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Are we heroes or couriers? A phenomenological study on reappropriation of professional subjectivity and agency among health professionals during COVID-19 contact tracing in Türkiye

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ABSTRACT

During the COVID-19 pandemic, Türkiye implemented a distinctive contact tracing approach involving in-person home visits by medical professionals to individuals who tested positive for the virus. This study examines the experiences of health professionals involved in contact tracing, exploring how they reappropriated their professional subjectivity and agency during their deployment in this role. It is an interpretive phenomenological qualitative study. We conducted 21 semi-structured in-depth interviews, subsequently carried out two separate focus group interviews with an additional 31 participants from various districts in Istanbul. Participants were selected from different medical professions (i.e. doctors, nurses, midwives), career stages, gender and age groups, and hierarchical levels (i.e. officers and directors). Data analysis was conducted collaboratively by the research team from sociology and public health disciplines.

Our main finding is that for the majority of health professionals, contact tracing was a novel experience with challenges and ambivalances. Yet, regardless of their perceptions (positive, negative, or mixed), the experience promoted a reaffirmation of professional identity and reappropriation of professional subjectivity and agency, which discloses that professional subjectivity is not firm but dynamic, carrying stability as well as flexibility and adjustment. Four main themes are identified in their reappropriation of professional subjectivity and agency: uncovering professional fulfillment, feeling restrained in professional dissatisfaction, assessing the job, and engaging in professional and bureaucratic negotiations.The profound exploration into the dynamics of contact tracing amidst the pandemic illuminates a multidimensional narrative that transcends the conventional discourse on physical and psychological stress experienced by medical professionals. Contact tracing experience had a transformative impact on meaning and purpose of professional identity. Our findings highlight a need for a balanced approach between centralized decision-making, mobilization of professionals, quantitative evaluation, and professional autonomy and discretion, qualitative assessments, and meaningful engagement.

1. Introduction

1.1. Contact tracing during COVID-19 pandemic

Contact tracing is "the process of identifying, isolating, and managing infected persons and their contacts," which has been a major "public health measure for controlling the transmission of infectious diseases" (El-Sadr et al., 2022). However "the urgency" and "scale" with which COVID-19 contact tracing was executed set it apart from its preceding implementations (Bafort et al., 2023). International health organizations such as World Health Organization and European Centre for Disease Prevention and Control immediately advocated its execution "to support early diagnosis and interrupt onward transmission" (ECDC, 2021; WHO, 2021). However it was adopted in diverse manners across countries, ragning from phone-calls and digital applications to manual recording of infected individuals and their contacts (Bafort et al., 2023; Jacob and Lawarée, 2021; Scassa, 2021).

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1.2. Türkiye's contact tracing policy and background

Türkiye, like numerous other countries, imposed curfews, lockdowns, and closures. However, until the introduction of vaccines, Türkiye adopted home-based contact tracing as it primary strategy for controlling the pandemic. Contact tracing was perceived by many governments as the main instrument to fight the pandemic and serve public health (Amann et al., 2021). Türkiye used phone-calls and digital applications in contact tracing, but accentuated medical professionals' in-person, face-to-face visits to citizens' houses as the distinctive aspect of its strategy. The government highlighted home-based organization of contact tracing as the key factor in Türkiye's "successful pandemic governance compared to other countries" (PDC, 2021). Other countries, such as Belgium, US, Canada, and France, employed home visits during contact tracing, but only locally and at targeted, hard-to-reach vulnerable social groups (de Timmerman et al., 2023; Gagnon-Dufresne et al., 2023; Udeagu et al., 2022). However, Türkiye deployed nationwide home-based contact tracing performed by health professionals.

Türkiye's adoption of a home-based, face-to-face contact tracing approach as a central strategy in pandemic control is deeply rooted in its rich historical, legal, organizational, technological, and political background. The Turkish term for contact tracing, "*filyasyon*," originated from the French during the Ottoman sanitary reforms of the mid-19th century (Demirtaş and Tekiner, 2020). In the early 20th century Türkiye successfully controlled several infectious disease epidemics, including malaria, tuberculosis, and smallpox. This success was grounded in the country's public health law enacted in 1930 (Büyükşirin, 2023). The legal foundation of contact tracing was revised in 1960 and 2015 (Sevimli and Sevimli, 2021) and implemented during outbreaks of Ebola virus disease, yellow fever, and West Nile fever.

The health reforms initiated in 2003, encompassing significant alterations to social security and healthcare systems (Aydın, 2022), marked a milestone in Türkiye's commitment to universal health coverage. These reforms also positioned the Turkish government as the largest healthcare provider and employer of health workers. Meanwhile, the mandatory service law and increasing the number of medical schools ensured a stable and growing recruitment of medical doctors even in underserved regions. Revisions in the organizational structure of the health governance in 2011 and 2017 (Küçük, 2018) have empowered the Ministry of Health with considerable authority and flexibility, enabling the strategic reallocation of health personnel as needed, and enhancing the system's responsiveness and efficiency.

Another enabling factor was the existing technological infrastructure. Türkiye's national health information system has already digitized and integrated most of the medical records across all public and private healthcare organizations (Köse et al., 2023), including local health authorities. When the pandemic emerged, new applications were developed and commissioned by the Ministry on top of this infrastructure to enable home-based contact tracing, integrating not only health-related systems but also other digital public services (İşlek et al., 2020).

The emphasis on expanding access to healthcare, a cornerstone of Türkiye's health reform, has become a prominent feature of governmental rhetoric and electoral campaigns. The Ministry of Health has been occasionally criticized for populist decisions that prioritize political objectives sometimes at the expense of the status and wellbeing of medical professionals (Kartal, 2021). Arguably, the deployment of health professionals to the doorstep of every single COVID-19 patient might be partially due to the government's intent to showcase its power and control over the unfolding crisis as well as to appeal to the general populace's immediate demands and concerns.

