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KEYWORDS

Resilience | experiential learning | healthcare professionals | crisis management

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We do so by analyzing inductively the diary data that captures the lived experiences of healthcare professionals with the aim of theory building. The analysis allowed us to generate a theoretical model that depicts how experiential learning processes is triggered by the crisis, acting as an enabler of healthcare professionals' resilience: adaptive and emotional one. Our study provides novel insights related to how resilience might be developed in healthcare professionals through an experiential learning process and provides implications as a means of dealing with future crises.
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Discussion Paper Series

Building Resilience through Experiential Learning: A Study of Health Professionals

Discussion paper n. 42/2025

Jasna Poček (a), Manuela Furlana (a), Ziad El-Awad (b):

(a) Sant'Anna School of Advanced Studies; (b) Lund University

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Building Resilience through Experiential Learning: A Study of Health Professionals

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Abstract

The study examines how healthcare professionals' experiential learning unfolds during the crisis period and how it contributes to the building of their resilience. While previous studies analyzed the linkages between learning at work and the resilience of healthcare professionals, we complement these studies by offering insights about experiential learning and its relation to resilience that occurs both on the job – in highly stressful environments – and parallelly outside work, in an intra-professional university setting. We do so by analyzing inductively the diary data that captures the lived experiences of healthcare professionals with the aim of theory building. The analysis allowed us to generate a theoretical model that depicts how experiential learning processes is triggered by the crisis, acting as an enabler of healthcare professionals' resilience: adaptive and emotional one. Our study provides novel insights related to how

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Keywords: Resilience, experiential learning, healthcare professionals, crisis management

1. Introduction

Healthcare systems and professionals routinely operate in high-pressure environments that demand constant adaptation and innovation. They are accustomed to facing unprecedented challenges, including limited resources, rapidly evolving clinical guidelines, ethical dilemmas in patient care, long working hours, and emotionally charged decisions involving life and death. These conditions test their ability to respond effectively under stress while maintaining professional and compassionate care (Baskin and Bartlett, 2021).

Maintaining healthcare services requires healthcare professionals to continue working in circumstances driven by crises. This requires more than just technical knowledge; it also demands adaptability, creativity, and persistence. In this context, building resilience and the ability to bounce-back becomes necessary to guarantee service continuity under disturbance (Wildavsky, 1998). Resilience however is not a fixed attribute, but a dynamic developmental capacity shaped by lived events and continuous process of learning. It particularly reveals how healthcare professionals can manage pressure, respond to disturbance, and preserve high-quality treatment under demanding conditions. Inspired by the research on entrepreneurial learning (Cope, 2005; Rae, 2006) and experiential learning (Kolb, 1984), this paper explores how resilience develops through daily activities of doing, reflecting, and adjusting in high-stakes clinical settings.

In this paper we argue that resilience is developed by practice-based benchmarks and critical learning opportunities, events that test practitioners, inspire introspection, and drive improvement, not as a natural ability. Following experiential and entrepreneurial learning

theory, which stresses learning through uncertainty, failure, and real-time decision-making (Politis, 2005), we place healthcare professionals as active learners who develop resilience by negotiating demanding, uncertain, and emotionally taxing events. Resilience is increasingly described in healthcare research as a dynamic capacity supported by systems-level adaptation, organizational routines, and learning from past disruptions (Sellberg et al., 2020; Wiig et al., 2020; Hollnagel et al., 2017). Although these studies provide insightful analysis of structural enablers of resilience, they sometimes highlight organizational responses and post-hoc reflections, so underplaying the individual-level (i.e., the healthcare professional), in-the-moment learning processes by which healthcare professionals build resilience among uncertainty and ethical tension. By contrast, entrepreneurial learning literature—especially studies on learning through critical events, failure, and ambiguity (e.g., Cope 2005; Cope 2011; Maitlis & Sonenshein, 2010), highlights how learning unfolds experientially, so influencing the learner's judgment, identity, and emotional control. Though these points of view are relevant in healthcare environments, where experts routinely negotiate uncertain, high-stakes situations, such firsthand accounts of learning remain undertheorized in resilience research. This paper therefore asks: *How does experiential learning contribute to resilience- building among healthcare professionals as they navigate the emotional, ethical, and practical challenges of crisis situations?*

To answer our research question, we investigate how healthcare professionals engage in experiential learning within a multi-layered systemic environment—both in their professional practice during the pandemic peak and in a parallel intra-professional academic program. These dual settings, as described by Wenger (1998), reinforce the concept of communities of practice where professionals engage collectively in reflective and experience-based learning. We focus on how these environments support the development of entrepreneurial thinking and resilience-building in high-pressure scenarios.

