75	COVID-19 hospital	2	12.50
≥ 46 years old	4	25.00	Surgery	1	6.25
Tot	16	100.00	Intensive care unit	1	6.25
			Tot	16	100.00

Table 1: Sample demographic characteristics

3.3. Data analysis

The qualitative data collected through interviews were analysed using a thematic analysis, following the methodological guidelines outlined by Braun and Clarke (2006). Specifically, we identified and systematically organised all excerpts relating to temporal and spatial dimensions within the interviews, which were then interpreted to generate insights into patterns of meaning.

4. Results

The main empirical findings are reported around the two central dimensions of the study: time and space. All quotations are anonymized for privacy and are presented as illustrative of broader patterns rather than individual cases.

4.1. Urgently suspended: time and temporal experience during the pandemic

During the pandemic, time lost its linearity and became a fragmented and distorted phenomenon. The rhythm of the emergency disrupted hospital routines, transforming professionals' perceptions of duration, urgency, and the future. Nursing personnel described experiencing time in three interconnected ways: (i) its structure collapsed, (ii) its pace accelerated, and (iii) its flow was suspended.

Interviews reveal that the perception of time was profoundly altered and became a constitutive element of the crisis experience. Temporal disruptions also reshaped the nurse–patient relationship, influencing how care, presence, and attention were organized and felt in daily practice.

Urgently suspended: time and temporal experience during the pandemic

Participants described the breakdown of the usual temporal order. The familiar markers of time, e.g., shifts, and schedules, no longer provided orientation. Time appeared chaotic, compressed, and indistinguishable, as if a "cut" had occurred in the normal flow of everyday life. This loss of temporal order and confusion between hours, shifts, days, and nights reflected the collapse of time within the organization. Events that should have been clearly separated began to overlap.

The following accounts suggest that crisis conditions disrupted the very structure that usually organizes temporal experience.

"There were no fixed schedules anymore… the six o'clock treatment happened together with the one at eight. Time had lost its order." (RN)

"The shift ended, but it never really ended." (RN)

"It was a constant coming and going — you no longer knew if it was day or night." (RN)

Pace: urgency and acceleration

If the temporal structure within the organization collapsed, daily activities became dominated by a new pace: urgency. Work accelerated compared with the pre-pandemic period, driven by the need to react quickly to constantly changing situations.

"At that moment, speed mattered more than reflection. You had to understand instantly what to do." (RN)

"You had to decide immediately; there was no time to think." (RN)

This sense of urgency compressed time, leaving little space for reflection or recovery. Nurses described an unrelenting rhythm that blurred boundaries between moments of action and rest. The acceleration of work created an experience of temporal intensity, in which speed became a strategy to deliver care and a source of exhaustion.

Time flowing: suspension

Alongside acceleration, participants also referred to a suspension of temporality. If time is often understood as a linear flow, here that line seemed to be cut and frozen within a continuous present. Waiting and hope were what linked the emergency of the present to the imagined promise of an ending that never seemed to arrive.

"There were moments when it felt like time had stopped. Everything was suspended." (RN)

"I tried to live through it by thinking: it will end. That famous 'everything will be fine' — I carried that thought with me every day." (NA)

"We kept waiting for it to end, but that moment never came." (RN)

This experience of suspended time reveals how uncertainty extended beyond organizational schedules into personal and emotional rhythms. The future lost definition, and the present became stretched and indefinite.

Embodied temporality: sensing and enduring through the body

Beyond cognitive awareness, participants emphasized that time was felt through the body, which became both the instrument for "measuring" it and the object affected by changing rhythms. Fatigue, tension, and physical exhaustion emerged as tangible indicators of the crisis. The body, in this sense, replaced the objective timing provided by clocks and schedules: it offered an alternative way of measuring time through sweat, breath, and endurance.

"We were always running. Time was the enemy." (NA)

"Wearing the protective suit for ten hours, with marks all over your face… it was exhausting." (RN)

Physical and mental fatigue shaped how nurses perceived time during the pandemic. Temporal awareness was no longer based on schedules or routines but on the body's signals of exhaustion and recovery.