Following Türkiye's first recorded COVID-19 case in March 2020, 6200 contact tracing teams were assembled across Türkiye (Koca, 2020), and this number increased to 23.096 teams during the first year of the pandemic (PDC, 2021).A contact tracing team comprised a medical doctor, an assistant health worker, and a driver. A significant mobilization of health professionals for contact tracing was undertaken, involving recruitment from diverse healthcare institutions and professions. Consequently, not only medical doctors but also dentists, technicians, nurses, and midwives were deployed in contact tracing. Additionally, other civil servants and medical professionals from health directorates provided support.

A contact tracing procedure was established by the Ministry of Health.Citizens who tested positive for COVID-19 were registered in the central health information system. They received a phone text message and call instructing them to stay at home and await contact tracers. Contact tracers contacted these patients to confirm their home address. Subsequently, they visited their homes to query close contacts of cases and collect nasopharyngeal specimens from symptomatic household members. They provided instructions about isolation and quarantine rules, handed out a brochure about COVID-19 and obtained consent from householders on compliance with regulations. Medical doctors prescribed and handed over drugs that were then believed to be effective against COVID-19 and provided detailed information about their usage, both verbally and in writing. Additionally, they prepared a medical report for sickness absence.This process is illustrated in Fig. 1.

1.3. Literature review

Given that health workers were at the forefront of the COVID-19 pandemic, their experiences have garnered significant scholarly attention. However, medical professionals in contact tracing have received comparatively less interest (Asiimwe et al., 2021; Fenton et al., 2023). Furthermore, as evident in review articles, academic studies, especially earlier ones, focused on health workers' professional and psychological challenges (Billings et al., 2021; Chemali et al., 2022; Chutiyami et al., 2022), particularly burnout and psychological stress (Cutler, 2022; Gupta et al., 2021). Strikingly, there has been less exploration of health workers' perspectives on their professional identities, roles, or purposes (Hanum et al., 2023; Rodriguez et al., 2023; Rosted et al., 2021; Zhang et al., 2021).

The same holds true for the literature regarding Türkiye. Studies have examined anxiety and depression among doctors (Kurt et al., 2020) and medical professionals in general (Hacimusalar et al., 2020; Havlioğlu and Demir, 2020; Şahin et al., 2020). Some explored work challenges during the pandemic, specifically stress and burnout (Kackin et al., 2021; Yüncü and Yılan, 2020). Ergur and his students (2020) conducted an original inquiry into how health professionals working at COVID-19 clinics developed strategies and experienced solidarity and conflict concurrently.

Yet, the experiences of medical professionals involved in contact tracing have received relatively less attention. Available studies are mostly quantitative investigations into aspects such as work stress and burnout (Özarslan and Caliskan, 2021), fear and anxiety (Pak-Güre et al., 2021), although a few also examine challenges in contact tracing (Ilgaz et al., 2022; Sevimli and Sevimli, 2021). A report prepared by the Medical Board (İTO, 2021) and qualitative interviews by Karataş et al. (2022) offer a closer examination of the work conditions, problems, risks, and challenges encountered by health workers involved in contact tracing. However, these studies also predominantly focus on addressing problems such as burnout and motivation loss, rather than delving into reconfiguration of professional identities, reevaluation of work meaning, or negotiations for the profession.

1.4. The current study and theoretical framework

Work constitutes an important basis of identity (Leidner, 2006). Professional identity pertains to an individual's self-definition's and perception of their profession, encompassing its goals, values, and meanings as enacted through professional roles (Chreim et al., 2007). However, professional identity is dynamic and can be restructured in response to job redesign (Chen and Reay, 2021). Professionals manage their identities in the face of threats and changes within their