Methodologically, the study employs an inductive qualitative approach, analyzing diary data

collected from healthcare professionals participating in a managerial training program organized by the Sant'Anna School of Advanced Studies and its Management and Health Laboratory. The diaries, as reflective tools, offer rich first-hand insights into participants' challenges and their adaptive and entrepreneurial strategies (Hägg, 2021). Simultaneously, the diaries serve as a pedagogical mechanism grounded in experiential learning theory (Roberts, 2012, 2015; Hägg, 2021).

Our analysis enabled us to construct a theoretical model illustrating how learning unfolds through practice-based experiences—both in the workplace and in an intra-professional academic setting—which serve as catalysts for resilience development. This is our main contribution to the literature on healthcare management, human resources, and experiential learning. The model identifies four core components of the experiential learning process: change management, situated learning, crisis-driven innovation, and commitment to a shared mission—each contributing to the development of two forms of resilience: adaptive and emotional. This dual pathway offers a nuanced understanding of how resilience can be cultivated through entrepreneurial learning dynamics and leveraged in future crises.

2. Theoretical framework

By building on the call that inductive studies do not require extensive literature review (Gioia, 2013), we offer insights into the main theoretical developments with regard to the experiential and entrepreneurial learning of health professionals and their resilience, without extensive elaboration. Resilience in the context of healthcare management has been studied (Hollnagel et al., 2007; Rubbio et al., 2020), and in particular as enabled by the technological transformation during the pandemic period (Rubbio and Bruccoleri, 2023; Abdel-Basset et al., 2021; Lee and Lee, 2021; Secundo et al., 2021).

Previous studies have emphasized that contextual factors play a significant role in shaping how experiential learning occurs, especially under conditions of stress and uncertainty (Cohen et al., 2020; Hägg and Kurczewska, 2020). For example, organizational culture was found to be related to learning and the capacity to enhance adaptive capacity and innovative behavior among healthcare teams during the pandemic (Alonazi, 2021). Moreover, digital and remote training environments have been shown to provide critical support for the learning of healthcare professionals by stimulating teamwork and supporting resilience under conditions of isolation and resource constraints (Blake et al., 2020).

Previous studies also addressed educational strategies for building resilience in healthcare, emphasizing the importance of combining learning and organizational factors (Forsgren et al., 2022; McAllister and McKinnon, 2009). Forsgren et al. (2022), for example, found that continuous learning feeds back into organizational capacity for resilience-building. The study emphasizes the need for health systems to learn from past experiences and adapt their strategies for future crises. McAllister and McKinnon (2009) find that resilience can also be fostered to equip healthcare professionals with the emotional and cognitive demands of their work. They find that developing resilience through education is argued to improve overall job satisfaction, which in turn helps the organization.

Experiential learning, however, as proposed by Kolb (1984), involves learning through direct experience and is thus highly relevant to healthcare workers navigating emergencies. Despite this relevance, there is a scarcity of current research on the topic of experiential learning of healthcare professionals during the pandemic and its relation to resilience. Some of the very few studies discussing experiential learning during the pandemic have highlighted the benefits of education in promoting resilience among participants (Butler, 2022; Ickes and McMullen,

2016), including healthcare students, through intra-professional educational practice (Nagel et al., 2024; Fewster-Thuente and Batteson, 2018). Butler (2022) found that the participants and course organizers adapted to the pandemic emergency, and this not only ensured safety but also promoted a sense of community that supported students' mental well-being during the crisis. In entrepreneurial learning research, experiential learning has also been discussed as a process through which individuals develop entrepreneurial capabilities (both, venturing and enteprising) (Pocek et al., 2021) by navigating uncertainty, learning from experience, and adapting through reflection and action (Cope, 2005; Politis, 2005; Rae, 2006).While this study concludes that learning models can serve as valuable frameworks for fostering resilience, there remains limited understanding of how experiential learning during crises evolves among healthcare professionals and how it contributes to resilience capabilities development— questions we aim to explore in this study.