"I no longer perceived time — only my body giving up." (RN)

"It was hard to manage the rhythm of sleep. I had to take a few drops to fall asleep." (NA)

"It was just a cycle of exhaustion, work, and exhaustion again. It never ended." (RN)

Through bodily sensations, healthcare professionals made sense of time when abstract temporal references, e.g., clocks, routines, and schedules, had lost meaning. The body itself became a temporal sensor, registering the "weight", duration, and strain of the crisis.

4.2. Unstable division: space and spatial experience during the pandemic

The pandemic profoundly altered the space of care with significant relational and symbolic implications. Spatial experience was characterized by two main phenomena: division and instability, revealing a deep rupture in how space was organized and inhabited, with main

implication on the relationship between nurses and patients. Unlike the collapse of temporal structures, here space was not structurally dissolved but rather split into dual and opposing zones. Nursing personnel described experiencing space in three ways: (i) it was divided into two zones, (ii) its architecture was unstable, and (iii) its relational dimension was transformed by distance and the loss of proximity.

Structural division of space

Nursing personnel was forced to divide its environment into two areas: one for contaminated patients and another for those who were negative. The hospital space effectively duplicated itself: on one side, the clean and uncontaminated area; on the other, the COVID world. Nurses and assistants constantly redefined the boundaries between "inside" and "outside," "clean" and "dirty," "near" and "distant," transforming the workplace into a dual environment where the threshold between one and the other area was continually shifting.

"We drew a line on the floor with red tape — beyond that line you were 'clean'. On the other side you were 'dirty', as if there was a wall, though there wasn't." (RN)

"At first, the focus was entirely on defining clean and dirty zones. My ward had a horseshoe layout — the left side for COVID-positive, the right for negative patients." (RN)

"It was a constant movement from clean to dirty areas — meals passed from one side of the ward to the other, separated only by a curtain." (NA)

"There was just one door separating the infected from everyone else, yet it felt like an abyss." (RN & NA)

The separation was perceived as essential. Space, through distance and division, became a safety device, materially marking who could and could not "enter." At the same time, it created an architecture of control shaped by the pervasive fear of contagion.

Unstable architecture

However, the division between areas was never definitive. Spatial adaptation was a continuous process marked by improvisation and change, as wards not originally designed for emergencies were repeatedly converted into COVID-19 units. Space reflected organizational fragility and the constant need for improvisation: the physical stability of the hospital was undermined, just as the predictability of work was. Improvised barriers, access rules, and ad hoc delimitations shaped the construction and management of shifting boundaries between "clean" and "contaminated" areas.

"At the beginning everything was improvised — one wing for positive patients, another for negative ones. Then it changed again. It was constant confusion." (NA)

"We set up screens in the corridor to divide clean and dirty zones. It was just a regular ward — we had to organize it ourselves." (RN)

"… even the layout of the ward kept changing." (NA)

The instability of spatial configurations generated a pervasive sense of disorientation. Constant changes in boundaries and layouts made coordination difficult and blurred familiar routines.

During the crisis, the space of care extended beyond the physical boundaries of the hospital itself.

"When I went to the homes of COVID-19 patients, we all had our own procedures to follow — me, the patient, and the family. In the beginning, I had to get dressed and undressed in my car, but later some families organized small areas inside their homes, close to the patient's room, where I could safely put on and remove my protective equipment." (RN)

These improvised architectures, both inside and outside the hospital, contributed to enhance the uncertainty that defined the crisis. They illustrate how space dynamics were marked by

flexibility and instability: the infrastructure of care was constantly reassembled to maintain continuity amid disruption.

Relational space

The affective and relational meaning of care space emerged as deeply transformed. Distance became synonymous with the loss of proximity, of contact, and of shared presence. Space functioned as the dimension that allowed distance to take form, influencing proximity, safety, and the conditions for empathy.

"That closed door separating me from the patient — that was hard." (RN)

"When relatives couldn't enter, space became an emotional boundary too. The patient was alone." (NA)

"We passed things through the door, from outside to inside. It was the threshold between those who could touch and those who couldn't." (NA)

Spatial arrangements thus produced a physical and emotional separation that reshaped the caring relationship. The boundaries created to ensure safety also imposed affective constraints, redefining what it meant to be "close."