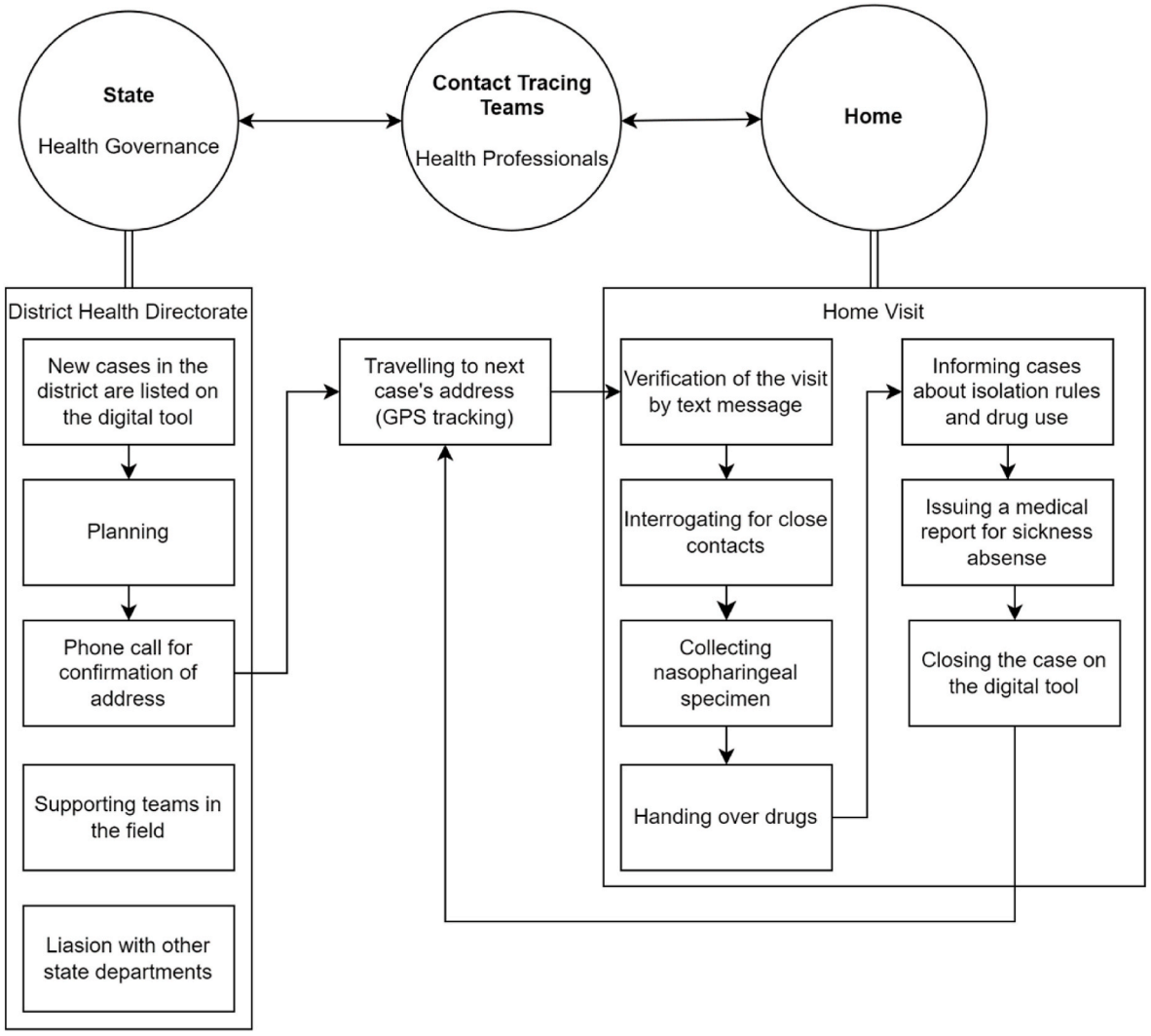

Fig. 1. COVID-19 contact tracing process in Türkiye.

professional field (Kyratsis et al., 2017). Times of crisis, such as the COVID-19 pandemic, have been shown to reshape work conditions and professional identities and purposes. Rodriguez et al. (2023) explore the impact of COVID-19 crisis on professional identities of healthcare professionals in Chile. They argue that professional purpose "is fluid, situated and shaped by contextual circumstances" (p. 5), highlighting the ways in which professionals have reconfigured their sense of purpose in response to the crisis.

In this study we undertake a similar investigation of the restructuring of professional identity and purpose in the context of health professionals' deployment in contact tracing. However instead of professional identity we conceptualize it around professional subjectivity for two reasons: i) subjectivity encompasses professional identity and goes beyond it to include individuals' subjective interpretations, their personal takes on the profession, their individual commitments, engagements, rejections, aspirations, or expectations; ii) subjectivity is conceptually associated with agency, and in the context of our study, we try to understand and explain contextual circumstances and work conditions that affect subjectivity.

In distinguishing between agency and subjectivity, Kockelman (2006) proposes that "agency is a causal capacity: say, the relatively flexible wielding of means towards ends [whereas] Subjectivity is a representational capacity: say, the holding of intentional states such as belief and desire" (p.1). Accordingly, professional agency can be described as the capacity to determine the professional means and ends and to be able to make choices about the work, including professional goals and decisions. In this paper, our approach to professional agency is informed by Eteläpelto et al. (2013)'s study which asserts that "professional subjects and/or communities exert influence, make choices and take stances in ways that affect their work and/or their professional identities" (p. 61). Professional subjectivity encompasses individuals' beliefs, thoughts, and commitments about the vocation and their professional identities, including aspirations about professional norms and roles.

Professional agency and subjectivity are interconnected; the perceptions, actions, and decisions of professional agents as well as the dynamics of structural forces, interactions, and negotiations create opportunities and constraints within a professional field in specific contexts. In this article we explore how medical professionals reappropriated their professional agency and subjectivity in the specific context of the redesign of their professional jobs amidst the COVID-19 crisis.

2. Method

2.1. Design

This study is designed as an interpretive phenomenological qualitative research. There exist significant philosophical and methodological differences between transcendental (descriptive) and hermeneutic

(interpretive) phenomenology (Neubauer et al., 2019). In phenomenological research, the aim is to describe the phenomenon as accurately as possible (Groenewald, 2004: 44). Conversely, in interpretive phenomenology, the analysis integrates context alongside descriptive categories; it emphasizes historical, social, and political forces that shape the experience (Lopez and Willis, 2004).

Our study brings to the fore two main questions of phenomenological inquiry: *what* and *how* (Creswell, 2007). *What* did contact tracers experience? And *how* or *in what circumstances* did they experience it? While some of our findings might be descriptive as we aim to illustrate how contact tracing operated and the experiences of health professionals involved, we strive to balance this by emphasizing the structural forces or circumstances that shaped their experiences. Interpretive phenomenology does not negate the use of a theoretical orientation. However, theory is not used "to generate hypotheses to be tested" but rather "a theoretical framework" is developed to interpret the data and generate findings (Lopez and Willis, 2004: 730). In this study, following qualitative research's inductive data analysis (Creswell, 2007), the theoretical framework is developed around conceptions of professional agency and subjectivity.

2.2. Data collection

We conducted semi-structured interviews with 21 participants in Istanbul between July and October 2021. To ensure the representativeness of our sample, we conducted interviews with contact tracers of various ranks (early, mid-, and late-career), professions (including medical doctors, nurses, technicians, and drivers), gender and age groups, as well as bureaucratic statuses (such as officers and directors).

Initially, we restricted our sampling to two districts in Istanbul, namely Üsküdar and Eyüpsultan, as these health directorates promptly responded and expressed willingness to participate in the research. Subsequently, we interviewed participants from two additional districts, Kadıköy and Fatih. Table 1 shows the characteristics of interview participants.

Additionally, to enhance the representativeness of our sample and to improve the validity of our findings, we organized unstructured focus group interviews involving participants from various districts in Istanbul. We sent invitations via e-mail and phone call to every district health directorate. 31 participants from 12 district health directorates participated in the focus group interviews, which were divided into two sessions. These participants included public health directors as well as their medical personnel most of whom were medical doctors. Our participants worked at districts that exhibit socioeconomic diversity. On a scale of eight categorizations where A+ represents the highest socioeconomic status and E the lowest, the districts that we conducted our interviews, namely Üsküdar and Eyüp, mostly fall within the categories of B and C, respectively (Şeker et al., 2017). Including focus groups interviews, most of the participants joined from districts represented by category C. Table 2 displays the information about districts and number of participants from both semi-structured interviews and focus group interviews.

