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A qualitative descriptive study of stigma and psychological burden among Japanese healthcare workers following COVID-19 infection or close contact

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Healthcare workers (HCWs) experienced significant stigma and psychological burden during the COVID-19 pandemic, yet empirical studies exploring Japanese HCWs' experiences remain limited. This qualitative descriptive study examined stigma and psychological burden among HCWs who contracted COVID-19 or were identified as close contacts during the early pandemic period in Japan. Twenty-three paediatric intensive care unit (PICU) HCWs (9 infected and 14 close contacts) participated in semi-structured interviews conducted 6–12 months post-experience. Two categories emerged: (1) COVID-19-related stigma and collective blame in the Japanese context, manifested through blame, labelling, avoidance, and strong disclosure reluctance; (2) profound guilt and professional burden during COVID-19-related leave, including self-reproach, guilt about burdening colleagues and not contributing, transmission fear, and professional responsibility. Both infected and close contact groups experienced multifaceted stigma and guilt, with distinct patterns. Infected individuals faced indirect stigma and intense responsibility for disruption of healthcare provision, while close contacts encountered criticism for mandatory absences perceived as professional negligence and witnessed organisational shame. These manifestations reflected Japanese cultural values of collective responsibility and avoiding burden to others (*meiwaku*). Our findings illuminate how cultural contexts shape pandemic-related stigma, highlighting the need for culturally informed support strategies that address both universal healthcare challenges and culture-specific manifestations.

Keywords Stigma, Psychological burden, Healthcare workers, COVID-19, Japan, Qualitative study

Health-related stigma arises from fear and misconceptions, significantly impacting the psychosocial well-being of affected individuals^{1–3}. Stigma is a social process through which individuals are devalued in specific contexts through labelling, stereotyping, and discrimination^{1,2}. During infectious disease outbreaks, stigma consistently emerges as a critical psychosocial challenge⁴. In fact, stigma surrounding infected individuals and close contacts has been reported globally, during the COVID-19 pandemic^{5–13} as well as past pandemics⁴, including SARS¹⁴ and MERS¹⁵. Stigma is amplified through heightened public anxiety, intensified by inadequate disease education⁸, media exaggeration of infection risks⁸, and detailed dissemination of patient information and transmission routes through social media¹⁶. Stigma harms mental health and impedes healthcare-seeking behaviour, which potentially accelerates disease spread and social inequalities².

Beyond stigma, infection with or exposure to emerging infectious diseases triggers complex psychological responses such as guilt and shame¹⁷. Both emotions have been documented among COVID-19 patients^{18–20} and close contacts^{10,21}. Guilt arises from recognising that one's actions have harmed others^{22,23}, while shame involves evaluating one's entire self as inadequate due to deviation from moral or social norms²². While guilt typically motivates apology and behavioural improvement, shame triggers concealment and withdrawal²². Understanding

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these emotional responses is crucial for providing effective psychosocial support during infectious disease outbreaks.

Healthcare workers (HCWs) faced unique challenges during the COVID-19 pandemic, bearing dual responsibilities of providing COVID-19 patient care while simultaneously maintaining routine medical services^{24,25}. This dual responsibility increased their workload and created physical and psychological burdens in high-risk work environments^{26–28}. Infection prevention, a key healthcare quality indicator, became a particularly emphasised professional responsibility²⁴. While being praised as ‘heroes’ by society, HCWs simultaneously experienced fear, vulnerability, and the burden of unrealistic expectations²⁹. Furthermore, HCWs infected with or exposed to COVID-19 experienced stigma similar to that seen in the general population^{18,30}, along with heightened susceptibility to severe stress disorders²⁷. They frequently experienced depression, anxiety, and burnout while maintaining professional composure^{18,31}.