"Some patients cried, and you couldn't even go near them. You had to talk from a distance, and that was painful." (RN)

"Even holding the hand of a dying patient was no longer possible. You felt useless." (RN)

"We could no longer touch them. Physical contact — a core part of care — had become impossible." (RN)

"The hardest thing was not being able to touch them, not being able to hug them when they were afraid." (RN)

"Human contact was missing, and that absence was felt even among us, among colleagues." (RN)

"When a patient finally tested negative and you could touch them without fear, it felt like a miracle." (RN)

By regulating distance and proximity, space redefined the texture of care, transforming how presence, empathy, and compassion could be expressed. Ultimately, space revealed its functional role as the very medium that makes relationships possible: when fractured by crisis, it exposed the fragility and the necessity of proximity in sustaining the human dimension of care.

Embodied disorientation

The physical space of care became disorienting. Healthcare workers had to learn how to navigate an unfamiliar, hostile, and ever-changing environment. New places and spatial logics required adaptation that carried psychological consequences.

"There was no dressing area, no undressing area, no clear pathways. You felt lost, even physically." (RN)

"The ward was badly designed — tiny rooms, no proper pathways, elevators shared by everyone. Working there drove me crazy." (RN)

"I was completely disoriented — I was used to having a dressing and undressing zone. In orthopaedics, there was nothing; it was a different world." (RN)

Spatial disorientation blurred both cognitive and sensory reference points, forcing professionals to rely on bodily awareness to orient themselves. Navigating these unstable spaces required constant improvisation: movement itself became a practice of embodied intelligence, where knowing how to act was inseparable from sensing and adapting.

5. Discussion

Our results demonstrate that space and time are not merely contextual backdrops in which crises unfold; rather, they are constitutive dimensions that deeply affect the nurse–patient relationship and are themselves profoundly transformed by crisis conditions. Moreover, these dimensions are not only cognitively perceived but are also experienced, sensed, and navigated through the body. In this sense, our contribution is threefold.

First, we illuminate how the relationship between nurses and patients changed during the pandemic along the dimensions of time and space. Our findings suggest that time and space are perceived as fundamental elements of the caring relationship and as foundational components of care quality. However, both dimensions were deeply impacted by the crisis. Space, on the one hand, ensured safety but simultaneously constrained care. What protected life also hindered human connection. Protective barriers, distancing practices, and divided zones produced a spatial condition that limited proximity and direct contact. One nurse explained: "We missed the contact, the ability to touch them. It was instinctive to adjust a pillow, a blanket, or give a gentle touch… but we couldn't." (RN). Patients, according to the interviewees, desired presence, tangible closeness, and reassurance: "Patients needed presence, eye contact, just to feel you were there. But with all the protection on, it felt like we were distant even when we stood a meter away." (NA). Spatial distance heightened awareness of the importance of touch for care, emotional support, and effective response during crisis. The materiality of protective equipment also altered how patients perceived healthcare workers: "It was hard for patients to recognize us with all that gear on… they saw us as astronauts, not as nurses." (RN).

Time, conversely, was compressed, accelerated, fragmented, and suspended. These altered temporal conditions eroded the space for reflection and transformed the temporality of care. The urgency of the crisis imposed a rhythm in which immediacy replaced deliberation, and rapidity became both an operational necessity and a source of chronic stress and loss of meaning. Scarcity of time undermined relational presence, while physical distance created emotional distance. The chaos and disruption of the pandemic were thus mediated through altered temporalities and spatial configurations, which in turn reshaped the caring relationship. These findings suggest that the intelligence of care does not concern only cognitive dimensions rooted in knowledge, decision-making, or abstract relational understanding. Rather, it is grounded in the materiality of organizations and the sensory and embodied conditions through which care is enacted. Time and space emerge as conditions that can either enable or hinder the human connection at the core of nursing practice, thereby advancing research on the patient–care relationship in healthcare organizations.

Second, we contribute to the literature on organizational resilience (Duchek, 2020) by showing how time and space are transformed and experienced by organizational actors during crisis. Both dimensions display specific, patterned forms of disruption. Temporality was characterized by a collapse of structure, an accelerated pace, and a pervasive sense of suspension. The normal markers of time—shifts, routines, and the alternation between day and night—disappeared. Time was not perceived through clocks but through fatigue, bodily strain, and emotional exhaustion. The body became the primary instrument for sensing time, as nurses navigated urgency, depletion, and uncertainty about the future. In this sense, time was not only cognitively interpreted but materially experienced: fatigue and physical strain served as temporal indicators, revealing how long and how intensely the crisis had been endured.