2.3. Data analysis

As an interdisciplinary research team, we convened regularly to thoroughly discuss the research data and facilitate a collaborative analysis (Cornish et al., 2014). We used ATLAS.ti software. To ensure a balance between autonomy and collaboration in the analysis (Bates et al., 2023), each researcher initially coded the first five interviews independently. Subsequently, AP developed a preliminary codebook aimed at standardizing similar codes and incorporating any codes that appeared three or more times to enhance "inter-coder reliability and agreement" (Campbell et al., 2013). The team finalized the codebook, and the remaining interviews were coded accordingly. AP conducted a comprehensive review of all codes and categories.

Table 2
District representation of interview and focus group participants.

SES category	Name of the district	Number of participants	Professions of participants
A	Beşiktaş	3	Health director, doctor
	Kadıköy	2	Doctor, midwife
B	Sarıyer	2	Doctor
	Üsküdar	9	Health director, dentist, doctor, nurse, technician
C	Beyoğlu	2	Doctor
	Eyüpsultan	11	Health director, dentist, doctor, midwife
	Fatih	2	Health director, doctor
	Kağıthane	2	Doctor
	Tuzla	1	Doctor
	Ümraniye	1	Doctor
D	Başakşehir	4	Health director, doctor, psychologist
	Esenyurt	4	Deputy health director, doctor, health worker, social worker
	Sultangazi	3	Doctor, technician
E	Sultanbeyli	2	Doctor

Table 1
Characteristics of interview participants.

#	Interview Date	Gender	Age Group	Profession	Professional Experience	Contact Tracing Experience
P1	05.07.2021	Woman	20-29	Doctor	0-2 years	>12 months
P2	05.07.2021	Woman	30-39	Nurse	>10 years	6-12 months
P3	12.08.2021	Man	20-29	Doctor	0-2 years	6-12 months
P4	12.08.2021	Woman	30-39	Midwife	>10 years	>12 months
P5	17.08.2021	Man	30-39	Doctor	3-10 years	>12 months
P6	19.08.2021	Woman	20-29	Doctor	0-2 years	6-12 months
P7	19.08.2021	Man	NA	Social worker	3-10 years	<6 months
P8	25.08.2021	Man	20-29	Doctor	0-2 years	6-12 months
P9	08.09.2021	Man	30-39	Dentist	3-10 years	>12 months
P10	13.09.2021	Woman	20-29	Doctor	0-2 years	6-12 months
P11	13.09.2021	Man	40-49	Driver	>10 years	>12 months
P12	13.09.2021	Man	20-29	Dentist technician	0-2 years	6-12 months
P13	15.09.2021	Woman	30-39	Dentist	3-10 years	6-12 months
P14	15.09.2021	Man	30-39	Driver	3-10 years	<6 months
P15	15.09.2021	Woman	20-29	Radiology technician	0-2 years	>12 months
P16	29.09.2021	Man	30-39	Driver	0-2 years	>12 months
P17	28.09.2021	Man	30-39	Health director	3-10 years	>12 months
P18	01.10.2021	Man	30-39	Health director	3-10 years	>12 months
P19	21.10.2021	Woman	40-49	Nurse	>10 years	6-12 months
P20	28.10.2021	Man	20-29	Doctor	0-2 years	>12 months
P21	22.10.2021	Woman	30-39	Health director	>10 years	>12 months

We developed themes through a close dialogue with interview transcriptions; reflecting the interpretive efforts to understand the lived experience and the meanings attributed to it (van Manen, 1990). A"systematic identification of participants' interpretations and constructs (first-order constructs)" is complemented by "researchers' own understandings, interpretations, and constructs (second order) (Ajjawi and Higgs, 2007:12)." An overarching theme, termed superordinate, is formulated by researchers to consolidate a series of related themes (Smith et al., 2009:96). We identified four superordinate themes as our interpretations of the narratives provided by our participants regarding their contact tracing experience. Table 3 presents a list of main themes.

3. Findings

For the majority of healthcare workers we interviewed, contact tracing was a novel, first-ever experience laden with various challenges and ambivalances. As medical professionals, they harbored mixed thoughts and feelings about the job, expressing diverse opinions, judgments, and levels of commitment and engagement. Yet, at the core of their perceptions of the experience, whether positive, negative, or both, lay their assertions of professional identity and reappropriation of their professional subjectivity and agency. We identified four main components in their narratives that constitute elements of professional subjectivity and agency, which are: uncovering professional fulfillment, feeling restrained in professional dissatisfaction, assessing the job, and engaging in professional and bureaucratic negotiations. Each theme is described below with illustrative quotations.

3.1. Uncovering professional fulfilment

Medical professionals in contact tracing did not opt for the job; rather, they were assigned to it by the health bureaucracy under state orders. They were not permitted to decline the assignment or resign from their jobs, particularly during the first year of the pandemic. They had to work to sustain their livelihoods and maintain their status as state employees (P#3, doctor). The inability to resign, coupled with long working hours, heightened their anxiety about infection and burnout (P#2, nurse). Furthermore, for many health professionals contact tracing was an unfamiliar task.

Table 3
Themes.