3. Methods

3.1.Empirical setting

The empirical setting of the study is based in two complementary locations, the university course that was attended during the Covid19 pandemic by healthcare professionals coming from various backgrounds in medicine, and at the same time their respective work settings, placed in Italian regions of Tuscany and Sardinia. The healthcare professionals attended the intra-professional managerial course entiteled: "*Management training course for managers of complex structures and aspiring health directors*", organized by the Management and Health Laboratory of Sant' Anna School of Advanced Studies.. Extraordinary the course opened also to the participants from other regions of Italy, due to the interests of the healthcare staff and accepted two more participants from the Region of Sardinia. A total of 50 students were admitted to the training program, divided into two classes: one class with 26 students (Class 1) and the other with 24 students (Class 2), involving 50 professionals in total. Of these, 49 completed the course, as one participant from Class 2 withdrew due to personal reasons.

The teaching program had to adapt to the outbreak of the pandemic, which severely impacted Italy starting in February 2019, leading to the first nationwide lockdown on March 10, 2020, and halting all in-person activities. The pandemic's impact was even more significant for the course participants, as they were those on the front lines in the fight against the virus.

For this edition, particularly for Class 2, the challenge arose to almost entirely redesign the program, shifting from in-person to online synchronous lessons.

- For Class 1, only the final module and the closing day were delivered remotely.
- For Class 2, as many as five modules were delivered online.

3.2. Source of data

The source of data for this paper is a diary- project work that course participants delivered, by working in a group. Diary is a rich source of data, and when conducted during the period of study, it serves as a monument to experiential learning practice, which allows students to engage in reflection and bridge knowing with doing (Hägg, 2021). In this psecific case, the diary aimed to collect analyses, suggestions, and proposals from the direct experience of those who, as professionals in the National Health System organizations, faced this pandemic. Participants were asked to focus on one or more of the following topics:

- Description of how work processes changed during this emergency compared to one or more processes they were involved in.
- Lessons learned from the experience related to a care pathway or process they were involved in.
- Description of their personal work experience during the pandemic.

Contributions could be individual or collaborative (up to 3 participants per group). The expected length was between 1,500 and 3,000 words. The breakdown of participants who wrote the diary that we analysed, is detailed in Tables 1 and 2 below.

Table 1. Information about the participants to the Class 1 who wrote the diary

Position	Company name	City	Period of diary writing
Head of complex structure	Local Health Authority Tuscany North West	Massa Carrara	May - July 2020
Head of complex structure with subsequent assignment	Local Health Authority Tuscany South East	Orbetello	May - July 2020
Head of complex structure	Local Health Authority Tuscany North West	Livorno	May - July 2020
Medical director	Local Health Authority Tuscany South East	Arezzo	May - July 2020
Medical director	Health Protection Agency Sardinia	Cagliari	May - July 2020
Medical director	Local Health Authority Tuscany North West	Valdera	May - July 2020

Head of complex structure	Local Health Authority Tuscany South East	Arezzo	May - July 2020
Head of complex structure	Local Health Authority Tuscany South East	Arezzo	May - July 2020
Engineer director	University Hospital of Siena	Siena	May - July 2020

Head of complex structure	Local Health Authority Tuscany South East	Arezzo	May - July 2020
Medical director	Local Health Authority Tuscany South East	Grosseto	May - July 2020
Head of complex structure	University Hospital Careggi	Florence	May - July 2020
Head of complex structure	University Hospital of Siena	Siena	May - July 2020
Medical director	Local Health Authority Tuscany South East	Colline dell'Albe	May - July 2020
Head of complex structure	Local Health Authority Tuscany North West	Albegna	May - July 2020
Head of complex structure veterinarian	Zooprophylactic Institute of Lazio and Tuscany	Pisa	May - July 2020
Medical director	Local Health Service Cagliari, Health Protection Agency Sardinia	Cagliari	May - July 2020
Medical director	Local Health Authority Tuscany North West	Lucca	May - July 2020
Head of complex structure	Local Health Authority Tuscany North West	Volterra	May - July 2020
Head of complex structure	University Hospital Pisa	Pisa	May - July 2020
Head of complex structure	Local Health Authority Tuscany South East	Arezzo	May - July 2020
Head of complex structure	Local Health Authority Tuscany Central	Florence	May - July 2020
Pharmacist director	Local Health Authority Tuscany Central	Prato	May - July 2020
Head of complex structure	University Hospital Careggi	Florence	May - July 2020
Head of complex structure	University Hospital of Siena	Siena	May - July 2020
Administrative director	University Hospital of Siena	Siena	May - July 2020

