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The emotional ambiguities of healthcare professionals' platform experiences

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ABSTRACT

This paper investigates how healthcare professionals experience digital platforms in their work practices and how these relationships enable forms of emotional labour and contribute to shaping their emotional health.

Methodologically, the contribution draws on audio-diaries kept by 15 healthcare professionals and a final semi-structured interview conducted with the same informants. The research material was analysed using open and axial coding techniques, in a grounded theory fashion.

Findings provides meaningful insights to the literature on the emotional labour of healthcare professionals, as well as to studies on digital health and labour. Specifically, we show that participants associate different and even contrasting reflections and emotional states with their relationships with digital platforms. Thus, there is not exclusively one trajectory that can explain the implications of media uses, as different and potentially conflicting emotions coexist within the same experience. Given this scenario, we argue that it can be fruitful to use the lens of 'ambiguity' to scrutinise the ambivalences and tensions characterising platform experiences, and how emotional labour in healthcare intertwines with technological developments. Moreover, we advocate for the development of critical digital literacy skills among healthcare professionals.

1. Introduction

Today, healthcare professionals are increasingly involved in a variety of complex tasks, incorporated in the aftermath of the COVID-19 pandemic. Particularly, nurses, physicians, and other workers often have to cope with emotionally intense situations, requiring them to manage their own emotions proficiently in order to provide patient-centred care (Larson and Yao, 2005). Nurses' management of emotion has often been defined as emotional labour, which represents a fundamental aspect of nursing practice, involving the management of one's emotions, the expression of empathy, and the ability to establish therapeutic relationships with patients. Several studies have emphasised the different dimensions of emotional labour, how they interact with one another and how they affect individual well-being and the effectiveness of professional practice, thus recognising the importance of better understanding emotional labour in healthcare practice and the experiences of healthcare workers (Grandey, 2000; Grandey et al., 2013).

An element that has been considered in relation to emotional labour is technological change, as the health and medical domains are increasingly pervaded by the use of digital technologies (Lupton, 2018; van Dijck et al., 2018). Specifically, the use of technology has been referred to among the possible supports for managing stress, anxiety and discomfort often caused by emotional labour (Stoumpos et al., 2023). Studies have also shown that the digitization of healthcare information and the increasing presence of technological devices have improved operational effectiveness in the sector, providing unprecedented opportunities for healthcare delivery practices (Moore et al., 2023). Other studies (Miller and Brown, 2018; Shelmerdine et al., 2022) highlighted that technology can enhance the efficiency and effectiveness of healthcare systems by augmenting, rather than replacing, existing roles. When integrated into clinical decision-making, technology can improve accuracy and timeliness, thereby minimising patient risk and enhancing the quality and efficiency of service. On the other hand, there are numerous questions raised about the impact of technology on workers' emotional labour (Sauerbrei et al., 2023), and how its integration into the medical domain may generate new emotional challenges. Furthermore, it is well-established that such technological systems as digital platforms are not neutral tools and that their implementation and use is characterised by frictions and negotiations (Torenholt and Langstrup, 2023). For example, as suggested by Sezgin (2023), technological

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systems such as collaborative tools and decision support mechanisms based on Artificial Intelligence (AI) are available via the adoption of organisations rather than solely based on personal choices in healthcare settings.

Drawing on audio-diaries, spanning 6 weeks, this research endeavour aims to investigate the experiences of healthcare professionals with digital platforms and how these experiences enable forms of emotional labour and contribute to their emotional health. Specifically, this study aims to address the following research questions: how do healthcare professionals perceive and relate with digital platforms, and what are the implications for their day-to-day practices and emotional labour? By doing so, the study will examine how digital platforms are integrated and understood in the care provided, how the relationships with these technological artifacts contribute to the emotional dynamics and coping strategies of healthcare professionals and, therefore, the nuanced relationship between digital platforms and emotional labour within healthcare settings.

This study provides an opportunity to make a dual contribution: to academic discourses on emotional labour in healthcare work and to the growing body of literature on digital health. Specifically, findings indicate that the use of videotelephony software programs such as Zoom and Microsoft Teams, as well as instant messaging services like WhatsApp, have become everyday supports for online learning, telerehabilitation, organizational practices and patient-doctor relationships. Different forms of emotional labour are enabled within these healthcare professionals' working engagements with digital platforms, which are characterised by a complex interplay of fluid, multifaceted and even contrasting emotions. Given this scenario, we argue that the interplay of emotional labour, healthcare work and technological change can be understood through Paasonen's concept of ambiguity', which emphasises the need for researchers to recognize the emotional ambivalences in our interactions with digital platforms. Specifically, this heuristic device allows for a nuanced understanding of the different emotional states present in the experiences of healthcare professionals, and to go beyond the binary distinction between the benefits and problems of technological artifacts to focus rather on the ambiguous affective intensities within which professional activities and different forms of emotional labour are both constrained and enabled. Furthermore, we contend that critical digital literacy is essential for healthcare professionals to better comprehend the implications of the use of commercial digital platforms, and to ensure personal and professional well-being.

2. Health, technology and emotion

2.1. The emotional labour of healthcare professionals

The provision of compassionate care is a fundamental component of the work of healthcare professionals. Building caring and sensitive relationships fosters a more stable bond with patients (Fouquereau et al., 2019), can reduce patient anxiety, alleviate unpleasant procedures (Litvina et al., 2020), and increase the overall well-being of the organisational setting. Furthermore, Gray (2010) argues that emotional labour is a key component of nurses' role in making patients feel safe and comfortable.