Superordinate Themes (Second-order Constructs)	Subordinate Themes (First-order Constructs)
Professional fulfilment	Work belonging and commitment
	Pride
	Heroic stories
	Being part of a big purpose
	Service to public health
	Meaningful
	Touching people's lives
	Feeling useful
Professional dissatisfaction	Work disengagement
	Feeling disconnect
	Professional atrophy
	Career stagnation
	Feeling underutilized
	Missing one's own profession
	Disappointed with people's behavior
Assessing the job	Effectiveness
	Suitability
	Success and failures
	Ambivalance and objections
	Türkiye/we did a good job
	Areas for improvement
Professional and bureaucratic negotiations	Quantity vs. quality
	Centralization vs.decentralization
	Professional discretion and autonomy
	Directors as intermediaries
	Initiatives

Yet, none of these conditions prevented them from taking ownership of the assignment and uncovering venues for professional fulfillment. They maneuvered to realign their professional belonging and commitment, finding meaning in their work sensing fulfillment. They embraced the recruitment to "fight back the pandemic on the front line" (P#9, dentist) or to fulfill professional and moral obligations under the state of emergency (P#15, radiology technician). They internalized the assignment to the extent of overworking and showing extra effort to overcome obstacles and to ensure the success of contact tracing. For instance, some voluntarily worked remotely from home to organize the work plan for the following day (P#19, nurse).

They adjusted their commitments and reaffirmed their dedication and purpose in contact tracing by delivering healthcare and promoting public health. They identified contact tracing as a critical public health service, expressing their "pride" in contributing to the efforts "to combat the pandemic" (P#7, social worker; P#12, dentist technician; P#20, doctor). One of our participants, who transitioned from serving as a family physician to becoming a health director during the pandemic, viewed contact tracing efforts as "heroic stories" she eagerly anticipated recounting to her grandchildren with pride (focus group interviews).

Their perception of the COVID-19 pandemic as an exceptional socio-medical occasion seems to have reinforced their professional dedication and fulfillment, involving a sense of being part of a significant and meaningful purpose:

> "How many pandemics can a person see in a lifetime? When we look at events affecting the world, the COVID-19 pandemic is similar to cholera or plague outbreaks. It has been a great experience for me. To manage the situation and to be professionally part of it were important to me. I wanted to be in it." (P#19, nurse)

Fulfillment was also generated by very concrete, specific incidences in which contact tracing health professionals discerned that they really "touched peoples' lives" (P#4, midwife) by providing them medical care as well as moral and psychological support.

> "Even when people's closest family and friends of kept at a distance, we, in a way, extended a spiritual hand, particularly during those ten or fourteen days of isolation at home." (P#concealed, health director)

Some had been deeply affected by the cases they saw during their home visits, reaffirming the meaning and value of the job they did:

> "We ascended the stairs and entered the apartment, where we found a middle-aged man lying alone on the sofa. He could barely speak. He told us that he had left the door open so that medical personnel could easily access to take him away when he died. He revealed that he had lost his mother, and then his father three days prior, both due to the COVID-19, and that two of his brothers were currently hospitalized awaiting treatment. In his own words, as the virus was hitting the family hard, he was waiting to die soon in his apartment." (P#9, dentist)

In the eyes of this participant and others, even if they could not measure the outcomes of their work, contact tracing symbolized serving people by providing medical care and support, thereby fostering a sense of contentment derived from being useful to individuals and society at large. This perception about conducting a meaningful public service was a strong asset to overcome professional burnout:

> "The entire process had been immensely draining; but on the day schools reopened, as I left home and saw little girls in pink backpacks, holding their mothers' hands, walking to school, I said to myself, 'Yes, this is it.' It made all the efforts of the last year and a half worthwhile. On days of curfew, seeing empty streets [devoid of people], I headed to work in tears." (P#concealed, health director)

3.2. Feeling restrained in professional dissatisfaction

While for some, professional fulfillment was central to their experience, for others, and sometimes even for the same individual, feelings fluctuated, and contact tracing was perceived as professionally dissatisfying. They found the job to be unrelated to their medical profession, resulting in feelings of disengagement, alienation, and professionally underutilization. As one participant expressed, "One thing I did about the medical profession was asking patients' complaints, in the rest I felt like I was merely acting as a civil servant." (P#6, doctor). Several participants expressed their discontent and dissatisfaction by stating that they felt like a delivery worker:

> "I felt like a delivery boy. I do not think distributing medicine requires a specific professional experience or education. I could not bring myself to it. I felt worthless." (P#13, dentist)

> "I am now twenty-five years old. In twenty-thirty years, when I look back, I will probably think contact tracing was worthless. I will regret being used like a courier at a time I was supposed to be actively performing medicine." (P#3, doctor)

The assignment was seen as a misrecognition of or disregard for their professional identity and authority. They felt being held back. Some health directors shared the same perspective, underlining that in the constant rush to visit more cases, healthcare workers were not granted the opportunity to utilize their professional knowledge and skills:

> "You cannot judge doctors for not doing the job; when they [have to] go door by door, visit about 80 houses per day. We did not give them the job of medicine but that of delivery." (P#concealed, health director)

Henceforth, doctors, especially those in the early stages of their careers, perceived the task of contact tracing as professional decline and a form of career stagnation. Some described it as "professional atrophy" (P#8, doctor; P#15, radiology technician).

> "This job has set back my professional skills. Over the past year since I graduated, I have not seen any patients. It atrophied my professional knowledge." (P#8, doctor)

Indeed, deployment in contact tracing has evoked a genuine longing for their original jobs, despite any previous job dissatisfaction:

> "I was working in a very busy dentist clinic. I used to complain about the heavy workload. But now, I really have begun to miss my own job. I miss the clinic. I miss my patients." (P#13, dentist)

In addition to experiencing professional dissatisfaction stemming from feelings of professional disengagement, deterioration, career setback, or missing their original profession and work conditions, medical professionals were also disappointed with people's behaviors and the lack of adherence to pandemic regulations. Their observations regarding individuals failing to comply with isolation, quarantine, or other measures, or even providing false information made them feel frustrated.

> "Upon visiting the apartment, we hear voices coming from inside. We say, 'You told us you were alone. Is there anyone else in?' They respond, 'Oh no, it is just the TV on.' [What can I say/do?] (P#4, midwife)

> "People are no longer as sensitive [as they were before]. They adhere to regulations less. It diminishes our motivation." (P#8, doctor)

Acoompanying the feeling of disappointment was a questioning of the value of contact tracing.