Table 2. Information about the participants to the Class 2 who wrote the diary

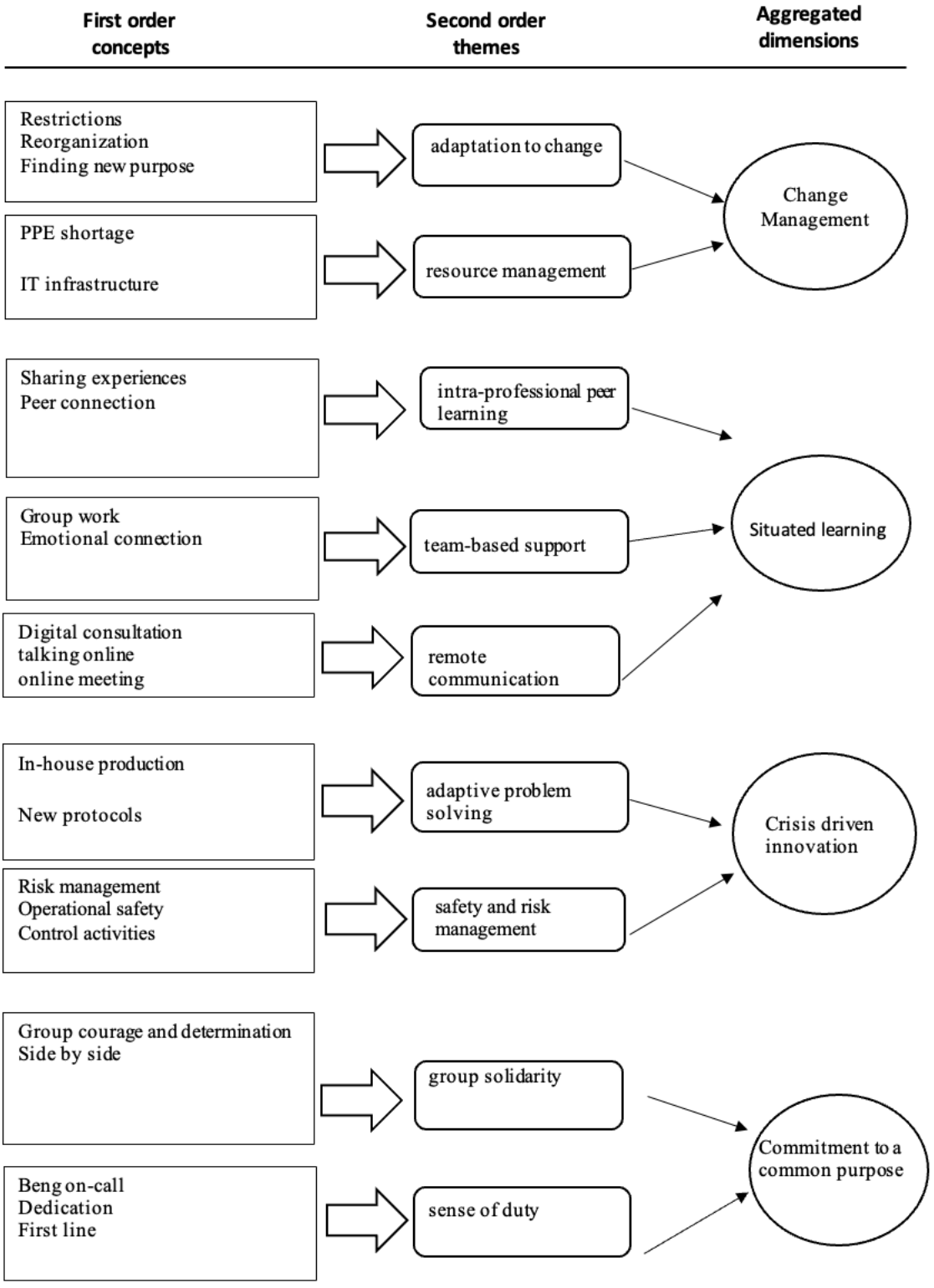
Position	Company name	City	Period of diary writing
Technical director	Local Health Authority Tuscany North West	Pisa and Val di Cecina	September - November 2020
Medical director	Local Health Authority Tuscany North West	Versilia	September - November 2020
Head of complex structure	Local Health Authority Tuscany South East	Arezzo	September - November 2020
Head of complex structure	Local Health Authority Avellino	Avellino	September - November 2020
Medical director	University Hospital of Siena	Siena	September - November 2020
Medical director	Local Health Authority Tuscany Central	Prato	September - November 2020
Medical director	Local Health Authority Tuscany North West	Massa	September - November 2020
Director of health professions	Local Health Authority Tuscany South East	Grosseto	September - November 2020
Medical director	Local Health Authority Tuscany South East	Grosseto	September - November 2020
Medical director	Local Health Authority Tuscany South East	Arezzo	September - November 2020
Director of health professions	Local Health Authority Tuscany Central	Florence	September - November 2020
Medical director	Local Health Authority Tuscany North West	Versilia	September - November 2020
Medical director	Local Health Authority Tuscany North West	Versilia	September - November 2020
Acting head of complex structure	University Hospital of Siena	Siena	September - November 2020
Medical director	Local Health Authority Tuscany North West	Lucca	September - November 2020
Acting head of complex structure	Local Health Authority Tuscany Central	Empoli	September - November 2020
Medical director	Local Health Authority Tuscany Central	Pistoia	September - November 2020
Pharmacist	Local Health Authority Tuscany Central	Empoli	September - November 2020
Medical director	Local Health Authority Tuscany South East	Grosseto	September - November 2020
Veterinary director	Local Health Authority Tuscany North West	Alta Valdera and Alta Val di Cecina	September - November 2020