Space was equally reconfigured. It was marked by a duplicated and fragmented architecture organized into "clean" and "contaminated" zones, as well as by dynamic instability that required constant adaptation. Unlike time, which collapsed, space multiplied and divided itself. Hospital environments were split into zones—"dirty" and "clean," "positive" and "negative"—requiring continuous boundary crossing. As one assistant noted: "To be honest, I saw many doctors doing their rounds from the doorway. The ones who actually went in and helped were us — nurses and nurse assistants." (NA). Another nurse added: "It was a constant crossing of that line between inside and outside. The body itself became the boundary." (RN). Spatial reorganization

constrained and reshaped proximity, visibility, and intimacy. Physical presence—mediated by protective layers—became the primary channel of relationality, replacing direct touch and embodied reassurance. What protected the body simultaneously limited communication and empathy, producing both safety and distance. Through these findings, we extend organizational resilience research by illustrating that resilience is not only a matter of adaptive processes or cognitive sensemaking but also emerges through lived and experienced temporal and spatial disruptions. Resilience is enacted through bodies navigating altered environments, reconstructing continuity under fragmented conditions.

Finally, what unites disrupted time and space during crisis is that both were experienced and navigated through the body. Across nurses' narratives, the body emerges as a central theme. Time and space were not merely conceived or understood; they were lived bodily. In relation to time, the body became an instrument of sensing and endurance—a sensor of exhaustion, a register of accelerated rhythms. In relation to space, the body functioned as a connector and mediator—a mobile threshold linking and separating, enabling care within an environment of fragmentation. Furthermore, the body was not only a biological entity but also a material entity intertwined with protective equipment, devices, and spatial constraints. These material elements redefined gestures, movements, and sensory perception. As one nurse recalled: "When you entered the room, you could feel the weight on your body — every movement was slowed down, even approaching the patient." (RN).

Crises are perceived and navigated through bodies; patient care unfolds through bodies moving in time and space. The intelligence of caring is therefore not only cognitive or emotional but also material and embodied. According to Watson (2008), the patient's body is a sacred and symbolic dimension of being, where vulnerability, suffering, and hope intersect. However, our findings highlight that the caregiver's body also plays a crucial role. Bodily presence, gestures, and touch by nursing personnel are forms of communication and compassion that bring caring into being. At the same time, the healthcare worker's body is exposed to fatigue, stress, and moral distress. Developing body awareness and self-care practices increases resilience and prevents burnout (Cooper et al., 2020; Hassan and Elsayed, 2025). Thus, the caregiver's well-being becomes a precondition for authentic relational engagement. Through this lens, we contribute to research on embodiment by showing that the "intelligence of care" involves the body as both the site and the medium of care and resilience.

6. Conclusions

This study shows that time and space are not neutral dimensions in which crises simply unfold, but conditions that are reshaped by disruption and, at the same time, shaped by people through their bodies. In healthcare, these dimensions strongly influence the ability to provide care and to sustain the caring relationship.

Our findings contribute in three ways. Empirically, we show how altered temporalities and fragmented spatial configurations changed how nursing personnel related to patients during the pandemic. Theoretically, we advance caring theory by highlighting time and space as core dimensions of caring; we extend organizational resilience research by demonstrating that resilience is lived through disrupted temporal and spatial arrangements; and we contribute to embodiment studies by showing that the intelligence of care is also material and bodily.

These insights have implications for healthcare management. Hospital management should recognize how altered rhythms and divided spaces affect caring practices and the well-being of professionals. Understanding the materiality of care work—the bodily effort, sensory limitations, and physical constraints experienced by frontline human resources—is essential for supporting them and safeguarding care quality during crises.

This study has limitations. It draws on qualitative interviews from two Italian regions, which may limit transferability. Also, the retrospective nature of the accounts may reflect how participants made sense of their experience over time.

Future research could explore more closely the role of objects and artefacts in shaping time and space during crises, and examine how power relations influence who defines these dimensions.

Overall, the study shows that the intelligence of care needed to face crises is not only cognitive or emotional but also material and embodied. For the resilience of the healthcare sector, time, space, and the body cannot be overlooked.

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