However, such figures as nurses are at greater risk of work-related stress, anxiety, and depression than other occupational groups. Care settings are also emotional contexts in which formal care providers can develop vulnerabilities. Nevertheless, they are always expected to manage and align their emotions according to professional expectations. The emotional labour, defined as the management and expression of emotions in the work environment, of professionals in healthcare plays a crucial role in the context of care (Mann, 2005; Funk et al., 2017). Goffman (1961) was among the first scholars to introduce the concept of emotional labour to describe the efforts employed in regulating emotions in order to fulfil the emotive aspects of one's professional role. In the healthcare context, Hochschild (1983a,b) expanded this perspective, arguing that healthcare professionals often have to exhibit extremely sophisticated emotional control to deal with complex situations, frequently characterised by suffering and distress. In his view, the emotional labour of health practitioners includes the ability to perceive, interpret and respond to patients' emotions, as well as the management of one's own emotional reactions, expressing only those requested by their organisations.

Ashforth and Humphrey (1993) suggest that in order to align with required emotional responses, employees generally act on three emotional dimensions: surface and deep acting, and the expression of naturally felt emotions. The surface dimension displays the untruthful appearance of an emotion without trying to change one's authentic feelings, which eventually leads to emotional exhaustion. Deep acting refers to attempts to evoke the emotions one wants to portray when interacting with others and is often related to employees' stress or physical well-being (Bono and Vey, 2005). Finally, there is genuine emotional labour (Humphrey et al., 2015). Numerous studies have shown that the effectiveness of emotional labour is associated with the quality of the patient-professional relationship and the well-being of healthcare staff (e.g., Grandey et al., 2013). Recognition and support of emotional labour, therefore, become critical elements in promoting a healthy working environment and the delivery of high-quality care.

This regulation of emotional expression generally occurs as a result of tacit and internalised rules within particular work environments, which either implicitly or explicitly dictate the proper emotional expression of employees (Bagdasarov and Connelly, 2013). Typically, these rules are prevalent in the nursing professions, requiring employees to show positive emotions or repress negative ones, regardless of their true feelings (Moretti, 2021). For example, Bolton (2001) identified three main emotional strategies used by nurses, i.e., the "professional" face - a caring yet detached demeanour to maintain control and self-protection; the "smile" face - to appease dissatisfied "customers," which can lead to resentment and diminish genuine care; the "humorous" face - a respite reserved for moments away from patients characterised by shared expressions of amusement, sighs, and subtle looks, or by offering additional emotional support to colleagues to help manage tough emotions. More recently, research on emotional labour has shifted to healthcare workers and the great difficulty often faced by individuals in balancing care work in professional practice (Borozdina, 2022), particularly with an intersectional perspective.

This difficulty of management of emotions has been particularly exacerbated by some historical moments, including the pandemic outbreak. MacIver et al. (2024) conducted an autoethnographic study exploring researchers' emotional labour studying healthcare workers' Long COVID experiences in Scotland. Their research uncovered unexpected types, intensities, and impacts of emotional labour influenced by the socio-political context, the severity of Long COVID, and participants' distress levels and unmet support needs.

Furthermore, the shift to remote working during the pandemic has been associated with an elevated risk of vicarious trauma among professionals frequently exposed to painful stories, including mental health workers and psychotherapists. This risk manifests as a persistent preoccupation with their patients' well-being beyond work hours and increased feelings of anger, rage, sadness, guilt, shame, and self-doubt.

Also in this sense, the concept of emotional labour intersects significantly with care practices, a key notion undergoing intense scrutiny and debate. Progressive thinkers and economists are attempting to redefine care as the foundation for a new political ideology. This emerging discourse seeks not only to elevate the role of care within the fabric of society but also to position it as central to a reimagined political framework that prioritises human welfare over traditional economic metrics (Birch, 2020). Concurrently, Bunting (2020) argues that the essence of care is threatened by its commercialisation, while Fraser (2014) has broadly criticised the capitalist exploitation of care, 'free riding' on the care sector.

Generally, the literature recognises the need for improved training and support to help healthcare workers manage the emotional demands of their job role (Roitenberg, 2021). Moreover, to develop effective and sustainable interventions to fight workers' burnout, it is important to understand their lived experiences and their perceptions of causal factors.

2.2. The role of digital technologies

In recent years, the widespread use of digital platforms and, more generally, digital technologies by healthcare professionals have significantly revolutionised clinical practice and information management in healthcare and affected the nature of workers' emotional labour. As argued by Moore and colleagues (2023), in regard to such forms of eHealth interventions as video consultations, they are not "a straight forward replacement of in-person consulting, but an offer that brings about substantive changes in the ways in which people consult and interact" (p. 13), entailing "a renegotiation and rethinking of practice and knowledge." (p. 14), which can entail multifaceted implications. On the one hand, Molino et al. (2020) claim that the implementation of digital technologies, such as electronic patient records (EPR) and telemedicine, can change the emotional dynamics in clinical interactions. Technology can act as a facilitative tool, enabling greater efficiency in daily activities. According to Topol (2019), the adoption of digital technologies, such as EPR systems, telemedicine, and mobile applications has improved access to clinical data, optimised communication among team members, and increased operational efficiency. The integration of digital platforms in the working context can also facilitate the rapid and secure sharing of information among healthcare professionals, improving care coordination and reducing medical errors. Moreover, the advent of the pandemic has catalysed a significant shift towards the normalisation of these technologies in healthcare provision and education. Social distancing mandates and the imperative for health safety accelerated the adoption of digital platforms, embedding them as essential components for patient care and for the facilitation of educational endeavours within the healthcare sector. This transformation indicates a fundamental reconfiguration of interaction modalities in healthcare, establishing digital engagements as the normative standard (Jonasdottir et al., 2022).