> "I sometimes feel like I am doing contact tracing, but outside, five times as many people are getting infected from each other. It is as if I am opening a faucet in a pool to drain it, but then it feels like ten other faucets are filling it up. I am doing contact tracing but people are lying about their contacts, not wearing masks, or wandering around on holidays [without observing regulations], and then I am asking myself 'why am I doing this job? "(P#3, doctor)

3.3. Assessing the job

Medical professionals evaluated both the way contact tracing was implemented in Türkiye as well as their own roles in it. They assessed various aspects of the contact tracing job, reviewing its suitability, effectiveness, challenges, strengths and weaknesses. In evaluating the job, they offered a comprehensive evaluation of the overall professional experience, listing both positive and negative aspects, and suggestions for improvement.

Health professionals praised Türkiye's contact tracing policy, viewing it as a notable success compared to other countries' pandemic management (P#5, doctor; P#19, nurse, P#concealed, health director). They regarded the home-based implementation of contact tracing in Türkiye as highly valuable and effective in several regards: to swiftly address positive cases, to inform patients' about the isolation and quarantine rules and monitor compliance, "to reduce hospital load" by providing citizens basic information and medicine at home, and to mitigate "the pandemic chaos" (P#5, doctor; P#9, dentist; P#10, doctor; P#15, radiology technician). Health service at home was seen instrumental to offer people sociomedical as well as psychological support, allowing them "to avoid hospitals and receive treatment at their home comfort" (P#4, midwife).

Health directors, while acknowledging shortcomings and failures, largely viewed their management of contact tracing positively. Even administrators on the periphery were observed to have adapted their organizational skills and assumed responsibility for managing the crisis:

> "We have truly been through a very stressful period. I remember spending twelve or thirteen hours on the phone planning. We are actually experiencing the success of having managed a major crisis. In the beginning, we were nervous and worried about how to overcome it. Yet, now looking back, I do not think we did a bad job, and it gives me peace of mind. The directors, even the most peripheral administrators, had taken on too much work." (P#concealed, health director)

Both health directors as well as other health workers involved in contact tracing expressed their opinions on improvement, articulating how things could have been done better. For instance, they underlined that contact tracing would have improved, if better communication could have been achieved between health professionals in the field and central authorities. Their main complaint revolved around the lack of direct briefing, which sometimes resulted in medical professionals having to learn even basic procedural changes about isolation and quarantine days from the social media or even from patients themselves (P#5, doctor; focus group interviews). They emphasized that more direct and clear communication was essential to address encountered problems and challenges, as well as to foster cooperation among health workers (focus groups interviews; P#20, doctor).

Health professionals appreciated various aspects of Türkiye's contact tracing policy and provided their insights on how it could be further improved. However, they also voiced disapproval of several aspects. While some of these concerns are related to their dissatisfaction with the job, as explained under the second theme above, others are more overarching. It encompasses their uncertainties, ambivalences, doubts, and objections to the design of the country's contact tracing policy.

A medical doctor who worked in contact tracing in tuberculosis, for instance, stated that a different approach to contact tracing, tailored specifically to COVID-19, should have been designed.

> "Transmission was slow in tuberculosis; measures such as a thorough questioning of patients' relatives, taking samples, prescribing

antibiotics were possible and useful; but the COVID-19 is different. Doing contact tracing in the same way is pointless. It exhausts healthcare workers and overloads the health system." (focus group interviews)

Similarly, some sugggested that rather than attempting to trace all positive-testing cases and their contacts, contact tracing should have prioritized specific segments of the population, such as the elderly, individuals with chronic or rare diseases, or those showing severe symptoms (focus group interviews).

In addition to suggestions, medical professionals had strong objections, specifically regarding the distribution of prescribed medications by the Ministry of Health (focus group interviews; P#1, doctor; P#6, doctor; P#13, dentist; P#concealed, health director). Medical doctors argued that they should have had full discretion in deciding whether to prescribe drugs or not. The crux of the matter lies in their criticism of centralized decisions that, in the eyes of health workers, limited the effectiveness and propriety of their work. The tension between centralization and autonomy also significantly influenced their negotiations regarding the job, as elaborated below in the fourth theme.

3.4. Engaging in bureaucratic and professional negotiations

Medical professionals did not only evaluate the implementation of contact tracing in Türkiye during the COVID-19 pandemic but also negotiated for their professional roles and decisions. They were engaged in negotiations. Bureaucratic and professional bargaining and trade-offs took place between administrators and health professionals. They concentrated on the level of centralization, the extent of autonomy and discretion, and the dilemma of quantity versus quality.

At higher administrative levels, bureaucratic rationale predominantly favored quantity and centralization over quality and autonomy. In contrast, most health directors, through their direct contact with contact tracers and their own experience, leaned more towards prioritizing quality and discretion, better recognizing their necessity. Health professionals in contact tracing generally followed the written policies while still exercising some discretion, albeit within certain limitations.

Both administrators and health professionals that practiced contact tracing acknowledged the embedded dilemma between quantity and quality in pandemic management and compensated for one or another, depending on the circumstances. The Turkish government, like other countries, aimed to achieve timeliness and comprehensive coverage in reaching out to cases (Martin et al., 2022). The Ministry of Health and health directors felt pressured to minimize the number of positive cases and contacts. Consequently, they oversaw contact tracing teams to swiftly reach out to positive cases and visit a maximum number of cases per day. Hence, they primarily evaluated the quantity of their work rather than its quality.

Directors and other bureaucratic officials compared the number of cases visited by different contact tracing teams, and sometimes using it as a stratetegy to encourage competition at work. However, medical professionals either doubted the validity of the figures or believed such comparisons were misleading due to the various factors influencing each contact tracing teams' ability to reach out to cases (focus groups interviews). Medical professionals emphasized that exceeding a certain number of cases compromised the quality of their work resulting in superficial and sloppy execution:

> "Once the daily number of home visits exceeded fifty, the quality dropped; medical reports went unwritten, and not all contacts were properly listed." (P#5, doctor)

They complained that their "hard work for meticulous, detailed contact tracing investigation was not acknowledged" (P#10, doctor), as quantity was prioritized over quality. Some health directors shared the same perspective on the challenge of balancing quantity and quality, but they also asserted that a balance could be achieved.