COVID-19 spread across Japan from early 2020, with Tokyo emerging as the epicentre. Sequential HCW infections³² and hospital clusters³³ strained the healthcare system. Affected facilities faced public criticism through media portrayals as socially ‘deviant’³³, and discrimination against employees and their families was also reported^{34,35}. Japan primarily relied on voluntary compliance-based pandemic measures rather than the strict lockdowns seen in many other countries³⁶. The government repeatedly promoted public health messages including ‘Avoid the Three Cs’ (closed spaces, crowded places, close contact) and warnings against visiting nightlife districts as high-risk areas for transmission^{37,38}. Japanese society strongly values avoiding ‘*meiwaku*’ (causing trouble to others)^{34,39,40} and maintaining ‘*sekentei*’ (social reputation and others’ perceptions)⁴⁰, reflecting deep-rooted collective responsibility where individual actions impact group standing. During the pandemic, these cultural values manifested as ‘*jishuku*’ (voluntary self-restraint) and heightened sensitivity to social expectations—‘reading the air’^{34,39}. This cultural context likely intensified social pressure on infected individuals. Previous Japanese studies documented widespread fear of both infection and discrimination^{41,42}, with recovered patients reporting discrimination experiences and psychological distress^{43–45}.

However, research examining stigma and psychological burden among Japanese HCWs infected with or exposed to COVID-19 during the early pandemic period remains extremely limited. This gap may reflect cultural norms discouraging open discussion of psychological distress and institutional reputation concerns, highlighting the need for empirical documentation of these experiences. While stigma and discrimination occur universally in infectious disease contexts, their manifestations vary by regional and sociocultural contexts^{2,3}. Similarly, HCWs’ psychological responses to emerging infectious diseases may contain both universal and region-specific elements^{26–28}. Understanding HCWs’ experiences during the early pandemic period is particularly crucial for future pandemic preparedness, as uncertainty and unpreparedness typically amplify both stigma³ and psychological distress²⁶.

This study aimed to elucidate the experiences, stigma, and psychological burden among Japanese HCWs infected with or exposed to COVID-19 during the early pandemic period. By examining both groups within Japan’s distinct cultural context where such experiences often remain unexpressed, we sought to understand their shared experiences and potential differences, contributing to culturally-informed understanding of pandemic impacts on HCWs.

Methods

Study setting

This study was conducted at Tokyo Metropolitan Children’s Medical Centre (TMCMC). The centre is a public specialised children’s hospital with a large emergency department (ED) and paediatric intensive care unit (PICU), covering a paediatric population of approximately 480,000 in western Tokyo. PICUs accommodate numerous critically ill children who are extremely vulnerable to infections, including those with congenital heart disease, immunodeficiency, and chronic respiratory diseases. During the early pandemic period, although paediatric cases of severe COVID-19 were rare, PICU staff faced unique challenges distinct from adult ICUs: protecting these vulnerable patients from an unknown virus while maintaining readiness for potential severe COVID-19 cases²⁹. These challenges were likely amplified when staff contracted COVID-19 or became close contacts; their absence disrupted critical care provision while raising concerns about transmission to vulnerable paediatric patients. This distinctive context may have shaped participants’ experiences of stigma and psychological burden. Notably, PICUs in Japan are established only in very limited medical institutions compared to adult ICUs. TMCMC was one of the few facilities in Tokyo capable of accepting COVID-19-positive pediatric patients requiring mechanical ventilation or ECMO, and was the only centre that experienced a major outbreak leading to PICU closure during the early pandemic period. In July 2020, a significant outbreak occurred among PICU HCWs³², identifying numerous close contacts. At that time in Japan, close contacts were defined as individuals who had contact with a confirmed case from two days before symptom onset and met one of the following criteria with infection risk determined through comprehensive assessment of environmental conditions and contact situations⁴⁶: (1) lived with or had prolonged contact with a confirmed case; (2) examined, nursed, or cared for a patient without appropriate protection; (3) were likely to have had direct contact with respiratory secretions or body fluids; or (4) had contact for > 15 min within approximately 1 m without proper prevention measures. The hospital developed stricter criteria after some staff members who did not meet the standard criteria later tested positive. Staff members who contracted the virus, their close contacts, and identified contacts were restricted from work, resulting in staff shortages with severe operational impacts. The PICU closure for 17 days, unprecedented among paediatric facilities in Tokyo, resulted in suspended emergency admissions and cancellation of surgeries requiring postoperative intensive care³². Contact precautions were implemented for existing patients, and family visits were restricted. Although the outbreak was eventually contained, staff members continued to sporadically contract COVID-19. Infected staff members were isolated either in a hospital

or at a designated facility or home, based on individual circumstances and system capacity. Close contacts were required to quarantine at home.