On the other hand, technology may also introduce new emotional challenges, as the invisible character of emotional labour makes it particularly vulnerable to displacement and naturalisation by new technologies (Rankin, 2009). First, digital platforms, widely used during the early pandemic period, may limit nonverbal emotional expression, complicating the transmission and perception of emotions between professionals and patients. Additionally, the use of videotelephony platforms is generally considered more psychologically challenging than face-to-face contact for several reasons, including a greater need for concentration, adapting to the new experience of very close proximity of facial images, difficulty relaxing into natural conversation, and a reduced ability to interpret body language (Stoumpos et al., 2023). In this context, the use of digital platforms can favour the generation and increase of anxiety and professional stress. Specifically, the management of tons of messages, notifications, online meetings, and new forms of emotional overload negatively affect the emotional labour of healthcare professionals. Furthermore, technological advancements can pressurise professionals to provide increasingly rapid responses (such as in telemedicine settings) to patients and family members, thus intensifying the feeling of urgency and responsibility in those subjects (Rosen et al., 2018).

In some cases, the constant use of digital interfaces may also alienate the professional-patient relationship, causing feelings of loss of connection and empathy (Sauerbrei et al., 2023). For example, AI systems, increasingly being developed and deployed in the healthcare sector, might have an impact on trust due to their inherent complexity. As argued by Foster and Hawkins (2005), changes in education delivery and the continuous introduction of technologies contribute to the possible demise of the contemporary nurse-patient relationship and, therefore, the loss of that essence of nursing which is essential to the patients' well-being and the nurses' professional satisfaction.

Regarding the constant exposure to digital technologies, such as EPR systems and instant communications with colleagues, Sundermann et al. (2019) highlight how these constant interactions can create a feeling of information overload. Digital information management, in fact, requires specific skills and continuous adaptation to new technologies, contributing to a high-pressure work environment. In this situation, the wide use of digital technologies and the advancements in AI pose also challenges related to data security and patient privacy (Hartmann et al., 2023), as their opacity can relate to how health and personal information is used and manipulated. Thus, healthcare professionals are constantly called upon to take appropriate protective measures (Moretti and Caliandro, 2024). Overall, it emerges that the "corporate platformization of healthcare" (Charitsis, 2019, p. 141) and of "healthcare communication" (Locatelli and Lovari, 2021, p. 249) may increase the responsibilities and workload of nurses and physicians. Within this context, tech companies extend their dominance over work and communication processes even in the healthcare sphere, frequently through public-private alliances that are advanced as potential solutions to the issues that characterise a consistently underfunded sector (van Dijck et al., 2018).

In summary, prior studies from different fields highlight that the use of technology plays a role in mediating emotions within and between individuals, groups, and organisations. Moreover, digital platforms are increasingly part of the healthcare work landscape. Given this scenario, it is key to focus on healthcare professionals and their perceptions and uses of digital platforms.

3. Material and methods

Within the aforementioned theoretical framework, and to address our research questions, a nonprobabilistic sampling, specifically convenience sampling, was employed; 15 participants were recruited through an online master's specialisation program provided by a university located in Northern Italy. This program was tailored for established healthcare professionals seeking additional competencies and focused on enhancing understanding and management of emotional experiences and technological utilisation in professional interactions with patients, caregivers, and colleagues. The selection of this program was driven by two factors: (a) it included a diverse group of healthcare professionals who differed in their professional title, genders, ages, and ethnic backgrounds; and (b) it focused on enhancing the social and technological skills of healthcare professionals. Additionally, this program was selected for strategic reasons, aligning closely with our study's aims to examine the implications of digital platforms in healthcare. The program's emphasis on emotional and technological skills ensured that participants were not only familiar with but actively engaged in areas of interest central to our research, thus allowing a rich exploration of how digital platforms contribute to emotional labour within healthcare delivery.

The recruitment process for this study began with initial outreach to the organising committee of the training program and establishing preliminary contacts with key tutors who served as essential gatekeepers. Following their approval of the study, the organisers facilitated an introduction between the researchers and the program participants. This introduction took place generically during one online session where we also shared our contact information with interested participants.

After the first online meeting, the researchers organised three workshops, focusing on training nurses and physiotherapists to improve the doctor-patient relationship and well-being in the workplace, and involving around 40 participants. At the end of the workshops, availability to take part in the research was asked. To qualify for participation, individuals were required to provide informed consent, be

currently employed by a healthcare organisation, actively work with patients, and possess familiarity with digital platforms. Within the people that attended the three workshops outlined in the teaching program, 15 healthcare professionals (see Table 1 for participants' details) decided to participate in this two-months qualitative study. Full attendance was crucial for the research, as it guaranteed that each participant was exposed to the same educational stimuli.

Regarding the methodology, we used two complementary techniques: audio diaries (ADs) and semi-structured interviews. As shown in various research (Risi and Pronzato, 2021; Markham and Pronzato, 2023), the diary form represents a comprehensive and exhaustive gateway to the participant's personal experience that otherwise would not be recorded. In particular, capturing events in real time, analysing changes and participants' daily challenges, ADs enable the construction of a detailed dynamic picture of the respondent's emotions and feelings (Monrouxe, 2009).

Data collection through the AD technique is designed to be enriched with a structured dialogue between the participant and the researcher, employing a two-step interview process to ensure clarity and depth of understanding. The initial interview is critical as it serves multiple purposes: it provides participants with precise instructions on how to engage with the AD technique, and it clarifies the overarching goals and relevance of the research. This foundational interaction sets the stage for meaningful data collection by aligning participant understanding with research objectives. The second interview, conducted after the collections of the ADs, is equally crucial. It allows for a comprehensive review of the participant's experiences and reflections. This final stage is instrumental in verifying the data collected and deepening the insights gained, thus crystallising the findings from the initial application of the technique (Alaszewski, 2006; Moretti, 2021).