> "It is not normal when too much or too little [contact tracing] is done. If one is recording about one and a half contact per case, it is not good contact tracing. If one is adding two and a half, it is better. If one is recording contacts below that of the average in Istanbul, it means that team is not executing a good contact tracing." (P#concealed, health director)

The other numerical bureaucratic negotiation concerned the physical proximity to the positive case site. As part of Türkiye's contact tracing policy, home was chosen as the primary site for contact tracing. Therefore, the health bureaucracy obliged health professionals to be physically at the precise address of positive cases. Their home visits were tracked using GPS signals and a feature installed into the digital application, initially developed to streamline contact tracers' manual workload. There was no officially set distance threshold, but health workers understood being "approximately 500 m" from the assigned dwelling was tolerated (P#12, dentist technician). Health directors exercised this discretion based on feedback from their teams regarding areas with poor cell phone reception and GPS signals.

District health directors functioned as intermediaries between higher-level bureaucrats and health professionals involved in contact tracing. They convened meetings with city governors and officals from the Health Ministry, relaying the challenges and issues faced at the local level to higher authorities. They develooped strategies aimed at enhancing the working conditions for contact tracers. For example, they arranged for food delivery when contact tracing teams overworked and restaurants were closed (P#2, nurse); or enhanced work flexibility by permitting teams to work for one full day followed by two days of absence for better rest (P#13, dentist).

Additionally, theytook initiatives, albeit limited, to grant autonomy to their medical professional personnel. Some directors, for instance, asked their contact tracing teams not to take samples from household residents (focus group interviews); or others accepted that they deliver only one of the medical drugs ordered by the Ministry of Health (P#concealed, health director). However, these initiatives were not standardized; they varied from one district to another, depending on the decisions made by individual health directors.

Nonetheless, the overall substance and procedure of contact tracing were determined by the central government and health bureaucracy, with local initiatives playing a minor role. However, both medical professionals and directors appreciated the centralization behin pandemic management, acknowledging their limited knowledge about COVID-19 (P#8, doctor). Directors admitted that organizations skills to manage a pandemic were not initially developed:

> "All districts and units muddled through at first. We did not know what we were dealing with. There was no central decision from the city directorate. Everyone [each district] tried to organize according to their conditions." (P#concealed, health director)

Health professionals and directors recognized the power of centralization in establishing regulations, enforcing compliance, mobilizing resources, and coordinating the organization. However, they also acknowledged the importance of adaptation, flexibility, discretion, and autonomy in effectively managing a health crisis.

4. Discussion and conclusion

In this paper, we aim to explore how healthcare workers experienced the contact tracing job during the COVID-19 pandemic in Türkiye by examining their reappropriation of professional subjectivity and agency. Drawing on accounts of medical professionals, we identified four key components: uncovering professional fulfillment, feeling restrained in professional dissatisfaction, assessing the job, and engaging in professional and bureaucratic negotiations.

Healthcare workers from various medical professions (such as doctors, dentists, nurses, technicians) and diverse medical and

administrative roles (including health directors and their personnel) were deployed by the Turkish state for the execution and organization of home-based contact tracing. This recruitment occurred regardless of their profession, age, gender, or seniority, encompassingrecent graduates, early-career professionals, and those with advanced work experience.

Although health professionals found themselves tasked with contact tracing, their professional subjectivity and agency were not subdued. On the contrary, we propose that this new responsibility prompted them to reclaim their identity within the medical profession. Chen and Reay (2021) outline that in response to job redesign, professionals restructure their identities by resisting identity change, preserving professional identity, suspending it, or modifying it. Likewise, Axelsson et al. (2010) emphasize that professional identities are ongoing identification processes in which individuals *become* professionals through the complex interplay of professional stability, flexibility, and ambivalence. We propose this ongoing dynamic conception is also valid for professional subjectivity and agency. Professional subjectivity can be understood as an ongoing process of *becoming,* rather than *being,* wherein professional subjects (healthcare workers conducting contact tracing in this particular context) continually revise, consider, and reformulate their acts, thoughts, and aspirations about their job. They preserve their professional identities but also adapt it. It manifests in their professional agency, as evidenced by negotiations and efforts they demonstrate to overcome challenges and constraints, and to expand achievements and opportunities with their profession. These features of professional subjectivity and agency are evident in the experience of health professionals undertaking contact tracing in Türkiye.

In their examination of the reconfiguration of medical professional purpose during crisis time, Rodriguez et al. (2023) argue that professional purpose is fluid and shaped by contextual circumstances. Our findings in this study are consistent with their study. Contextual conditions, the COVID-19 pandemic and the Turkish state's policies to manage it, rendered health professionals in contact traing to adapt, embrace, or refuse regulations about their professional jobs and to reconfigure their professional purpose and roles. Despite their adaptive capacity, medical professionals' engagements in contact tracing were complex driven with ambiguities and ambivalances.

Ergur (2020) proposes that some healthcare workers participated voluntarily in pandemic combat in Türkiye, whereas others were either initially reluctant but later felt obliged or reluctant but subsequently became volunteers (p.84). Ergur (2020) also argues that healthcare workers' perspectives on the value of their job varied. While some rediscovered the value of their profession, some others questioned it, asking if it was worth taking so much risk (p.109). Our findings are similar to Ergur (2020)'s typology and emphasis on variety. Healthcare workers had diverse perspectives, thoughts, emotions, and attitudes regarding their enrollment in contact tracing. They had distinct levels of commitment and reluctancy as well as different attitudes to reshaping professional identity at a time of major change and new roles. It encompassed a wide range of responses, from resistance to adaptation, Yet, regardless of their stance, the experience led to a renewed awareness of their professional subjectivities and agencies.