Study design

This study employed a qualitative descriptive study design as part of a broader investigation examining the psychosocial and organisational impact on HCWs who contracted COVID-19 or required quarantine as close contacts. Qualitative descriptive research provides comprehensive summaries of people's experiences and events in everyday terms, and is particularly suitable when a direct description of phenomena is desired^{47–49}. This approach was chosen to illuminate HCWs' experiences, concerns, and responses, as well as influencing factors, early in the unprecedented pandemic period, where faithful portrayal of phenomena was essential. Compared with other qualitative methodologies, qualitative descriptive research involves less interpretation and enables analysis that stays closer to the data⁴⁷. This characteristic aligned well with our aim to obtain practical insights from healthcare settings during the early pandemic period. Furthermore, the qualitative descriptive design is well-suited for capturing candid responses and concerns about issues important to practitioners and policymakers⁴⁷. By directly describing HCWs' isolation and quarantine experiences, this study attempted to provide practical implications for infection control systems and human resource management in healthcare institutions for future pandemic responses.

Research team

The present study was conducted by an interdisciplinary team led by MK, a female physician with paediatric intensive care experience and qualitative research training. The team included AA (physician and medical ethicist with extensive experience in qualitative research and internal medicine), AE and TO (PhD holders in philosophy and ethics), and OS (physician with extensive paediatric intensive care experience).

Participant selection and recruitment

This study employed purposive sampling to achieve the objective of understanding HCWs' experiences during the early COVID-19 pandemic period. Participants were selected from among HCWs who worked in the PICU at TCMC during the critical early pandemic period (February 2020 to March 2021) and experienced either isolation after contracting COVID-19 or quarantine as close contacts. Eligibility criteria were as follows: (1) individuals who tested positive for SARS-CoV-2 polymerase chain reaction (PCR) and underwent isolation at designated medical facilities, accommodation facilities or home, or (2) individuals who tested negative for SARS-CoV-2 PCR but were identified as close contacts by the hospital infection control team and required home quarantine. No exclusion criteria were set regarding age, sex, or occupation. During the early period of the COVID-19 pandemic, experiences of infection and close contact exposure were considered highly sensitive information, and broad recruitment was challenging due to ethical considerations. Therefore, we focused on a single accessible facility. Within this limited scope, we endeavoured to include participants with diverse characteristics such as profession, age, and years of experience. As the number of participants was determined based on these practical and ethical constraints during this specific period, we did not assess content saturation. Following the qualitative descriptive research principles^{47,48}, we emphasised the comprehensive description of diverse perspectives and experiences within the defined setting. Of 33 eligible HCWs, 23 participated (nine infected individuals and 14 close contacts). Six potential participants were unreachable due to transfer or resignation, and four declined to participate. Eligible participants were directly approached at the workplace by the principal investigator.

Data collection

Semi-structured interviews based on a researcher-developed interview guide (Table 1) were conducted between April and October 2021, 6–12 months after participants' COVID-19 infection or close contact experiences. This timing was selected for several reasons. First, we considered that acute psychological distress immediately following the experience would have subsided by then, allowing participants to reflect on their experiences in a more composed psychological state. Also, a period of 6–12 months was considered sufficient for participants to process their experiences and develop meaning from them, which was crucial for obtaining rich narratives. Second, this timeframe minimised recall bias while ensuring memory accuracy. Furthermore, medium- to long-term psychosocial impacts would have become apparent, including changes in interpersonal relationships and effects on professional identity, which participants could then recognise and verbalise. Based on these considerations, we determined this interview timing to be optimal for achieving our research objectives.