The data collection was carried out between November and December 2022 and each participant was asked to register at least one audio per week over the two months, for a total of at least 9 ADs. This timeline was established to evaluate the role of digital platforms in their work over time. Before beginning to register the ADs, participants were given instructions, through an initial and collective interview, on our expectations by offering thematic ideas. A pivotal step within the AD technique is guidance, or a sort of "participant training", which is a crucial moment that can compromise the entire research process or, vice versa, guarantee its success. As the researchers were not able to meet the subjects face to face in advance to provide them with formal equipment, the respondents were asked to create audio notes and messages with their own devices. Most participants used the "voice memo" function on their smartphone, some of them sent audio messages directly through Whatsapp and in one case a professional microphone was used.

Table 1
Participant's details.

Participants' details including the number of audio-diaries sent				
Code	Gender	Professional Role	Years of experience	Number of audio diaries sent
01	M	Physiotherapist and educational tutor	14	9
02	F	Nurse	25	9
03	F	Nurse	10	9
04	F	Nurse	4	9
05	F	Physiotherapist	8	8
06	F	Nurse	3	10
07	M	Nurse	20	9
08	F	Physiotherapist	9	9
09	M	Physiotherapist and educational tutor	15	7
10	M	Physiotherapist	17	7
11	F	Nurse	12	9
12	F	Physiotherapist	13	9
13	M	Physiotherapist	12	9
14	F	Nurse	4	9
15	F	Nurse and educational tutor	14	9

With respect to the proposed suggestions, two main categories for diarists to follow were presented: emotions experienced during care practices and the relationship with digital platforms used daily in the workplace. However, all subjects involved had full freedom on the content and duration of the audio snippets composing their ADs, as well as their delivery (they could send their daily snippets at the end of the day or send all of them at the end of the period under investigation). Moreover, we did not ask participants to focus on specific platforms in advance, so as to identify which platforms were most relevant to their emotional labour as a result of their lived experience.

As shown in Table 1, 15 participants completed the task, sending all the ADs for two months; 3 participants did not complete the 9 entries but we decided to keep their data and involve them in the follow-up interview to understand the themes and problems that arose during the recording of their messages. In one case, however, a participant sent an additional audio to complement their narrative.

Given this methodological background, the study enabled the technique through its distinctive features, i.e., the creation of a participatory narrative, and the participant's control over the information.

Then, the follow-up interview began ten days after concluding the recording, in order to allow the participants to metabolise the lived experience. Interviews were conducted online to align with the entirely digital format of the training program, which was designed to accommodate healthcare professionals spread across various regions of Italy. This methodological choice facilitated access to a diverse participant pool, ensuring broad geographic representation while adhering to the logistical constraints of the participants' schedules and locations. Conducting interviews online also preserved consistency with the digital nature of the program, allowing for seamless integration of the research activities with the existing online training framework.

Both diary and interview data were transcribed *verbatim* and then analysed through a thematic analysis, in a Grounded Theory fashion (Brewer, 2003). Using the NVivo12 application, we conducted different rounds of coding and inductively developed categories through a process of constant comparison (Charmaz, 2003).

To begin, the phases of open coding permitted researchers to immerse themselves in the data and generate a first comprehensive list of codes representing key ideas, concepts and phenomena. Following this phase, researchers begin the process of theory development. Thus, axial coding was performed to investigate the relationships between concepts and categories developed in the open coding process. In this regard, Strauss and Corbin (1990) suggest examining data and codes based on a coding paradigm that focuses on and relates causal circumstances, context, intervening conditions, action/interaction strategies, and consequences.

In relation to ethics, participants were provided with sufficient information to make informed decisions as to whether to participate in the research. During data collection, we followed a privacy-by-design approach and required user consent. All the transcripts were fully anonymized. Since all the interviews were carried out online, we also employed a secure communication channel by recording only the voice of the participants.

4. Main results

As summarised in the coding tree (see Table 2) and presented in the following sections, our analysis resulted in the identification of three key themes to showcase the platform experience of healthcare workers, the issues and fatigue involved in it, but also the perceived benefits at the personal and professional level.

4.1. Always connected, always on call: a new setting for emotional labour in healthcare

Our results show that the use of diverse digital platforms has become

Table 2
The coding tree.

Coding tree	
Always connected, always on call: a new setting for emotional labour in healthcare	Always on Merging of different activities Increased workload Blurred boundaries Disconnection to rest
The emotional weight of online work: coping with stress and fatigue	Constant connection: possibility to continue working Mental/physical fatigue Detachment from colleagues Lack of personal relationships Lack of shared understanding
Personal and professional efficiency: the positive aspects	Optimization of one's schedule End of commuting More work-personal life balance Innovative telerehabilitation

more common among healthcare professionals, and thus the interplay between remote work and emotional labour. Specifically, each activity that could be performed online was moved to networked environments following the pandemic period. In their ADs, informants highlight that videotelephony software programs such as Zoom, Skype and Microsoft Teams in particular, as well as instant messaging services like WhatsApp, have become ordinary and, in certain cases, essential in their daily practices.