Veterinary director	Zooprophylactic Institute of Lazio and Tuscany M. Aleandri	Pisa	September - November 2020
Technical director (architect)	University Hospital of Siena	Siena	September - November 2020
Medical director	University Hospital Pisa	Pisa	September - November 2020
Medical director	Local Health Authority Tuscany South East	Abbadia S. Salvatore Siena	September - November 2020

3.3 Data analysis

The diary data has been analyzed inductively, following the Gioia (2013) method. This analysis followed several steps. The first author read the diary and coded inductively the first order codes, that are captured with the voices of the informants. The first order codes that initially counted many entries, were reduced to a manageable number (136 open ended codes). Following this the codes were grouped based on their meaning in the second order categories that still captured the voices of the informants but were closer to the theoretical language. Since the second author worked as a coordinator of the study, she remained outside of this coding procedure, to ensure objectivity. However, since she also had unique insights in the dynamics and relations of the course, once the first author obtained the second order categories, these were discussed together. Following this, the first author went back to the coding and completed the classification of the second order categories into the aggregate dimensions (figure 1). We, as an author team then discussed the dynamics between the aggregate dimensions and how these can be the related to the existing literature to understand a grounded but also theory - informed understanding of the process.

Figure 1. Experiential Learning of Healthcare Professionals in Times of Crisis



4. Results

In the results section we present firstly the aggregate dimensions that emerge with respect to the experiential learning. Following this, we present how these aggregate dimensions contribute to building of health professionals' resilience.

Based on our analysis, four aggregate dimensions emerge with respect to the experiential learning evolution: Change Management, Situated Learning, Crisis-Driven Innovation, and Commitment to a Common Purpose.

Change Management

The first aggregate dimension is change management, and it highlights the perception of the professionals about the need to rapidly adapt and learn in response to changes due to the pandemic. This includes a capacity not only for learning but also for problem-solving and seizing emergent opportunities**,** skills often associated with entrepreneurial learning.

Adaptation to change in light of the pandemic emphasizes how professionals needed to swiftly develop new skills and competencies to meet new requirements and adapt to new circumstances. In doing so, they engaged in opportunity-driven experimentation, a core feature of entrepreneurial learning. They had to learn about how to address newly emerging needs and provide rapid even structural reforms so as to ensure continuity of their service: " *As the Operating Unit, we found ourselves having to quickly implement a series of organizational changes aimed at meeting the emerging new needs, while continuing to ensure the essential and non-deferrable daily activities*."

Ability to manage and leverage resources was another learning aspect that is part of the change management. For example, the shortage of personal protective equipment forced the organization to find innovative solutions, such as producing disinfectant gel internally: *"...therefore, hospital pharmacies turned to galenic laboratories, where available, to compensate, at least in part, for this shortage*." Furthermore, the pandemic exposed need to rediscover and learn about the resources related to the IT infrastructure, which were already existing but not being used: "*The use of information technology supported the entire healthcare organization through increased use of digital channels and a renewed appreciation for tools that, before this emergency, were rarely used*."

Situated Learning

The second aggregate dimension is situated learning, which reflects how personal and shared experiences shaped the way professionals learnt to navigate uncertainty and develope new practices, often collaboratively. This kind of peer-based, reflective engagement aligns closely with entrepreneurial learning within professional communities.Three key themes that describe this dimension are: intra-professional peer learning, team-based support, and remote communication.