Our findings are consistent with several other studies that have highlighted burnout, discontentment, and various challenges experienced by health professionals in Türkiye during the COVID-19, including physical, psychological, and professional aspects (e.g. İTO, 2021; Özarslan and Caliskan, 2021; Pak-Güre et al., 2021; Karataş et al., 2022). However, our study emphasizes that states such as fulfillment and dissatisfaction, emerging from this experience, were not stable or constant. Instead, professionals' perspectives on the contact tracing job were characterized by fluctuations and ambivalence. While some healthcare workers were committed and found the contact tracing work meaningful, efficient, and beneficial, resulting in feelings of contentment, satisfaction, and fulfillment, others perceived it as inefficient, useless, mismanaged, leading to feelings of being lost, alienated, and disengaged. Many missed their original profession and aspired to return to their normal career path.

The most significant contextual factor influencing medical professionals' involvement in contact tracing was Türkiye's "public health centralism" (Özçürümez, 2021). A highly centralized bureaucratic health administration made decisions regarding pandemic management and established rules and procedures for contact tracing. Medical professionals appreciated the centralization policy due to their limited knowledge and skills regarding contact tracing and its organization, especially during the early stages of the pandemic. However, they were never satisfied with the restriction of their professional judgments and choices. This finding about the tension between centralization and autonomy resonates with de Graaff et al. (2023)'s study in the Netherlands, which shows that the impulses for centralization and decentralization were inherently in conflict during the COVID-19 crisis, each with its own merits and drawbacks.

In our study, medical professionals, particularly health directors, can be characterized as "street-level bureaucrats," a term coined by Lipsky (1980) to describe government officials who directly interact with individuals in public service and seek to address challenges by exercising discretion and implementing their own actions, thereby separating "policy as performed" from "policy as written" (Lipsky, 2010). In a special issue on street-level bureaucrats during the COVID-19 pandemic across different countries, the strained tension between the level of centralization and the extent of autonomy and discretion is highlighted. This tension persists despite variance across professions and countries (Gofen and Lotta, 2021). "Three patterns of response, namely, adaptation, resistance, and innovation" are observed among street-level bureaucrats across different cases (Gofen and Lotta, 2021). In the experience of health professionals in contact tracing in Türkiye, we have similarly identified acts of resistance, adaptation and the exercise of discretion. While not identical, these actions contain innovation.

Gofen and Lotta (2021) also emphasize that "professionalism is a key in street-level bureaucrats' capacity to cope with imposed challenges, although a situation of crisis undermines professional knowledge, skills, and judgement" (p. 10). This aligns with our central argument that, despite facing significant challenges during a crisis, health professionals deployed in contact tracing reclaimed their professionalism, asserted their professional identities and roles, and reclaimed their professional agency and subjectivity.

It is important to note that actions taken by both medical professionals and health directors, which deviated from central decisions, were not explicit acts of resistance rejecting policy as written. They were instances of "covert resistance" (Hollander and Einwohner, 2004) not openly promoted but devised for practical purposes. Collinson (1994) emphasizes in his study on workplace resistance that consent and resistance are rarely polarized extremes. He argues that resistance often contains elements of consent, and conversely, consent often incorporates aspects of resistance (p. 29). Medical professionals, acting as street-level bureaucrats, navigated between consent and resistance while implementing centralized decisions and policies regarding contact tracing.

Although we highlight health professionals in contact tracing as a collective group, it is crucial to recognize the differences among them influenced by various factors. While some studies point out gender inequalities in professional experiences during the COVID-19 (Hennein et al., 2023; Su et al., 2022), in our study, the variance primarily depended on the type of medical profession, professional status, and career stage rather than gender. It is particularly the early career, junior medical doctors and dentists that felt professionally disengaged and dissatisfied, concerned about the loss of professional knowledge and skills. This finding parallels Johnston et al.'s (2021) remarks about the pandemic's disruption to career progression among junior Australian doctors. Furthermore, in distinction to studies that show higher burnout and workforce exit rates among nurses and other health assistants (Frogner and Dill, 2022), in our case, the latter expressed stronger professional fulfillment and pride in contact tracing experience than

medical doctors.

Similar to other qualitative studies, our findings might not be generalizable. Our sampling was limited to contact tracers in Istanbul. However, taking into account the centralized organization of contact tracing in Türkiye, we think our findings are transferable beyond Istanbul. We suggest our findings can be extended to other contexts where health professionals were deployed in tasks beyond their regular routines or in pandemic health management at different levels. Our study shows the importance of future research on professionals' reappropriation of their professional subjectivity and agency comparatively, across different professions and countries, particularly during times of crisis and change.

The contact tracing experience of medical professionals in Türkiye discloses the complex interplay between centralized governance and professional subjectivity, highlighting a more nuanced and multifaceted account. The experience, while marked by challenges and complexities, has also served as a catalyst for self-reflection, professional reevaluation, and the reassertion of the value of medical expertise in a rapidly evolving global health landscape.

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Ethical approval

We obtained approvals from the Republic of Türkiye Ministry of Health (21.03.2021) and Istanbul Medipol University Noninvasive Studies Ethics Committee (01.04.2021, No:392). Participants provided informed consent before the interviews. We preserved the privacy of participants throughout the research.

Declaration of generative AI in the editing process

During the revision of this study the authors used ChatGPT in order to improve readability and language. After using this tool, the authors carefully reviewed the edits as needed and take full responsibility for the content of the publication.

CRediT authorship contribution statement

Ayşe Polat: Writing – review & editing, Writing – original draft, Supervision, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Zübeyde Demircioğlu:** Writing – review & editing, Validation, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Hüseyin Küçükali:** Writing – review & editing, Visualization, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization.

Declaration of competing interest

The authors declare that they have no conflicts of interest to disclose.

Data availability

Data will be made available on request.

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