> *All educational activities were redesigned and made accessible online.* (P9, M, physiotherapist and educational tutor, AD n. 3)

> … *We do telerehabilitation sessions. It's a project that had started for kids with scoliosis (…) and then continued with ALS patients.* (P9, M, physiotherapist and educational tutor, AD n. 4)

These two examples of a physiotherapist that also serves as an educational tutor show the permeation of digital platforms across different activities. Since the COVID pandemic, several services, such as rehabilitation services and e-learning activities, have been moved online. Furthermore, even micro-communication exchanges with colleagues and patients increasingly occur through instant messaging apps, which seem faster, more convenient and require less effort and commitment, contributing to the coordination of hospital work. As this participant puts it:

> … *if I needed something, I would go (…) to the operating room, coping directly with the coordinator or the nurses (…). Now I prefer other forms of communication, like sending a message on WhatsApp or an email and waiting for a response, even a little more* … (P15, F, nurse and educational tutor, AD n. 2)

However, as the same worker continues explaining, the use of networked technologies for different activities pervades work and personal life. The spaces of emotional expressions and control have become platformized, and being 'always on' emerges as an ordinary setting of healthcare work.

> *I turn on the computer in the morning when I arrive and turn it off a minute before I leave. It is always on (…). Sometimes I realise I spend even 5 or 6 hours using it, I only get up to go to the bathroom, I don't eat. I'm always attached to this computer. (P15, F, nurse and educational tutor, AD n. 3)*

Specifically, for some participants, being 'always on' frequently implies being 'always on call', using videotelephony software programs for lectures, telerehabilitation sessions and coordination with colleagues. For instance, this physiotherapist performs both therapeutic and tutoring activities online, seamlessly mixing the two working paths.

> … *my connectivity has increased, so I am always on call, and the activities I have to do have increased.* (P1, M, physiotherapist and educational tutor, AD n. 9)

Patient rehabilitation or nursing duties include forms of physical and emotional load which become now enabled within mediatized communication spaces. These 'always on' experiences, consistent throughout the ADs, show longer-than-expected working schedules, thus favouring the expansion of work. As this nurse puts it:

> *My work (….) is done a lot through the computer (…) sometimes when I get home I'm still in front of the computer* … (P3, F, nurse, AD n. 3)

Then, the same participant explains how, for her, rest involves turning off the computer, i.e., "disconntecting" from the device that enables professional activities and the emotional burden connected to it.

> … *this weekend I also tried to give up the computer a little bit, I tried to work as little as possible but just to get away from it* … (P3, F, nurse, AD n. 6)

Thus, turning on a computer and using digital platforms can sometimes be an emotionally charged action because it is considered as a continuation of the work experience. Overall, it can be noted that the spread of corporate digital platforms in healthcare contributed to the redefinition of healthcare work, providing a new setting for emotional labour. Although the use of software applications is discursively legitimated by professional needs, as it will be examined in the next two sections, participants perceive ambivalent feelings and emotional burdens regarding their platform experiences, which are linked to an increase and qualitative change of the workload, also at the emotional level. Having discussed how digital platforms have been integrated into the daily professional lives of healthcare professionals, the next section will focus on the different emotional burdens participants associated with their platform experiences.

4.2. The emotional weight of online work: coping with stress and fatigue

The interplay between remote work and emotional labour enabled by digital platforms can be problematic. Being 'always on' and 'on call', for some, can be stressful and exhausting, as work becomes possible at any moment, resulting in workers feeling under pressure.

> … *now everything is pretty much so technological that sometimes it seems like in every minute of your day you can and should jam in as much as possible* … (P2, F, nurse, AD n. 1)

As explained by this nurse, the possibility of working everywhere, a typical feature of freelance jobs, can be emotionally burdensome for some. If at first it can be exciting, being always potentially connected and thus potentially 'productive' can become stressful over time. Indeed, the opportunity to work given by digital platforms is matched by the responsibility to work, which weighs on the shoulders of healthcare professionals.

> … *I am constantly connected, and that is something that is devastating to a person's well-being. I am almost always at work. This is not good* … (P1, M, physiotherapist and educational tutor, AD n. 2)

In the blurring of leisure and work, physical and mental exhaustion become recurring feelings. As the same participant continues, a few weeks later:

> … *today was another day spent using technology and, therefore, there is no end to the work* … (P1, M, physiotherapist and educational tutor, AD n. 5)

A networked working schedule can result in a feeling of estrangement from the workplace and the weakening of relationships with colleagues. Online activities and the physical setting where they are carried out intertwine in unexpected ways. For example, this interviewee said:

Sometimes, using the computer limits my relationships with colleagues (…). [They go] to lunch, and I have a meeting on GMeet, then right after that, another one. Then, I have class and I take advantage of any time to follow it. (…) most of the time I have to give up going out with them (…) and this penalises me a little bit. (P15, F, nurse and educational tutor, AD n. 3)

In this case, this participant, with roles as nurse and educational tutor, expresses feelings of isolation and missing out on social interactions with colleagues. Her schedule, filled with online meetings and classes, prevents her from engaging in informal social activities, leading to feelings of disconnection and loneliness, key aspects of emotional labour. These narratives are not exclusive to one profession and can be found across different fields. For example, teachers and tutors frequently report frustration due to not being listened to and comprehended, lack of forms of expressiveness that can help their work, and the resulting lack of students' preparation.

… there is an inexpressiveness of the interface, (…) very often we teach to faces looking at the other side of the screen or with the camera off (…). Then, in person, you realise that they didn't catch a lot of the things that we had done so it can be a cumbersome [and frustrating] experience …. (P9, M, physiotherapist and educational tutor, AD n. 3)

This participant supports that building a shared understanding in communicative exchanges on digital platforms can be complex and frustrating, given the difficulties in adjusting one's activities to online environments. The emotional labour can be noted in the efforts to adapt teaching methods to overcome these barriers and ensure students continue their education remotely. This lack of non-verbal communication and bodily feedback is perceived as an issue in diverse experiences of professionals involved in telerehabilitation practices. As this diarist put it in two different moments:

… what is missing is that nonverbal part, sometimes therapists need to understand (…) what is unspoken (…), what precisely the parents want to tell us. I find even that part a little bit difficult. (P10, F, physiotherapist, AD n. 1)

… there is just less (…) empathy … (P10, F, physiotherapist, AD n. 7)

Coping with communication challenges involves emotional labour as individuals may feel frustrated, isolated or undervalued if their contributions are not fully acknowledged. This physiotherapist invests significant emotional energy into providing care and support in online settings. Moreover, conducting in-person rehabilitation sessions is considered more satisfying and inspiring given the micro-network of relationships involved in each session.