Intra-Professional Peer Learning captures the perceptions of healthcare professionals about the importance of sharing knowledge with professionals from different backgrounds, both at work and in an academic setting. In these processes the professionals perceive that they could engage in reflective learning and share their experiences with intra professional peers which are seen as complementary to theirs. As one participant noted: "*I have therefore learned and understood (during the academic course) how a shared approach to the problem (with medical professionals from other fields) can be a key pathway. I hope that the pandemic, in addition to being a great global tragedy, will truly serve as an opportunity to bring together public health doctors and veterinarians…*" Another participant wrote down: "*The network we*

established has been a source not only of support but also of rapid and interdisciplinary communication of best practices, anticipated challenges, and creative solutions adopted elsewhere."

Experience of the learning in intra-profesonal academic setting, that was evolving parallely to the developments at work during the pandemic, served also as an inspiraton on how to handle the unexpected situations and face these changes in light of uncertainty, something that participants took with them to their daily job*: "The course, shared with the faculty through an equitable negotiation between healthcare learners, with their own urgencies, and university teaching staff, facing the challenges inherent in education at every level, was for me a profound example of crisis management and change management. It inspired me to rethink and adapt my daily work."* The participants also reflected about the importance of intra-professional environment at work as important during the emergency period: *"Certainly, in stressful situations such as the Covid emergency, teamwork and interdisciplinary exchange are facilitated by the fact that the entire system converges toward a single goal. In contrast, under "normal" conditions, although all healthcare activities are aimed at ensuring care for citizens, each healthcare professional operates within a micro- reality with intermediate objectives that differ from those of others. This sometimes makes collaboration more challenging."*

Collective work and support is a second theme that describes the situated learning, and has emerged as an important element of the process of learning, as captured by this quote: "*We have been a team that worked by making the best use of different skills*.**"** Collective work and support were particularly evident in providing both technical but also emotional support to the medical staff. The sharing of good practices and personal experiences also contributed to the environment where work is done collectively, to be able to better address the emergency.

Remote communication among the group emerged as a third theme related to the situated learning. These were discussed as necessary for maintaining the dialogue, that helped also the creation of organizational culture that is supportive of learning about challenges and solutions, so as to overcome the difficulties during the pandemic. Different tools were used and being familiarized with so as to operationalize the communication and coordination during the pandemics, mostly the digital tools, that helped bridge the gap in communication, but also protocols and ad hoc informal instruments that would foster communication and coordination of a group.

Crisis-Driven Innovation

The third aggregate dimension, Crisis-Driven Innovation, captures how healthcare professionals and organizations acted entrepreneurially to innovate and in this manneraddress the challenges imposed by the pandemic. This dimension is composed out of two themes: adaptive problem-solving, and safety and risk management.

Adaptive problem-solving is a theme about new strategies and methods developed by healthcare professionals to address work related needs during the crisis and because of the crisis. For example, in-house production of supplies in collaboration with partners, beyond normal working hours and common working duties, emerged as one of the solutions to the shortage of resources: “The galenic preparation of alcohol-based gel pushed the galenic laboratory well beyond its usual capacity and working hours, but with the collaboration of other professionals (TSLB), it was able to ensure a small yet steady supply to all the other hospitals in the ASL TC.” On the other hand also new protocols were rapidly designed and implemented to adapt to the situation, ensuring continuity in patient care and organizational operations. These included updated procedures for patient management, infection control, and the use of medical equipment. The professionals reflected continuously on the need to be

adaptive and

their efforts, together with their team to invent the most efficient approaches, to deal with the emergency and adapt and learn quickly, reflecting practice-based entrepreneurial learning.

Safety and Risk Management is the second theme related to the aggregate dimension that relates to the innovating for managing the crisis. Participants emphasized the importance of designing and implementing novel strategies to mitigate risks associated with infection spread and operational disruptions. Operational safety was maintained through strict control activities, including monitoring compliance, conducting regular audits, and improving workplace hygiene practices.

Commitment to a Common Purpose

The fourth aggregate dimension is Commitment to a Common Purpose and it emphasizes the elements that helped healthcare professionals be committed to work despite the huge amount of unpredictability and difficulty. The themes that emerged under this dimension are group solidarity and sense of duty.

Group Solidarity is a first theme of this aggregate dimension, and it relates to the participants perception about the importance of group as a catalyst for emotional coping during the pandemic. In this respect the data shows that healthcare professionals leaned on their teams and colleagues to create a sense of unity and shared purpose during the pandemic. This solidarity fostered a collaborative learning space, where mutual understanding led to solidarity of the group: As one participant shared: "*We must absolutely rediscover the importance of solidarity* (…) *Woe to anyone who is alone: if they fall, there is no one to lift them up*."

Sense of duty is the second theme that emerged in relation to this aggregate dimension, as a driving force of mental and physical dedication in moments of crisis. One of the participants described: " *Only the professionalism and sense of duty of all the staff made it possible to (...)*

respond optimally to clinical needs, providing test results within the appropriate timeframes (...)

Adaptive and emotional resilience

We now proceed with our results to depict how the experiential learning process identified in the aggregate dimensions and their respective second order themes described above, lead to the development of two types of resilience: adaptive resilience and emotional resilience.

What we observed is that adaptive resilience emerged as supported by the change management and crisis- driven innovation aggregate dimensions and emotional resilience emerged in processes related to situated learning development and commitment to common purpose. While the catalyst for the emergence of the resilience is in both cases the crisis- Covid-19 pandemic, we observe that the adaptive resilience seems to be reactive- it comes as a reaction to the organizational shocks, and it manifests in the ability to adapt to new circumstances and operationalize innovative solutions needed to ensure the continuity and efficiency at work. As illustrated by the following quote about the relation between crisis driven innovation and adaptive resilience: "*With no additional staff available and unable to reduce the UFA shift without risking errors or causing significant disruption to oncological patients undergoing treatment, we optimized the scheduling of gel production by leveraging the expertise of the biomedical laboratory healthcare personnel (TSLB) working in the UFA."*

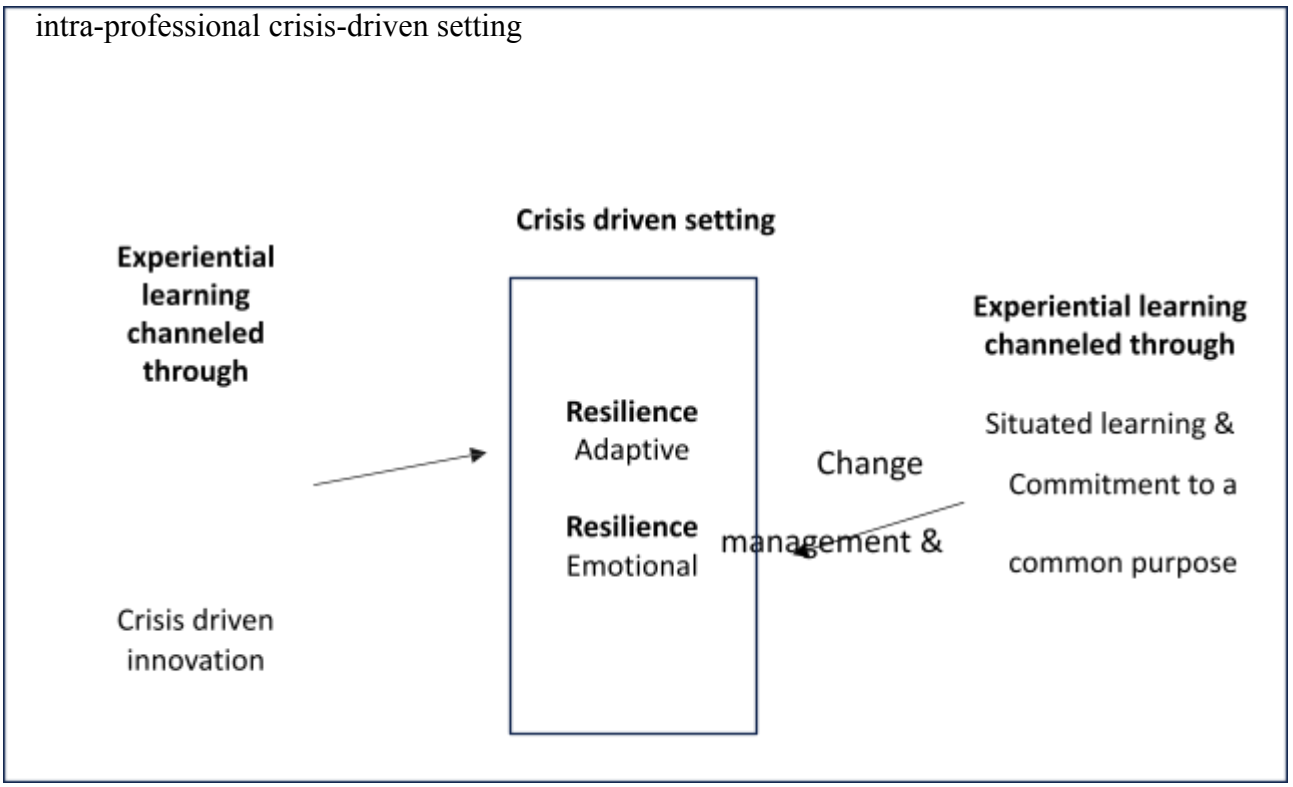
Emotional resilience on the other hand is triggered by the processes related to the situated learning development and commitment to a common purpose aggregate dimension, since these created a strong sharing working culture, peer support and intra-professional personal relationships. As such this type of resilience seems to be proactive rather than reactive, in so far it embedded in values and feelings of the professionals, as captured by one of the quotes: "*Heroes? Warriors? Despite the wartime rhetoric, I prefer to think of us as individuals who,*