It is less tiring to see all the children at a distance but at the same time it gives you so much more [to see them in person]. (…) … [it] allows you to savour much more what you can do with them, (…) share much more, all the emotions (…) and the satisfaction of reaching the goal and succeeding. And then being joyful when they see their parents again at the end of the 45 minutes … (P12, F, physiotherapist, AD n. 6)

As explained by this participant, the embodied practice of health labour is something to be valued while telerehabilitation is considered as lacking from a relational point of view. Overall, these narratives of work with digital platforms emerge as stressing and highly emotionally-charged. Although these experiences are reported by several participants, some diaries also highlight the perceived conveniences of online work, as it will be discussed in the next paragraph.

4.3. Personal and professional efficiency: the positive aspects

Some accounts, even from the same participants, emphasise positive aspects of the interplay between the use of digital platforms and emotional labour. A recurrent reflection in the final interviews was that distance learning can be beneficial for healthcare professionals.

… [It's good that] the training I'm doing with the Local Health Authority is online (…) because then (…) we don't lose hours commuting and we can actually see our patients. (P11, F, nurse, AD n. 4)

As described by this nurse, optimising her schedule and minimising commuting allowed her to dedicate more time and energy to patient care and to her professional responsibilities. Moreover, in her appreciation for the flexibility afforded by online training, she recognises the importance of self-care, another aspect of emotional labour. Similarly, this participant explains:

… the good thing is that I was able to see all my patients until just before [another] call. I'm really satisfied with that, [and] not wasting time on the trip … (P6, F, nurse, AD n. 6)

Participants value organising their schedule to balance patient care with different activities. By successfully navigating the demands of their role, they can experience a sense of accomplishment. Participants also consider e-learning and telerehabilitation activities as valuable opportunities to work and gain additional training without spending time and money on commuting. Moreover, as this participant puts it:

… distance education is very useful (…). We are talking about people who work during the day, so it may be more difficult to balance family or professional life with the commitment to be physically in a class … (P3, F, nurse, AD n. 3)

In the first paragraph, this nurse described her need to disconnect to rest. In this excerpt, she highlights how e-learning allows her to carve out more time for family and work life. Thus, ambivalences emerge within the platform experiences of healthcare professionals.

This morning I worked with a child through the apps in his laptop and (…) it was very helpful. This child has autism and in a moment of crisis it was useful for me to recover him. Now we will also use this method at home, not to keep him distracted (…) but just (…) for activities (…) that are useful to him for communication. (P9, M, physiotherapist and educational tutor, AD n. 2)

While in the previous paragraph this participant showcased certain perceived issues of telerehabilitation, such as the 'inexpressiveness of the interface', here he argued that this modality of care entails opportunities for clinical practice. He believes that online devices can be used for therapeutic purposes, by giving patients more ways to express or address their needs. In this case, the use of digital platforms seems to support the emotional labour of physiotherapists by providing help with communication, adaptation to patient's needs and empowerment of their caregivers. Furthermore, telerehabilitation is considered a potential opportunity for healthcare professionals to observe patients in their everyday environments, as well as the people that conduct care activities.

… the experience [of telerehabilitation] was particularly touching. (…) as long as the patient enters the clinic and has to participate (…) in a therapeutic service, we are in a highly structured context, while seeing them in their everyday life at home allowed us (…) to see the relationship of ALS patients with their caregivers, the degree of care (…) that in the clinic had never emerged in a definite way (…), it made us think mainly about their compliance (…), both from the perspective of intensive rehabilitation and continued therapeutic care at home … (P10, F, physiotherapist, AD n. 9)

In other words, videotelephony services allow clinicians to exit the controlled environment of the clinic and examine patients in their homes, potentially obtaining valuable insights. Evaluating and adjusting treatment strategies to online settings to provide compassionate and effective care implies emotional labour. Also in this case, our results highlight that some healthcare professionals envisage potential opportunities and conveniences in their practices on digital platforms, which exist in a dialectical tension with the stressful experiences previously

showcased.

5. Discussion: emotional ambiguities

The results from our study provide meaningful insights to the literature on the emotional labour of healthcare professionals, as well as to studies on digital health and labour.

The heavy use of digital platforms and, especially videotelephony software programs for e-learning and telerehabilitation purposes, was common among healthcare professionals. Being "always on call" and "always on call", a condition that has grown during the COVID-19 pandemic (e.g., Risi and Pronzato, 2021), seems likely to persist. Indeed, the "digital immediacy" (see Tucker and Lavis, 2019) enabled by digital platforms has expanded in the realm of healthcare services, favouring experiences characterised by strong emotional value, multifaceted perceptions and a sense of emotional burden among workers.