driven by a deep love for caring for others, endure, face challenges, and strive to overcome them together, sharing the still limited knowledge we have."

5. Discussion and conclusion

Based on our results, we propose the Figure 1 in which the experiential learning process described by the four dimensions leads to a dual resilience model, where both the organization (processes and innovations) and the people (emotional and social support) should be reinforced. This dual resilience ensures that healthcare professionals can sustain operations during crises and recover effectively afterward.

Figure 1. Resilience building though experiential learning in academic and intra-professional crisis-driven setting



In our paper we asked: *How does experiential learning contribute to resilience-building among healthcare professionals as they navigate the emotional, ethical, and practical challenges of crisis situations?*

In response, our findings demonstrate that experiential learning during the crisis evolved through perceptions of: change management, situated learning, crisis-driven innovation, and commitment to a common purpose. These dimensions represent the experiential learning mechanisms but also the channels through which healthcare professionals adapted and responded to challenges and redefined their work processes. We find also that experiential learning provided a framework for professionals to overcome crisis-driven challenges. It allowed professionals to draw on real-time experiences, both their own and those of their peers. This is in line with previous studies who found that continuous and collaborative learning from both poisitve and negative events is a crucial aspect of learning to be adaptive (Haraldseid-Driftland et al., 2022).

We also found that the experiential learning process contributed to the development of two types of resilience: adaptive resilience and emotional resilience. Adaptive resilience, supported by change management and crisis-driven innovation, emerged as a reaction to the need to adress external pressures and ensure work continuity and service delivery. This resilience was seen through professionals capacity to rapidly develop innovative solutions, allocate resources. Previous studies found that indeed adaptability is the core aspect of the notion of resilience particularly in the situations of uncertanty and change (Lengnick-Hall et al., 2011, Floreze- Jiminez et al., 2024). Also, in line with our results, research discussed how crisis-driven innnovation and management support the adaptive resilience (Williams et al., 2017) especially during the period of response to the crisis (Youssef and Luthans, 2007). Emotional resilience, on the other hand, was fostered through the situated learning and commitment to a common purpose dimensions. It reflected in the proactive cultivation of

relationships, solidarity, and shared purpose. This fidnings is in line with previous studies who found that emotional resilience should be proactively shaped for better outcomes in healthcare workers stress management (Vitorino et al., 2024).

Crucially, these two forms of resilience were found to foster each other. Adaptive resilience relied on the emotional strength provided by supportive relationships, while emotional resilience was reinforced by the operational solutions created through innovations. Together, these findings highlight the importance of a dual resilience model that integrates adaptability with interpersonal solidarity to enable healthcare professionals to respond effectively to crises. And this ultimately both the theoretical and practical contribution of our study.

To conclude, our study underscores the potential of experiential learning in building resilience among healthcare professionals. It suggests that environments—both academic and workplace-based—that promote time for exchange and reflection, collaborative learning, and problem-solving can prepare healthcare professinals to better navigate future crises.

Furthermore, the findings emphasize the need for healthcare organizations and their human resources management to support both the emotional well-being of their workforce and the structural adaptability or ability to commit to intrapreneurship processes, as important aspectes of holistic approach to reslience.

Future research could extend these insights by examining the application of the dual resilience and experiential learning model in other high-stress healthcare and academic contexts, to improve or argue for the generalzibility of our findings. Indeed, the limitation of our paper is related to the source of data that relies on one specific geographical setting.

Furthemore, diary as a method could be complemented with additional focus groups and interviews, as part of the future research studies.

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