Some participants highlighted the bright side of emotional labour (Humphrey et al., 2015) associated with their platform experience, noting benefits for flexibility and optimization of schedules and commutes and even for the provision of innovative rehabilitation practices. E-learning and telerehabilitation may enable professionals to perform various tasks in the same place, thus reducing the necessity to manage such stressful situations as commuting, and potentially allowing workers to balance work and personal life in a positive way. Within this situation, the condensation of diverse duties requires workers to shift from different types of acting and emotional labour. Moreover, the provision of remote health services is considered a practice that can allow them to observe and intervene in the patient's everyday environment and activities. This can favour forms of natural and spontaneous emotional labour (Ashforth and Humphrey, 1993; Humphrey et al., 2015). Figures such as physical therapists, in fact, have perceived the possibility of developing instances of 'digital intimacy', that is, "relationships characterised by a thorough familiarity made possible, sustained or reinforced through electronic devices" (Piras and Miele, 2019, p. 117). In these cases, rewarding feelings and positive emotions emerged, reducing potential burdens.

However, the continuous connectivity facilitated by digital platforms also favoured stress and exhaustion among healthcare professionals. Participants invested emotional energy in adapting their works to online environments, but some of them suffered from the perceived lack of an embodied encounter that could serve as the basis for a shared relationship in rehabilitation and e-learning services (e.g., McCoyd et al., 2022). In these situations, frustration emerged from difficulties in online communication, such as the lack of non-verbal cues, requiring workers to regulate their emotions and perform additional work. Furthermore, in some cases, non-standard working hours and the continued adoption of digital platforms resulted in physical and mental fatigue, commonly associated with an increase in emotional labour (Lee et al., 2014) and forms of "Zoom fatigue" (Aagaard, 2022), especially in the provision of telehealth interventions and online training courses. In this regard, feelings of loneliness and isolation were common. Nevertheless, workers felt pressure to always be productive, facilitating the blurring of work and private life and the resulting loss of balance between the two. This shows a 'presence bleed', even in healthcare, with "the location and time of work [that] become secondary considerations faced with a "to do list" that seems forever out of control" (Gregg, 2011, p. 2), and that requires healthcare professionals to continually regulate their emotions to continue working.

Within this scenario, no single trajectory explains the implications of the use of digital platforms for emotional labour, as different and potentially conflicting emotions, such as amazement, excitement, sadness, and mental fatigue, coexist within the same situation. Being 'always on' may involve managing stress and anxiety, but also excitement and forms of gratification. These emotional ambiguities are not novel for healthcare workers, whose profession has been always characterised by ambivalences in regard to the values underlying the relationship physicians have with patients, with their own images and with their colleagues (Merton, 1957). However, as noted by Henwood and Marent (2019) in relation to digital health, digital technologies contribute to the enactment of specific ambiguities, "create ambivalence and (re)configure health practices" (p. 1). Extending on this idea, to better understand the interplay between digital platforms, care work and emotional labour, we argue that Paasonen's (2020) conceptualisation of 'ambiguity' can be a valuable heuristic device. In her theorisation, which focuses on the 'affective encounters' individuals have with digital media, Paasonen (2020) argues that researchers need to attend "to the fundamental ambiguities in our engagements with devices, apps and platforms that yield different affective intensities and experiential horizons of possibility." (p. 12). Specifically, she analyses how micro-level experiences with digital platforms entails "the copresence of mutually conflicting and intermeshing intensities", which "can simultaneously bore, fascinate, irritate and enchant." (p. 18). In this theoretical framework, a key role is played by 'affect' that "emerges in and gives shape to encounters and relations between bodies (both human and non-human) and makes these matter", entailing "a precognitive force that yields more or less contingent connections and affords experience with tone and quality." (Lehto and Paasonen, 2021, p. 812).

Although this paper is not directly concerned with cultural inquiry, we concur with Paasonen (2020) that the dynamic tension and potentially contradictory affective intensities that characterise online experiences need to be considered to granularly understand such complex phenomena and their implications for emotional labour. The emotion-laden routine activities that users conduct on digital platforms "both weigh people down and afford quotidian rhythm and intensity of experience" (Lehto and Paasonen, 2021, p. 823), therefore, there is not a single trajectory through which to explain the experiences of healthcare professionals with digital platforms, but rather ambiguous dynamics within which individual activities and emotions are both constrained and enabled. Our findings showed how workers employ emotional energy and perform emotional labour in adjusting their tasks to digital platforms to ensure effective patient care and educational outcomes. However, these experiences are nuanced, with ambiguities and contrasting emotions coexisting within the same person's experience. On the one hand, working remotely implies possibilities valued positively by participants, as key aspects of emotional labour, such as self-care and the improvement of treatment strategies, are enhanced; on the other hand, the lack of certain non-verbal or informal communication practices are felt as detrimental to one's work, increasing fatigue and loneliness. While healthcare professionals can save time and optimise their schedule, the succession of continuous calls and the latent possibility of nonstop work emotionally affect the participants in a negative manner, requiring them to perform additional emotional labour. Thus, rather than a binary distinction between benefits and problems embedded into technological artifacts, we argue for going beyond rigid narratives that depict media effects as predictable and uniform. Researchers should focus on the multifaceted, coexisting affective intensities, their fluid patterns and rhythms, and the ways in which different forms of emotional labour are favoured and inhibited within human-machine relationships. This approach can illuminate how healthcare professionals simultaneously regulate different feelings within platform environments, thus showing the shifting character of emotional labour.

Given this scenario, we argue that this analysis of the affective encounters should be complemented by critically examining how personal experiences and healthcare services are reconfigured in platform environments and the proactive role of technological artifacts. The affordances of digital platforms are not neutral, there are always values, goals and intended activities embedded into them. The affordances of an object "shape action for socially situated subjects", and "push, pull, enable, and constrain" specific actions for specific purposes (Davis, 2020, p. 6). In our case, videoconferencing platforms facilitate working practices from any place, thus contributing to a reconfiguration of how work, space and social relationships can be experienced (e.g., Arribas-Ayllon,

2023; Moore et al., 2023). More specifically, this implied for healthcare professionals rearrangements in the 'carescape' (Ivanova et al., 2016) and in the emotional labour required to manage their professional role. The possibility to work all the time and the restructured doctor-patient boundaries influenced the perception of their work, impact and potentialities.

Notwithstanding the implications of the platformization of healthcare work, nurses and physicians do not receive formal training or digital technologies set up specifically to communicate with colleagues or patients (Shiferaw et al., 2021). Indeed, it seems easier to spontaneously use commercial platforms already in the market, such as Zoom and Skype, for online learning and telerehabilitation practices.

This situation further showcases the infrastructural role of digital platforms in the provision of essential, daily services that are turned into a source of profit (van Dijck et al., 2018). While interacting with and through digital platforms has been normalised over time and habit, key critical digital literacy skills, whereby individuals reflexively understand the logic underlying the operations of digital platforms, the dynamics favoured by their affordances and the risks implied in these artifacts, are still missing (Pronzato and Markham, 2023). These abilities may also imply the ethical and legal dimensions embedded into the use of digital platforms, such as ensuring compliance with privacy regulations and the protection of sensitive patient information. In this context, while digital platforms can bring a significant development in healthcare, careful management of related challenges is necessary for it to enhance clinical practice. If being a doctor today implies being able to use different (commercial) digital platforms and relate to patients in diverse manners, in fact, developing critical digital literacy among physicians emerges as a key challenge. In this regard, as argued by different digital literacy scholars (Pangrazio, 2016; Markham, 2020), emotions can play a key role, as recognising and managing the affective ambiguities involved in platform experience can favour the development of critical abilities rooted in everyday practice and reflection, thus helping healthcare professionals better understand the implications of digital platforms for their personal and professional life.

6. Conclusion

This paper investigated how healthcare professionals engage with digital platforms in their professional activities, examining how these interactions enable forms of emotional labour and emotional well-being. Specifically, we analysed the experiences of healthcare professionals with digital platforms in their working activities and the relationship between digital platforms' uses and emotional labour. Our findings suggest that contrasting emotions intertwine in the platform experience of the participants, revealing a nuanced landscape where multifaceted affective intensities coexist, thus requiring continuous adjustments by healthcare professionals.

Given this scenario, we contended that, to scrutinise healthcare professionals' platform experiences, the multifaceted emotional states that characterise their working activities and how emotional labour in healthcare intertwines with technological developments, it can be fruitful to use the lens of 'ambiguity'. More broadly, this paper shows how bridging a health sociology perspective with a media studies framework, which has a long tradition of research focused on user experiences, can provide an important opportunity to advance our understanding of the platform experiences of healthcare professionals, the emotional labour involved in their platform engagements and the different and even contrasting emotional states emerging within these relationships with digital platforms. By doing so, we contributed to studies focused on the emotional labour of healthcare professionals and research on digital health.

Furthermore, we advocated for the development of critical digital literacy skills among healthcare professionals to effectively navigate the emotional labour and professional challenges posed by digital platforms. Technological artifacts can help and improve the management of care relationships (e.g., the potentialities of telerehabilitation), but they always redefine their spaces and temporalities. An implication of the use of digital technologies, such as videoconferencing platforms, and of the extension of forms of remote work, can be an increase in the workload and emotional labour of healthcare professionals. Doctors and nurses, in fact, are not necessarily trained to manage and comprehend the implications of human-tech relationships, and this can result in more emotional burden, stress, fatigue, etc. Thus, to address the challenges implicit in the digitization and datafication of healthcare practice, it is essential to implement stress management strategies and provide appropriate training to improve their critical digital literacy. A balanced approach that integrates the operational effectiveness of digital technologies with attention to their features and the psychological well-being of healthcare professionals can help mitigate the negative impacts on anxiety and stress associated with this digital transition. Although the details need to be tailored to the environments, activities, and available technologies, our findings suggest an approach that can educate and support the most vulnerable individuals. Indeed, the dynamic relationship between technology and emotional labour requires constant adaptation of healthcare practices, education and policies to ensure a sustainable and empathetic work environment.

In general, we stress the importance of taking a holistic approach in assessing the impact of technology on emotional labour and healthcare work by integrating the perspective of different research areas, such as health sociology, critical internet studies, education, behavioural and computer sciences. As shown by our use of the concept of 'ambiguity', interdisciplinarity can help develop a nuanced understanding of the interplay between healthcare work, digital platforms and emotional labour.

Ethics approval

Our study, which examines the emotional labor of healthcare professionals, was conducted under the rigorous standards expected by the scientific community. Prior to the initiation of our research, we engaged in a thorough review process with the Data Protection Officer. It was determined that formal ethics approval was not required for the nature of this study.

The decision was based on the following considerations:

Nature of Data: The study did not involve the collection of sensitive personal data or direct interventions with patient populations. Moreover, data were completely anonymized.

Sample: Research participants are not individuals who, also in relation to the research context, may suffer discrimination or stigmatization. Moreover, participants were aware that they were participating to the research process and signed an informed consent form.

Conflict of interest As authors, we had no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Compliance with Ethical Standards: All procedures followed were in accordance with the ethical standards of the institutional and/or national research committee.

This exemption does not imply a lack of ethical consideration; rather, it reflects the specific nature of the study and its alignment with established guidelines which deem it exempt from requiring formal approval.

CRediT authorship contribution statement

Veronica Moretti: Validation, Supervision, Methodology, Investigation. **Riccardo Pronzato:** Formal analysis, Data curation, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence

the work reported in this paper.

Data availability

The data that has been used is confidential.

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