Due to COVID-19 prevention measures, interviews were conducted either face-to-face in a meeting room at the researchers' medical centre or online via Zoom, based on participants' preferences. All interviews were conducted by MK on a one-to-one basis, ensuring privacy regardless of interview format. Each participant was interviewed once. Questions were explained verbally during sessions. Interviews averaged 53 min (range 24–109 min) and were audio-recorded with participants' consent using a digital recorder. Field notes were not collected in this study.

Data analysis

Verbatim transcripts were created by Kyoto Data Service, a professional transcription company, and verified against audio recordings by the principal investigator (MK). Transcripts were not returned to participants for verification. Qualitative descriptive analysis followed established procedures^{47,50}. Transcripts were read repeatedly, with coding performed based on content similarity at the sentence or phrase level. Similar codes were organised into subcategories with simplified names representing shared content. These subcategories were gradually grouped into categories and core categories through progressive abstraction. Data coding

Experience during the period from testing to return to work and subsequent mental state
How did you feel during the period from taking the test until receiving the results? (For positive cases) How did you feel during the period from receiving the results until admission to a medical facility or accommodation facility? (For positive cases) During hospitalisation or stay at accommodation facility: How did you feel? What inconveniences or difficulties did you experience? What measures did you find helpful in addressing these issues? During home quarantine after discharge from hospital or accommodation facility: How did you feel? What inconveniences or difficulties did you experience? What measures did you find helpful in addressing these issues? During the period of approximately one month following your return to work: How did you feel? What inconveniences or difficulties did you experience? What measures did you find helpful in addressing these issues?
Discrimination experience
Have you experienced any discriminatory reactions from others as an infected person or close contact? If yes, what kind of incidents occurred?
Information disclosure
How did you feel about the Tokyo Metropolitan Government's information disclosure regarding positive cases? How did you feel about the hospital's information disclosure regarding positive cases?
Future support needs
What kind of support would you like to receive from your workplace if similar situations occur in the future? What kind of support would you like to receive from the government if similar situations occur in the future?
Impact on daily life routines
Have you noticed any changes in your daily work life before and after this experience? Have you noticed any changes in your daily life outside work before and after this experience?
Overall experience
What did contracting COVID-19 or being identified as a close contact mean to you as an experience?

Table 1. Interview guide.

was primarily conducted by MK, with continuous guidance from three researchers with extensive qualitative research experience (TO, AE, AA) and OS with substantial clinical experience at the study site. Specifically, during the coding and subcategory generation phases, research meetings were held every 1–2 weeks to discuss interpretative validity. During the category generation phase, MK and AA collaborated to deepen the analysis, and the final category structure was individually verified by AE, TO, and OS. Codes, subcategories, categories, and core categories were inductively derived from the data. When interpretative differences arose among researchers, discussions continued until a consensus was reached regarding data interpretation and analytical reliability and validity. Data management used Microsoft Word and Excel without specialised qualitative research software.

Trustworthiness and rigour

This study required special consideration regarding researcher positionality. The principal investigator (MK) and co-investigator (OS) were colleagues of many participants at the same facility, and MK had personally experienced COVID-19 infection. To ensure trustworthiness while considering how such positionality might influence the analysis⁵¹, several methodological approaches were adopted. First, throughout the study, the research team engaged in critical reflection on how certain members' experiences and assumptions might influence the research process, conducting regular reflective dialogue⁵⁰. Second, during interviews, particular attention was paid to facilitating participants' free expression while remaining mindful of how researcher-participant relationships might affect the interaction. Specifically, we primarily used open-ended questions, maintained a non-judgmental attitude towards participants' statements, and allowed silence to encourage participants to share at their own pace. The interviewer consciously avoided self-disclosure that might guide participants' narratives, particularly regarding experiences crucial to research objectives. Throughout the interviews, depth of data was maintained by seeking detailed descriptions whenever possible. Third, researchers with medical, philosophical, and ethical backgrounds regularly reviewed and advised on the principal investigator's analysis, examining interpretative validity from their respective disciplinary perspectives⁵¹. This interdisciplinary approach facilitated multifaceted understanding and deeper interpretation of the data. Member checking with participants was not conducted in this study. This decision was made out of consideration for the potential psychological burden of revisiting sensitive experiences of COVID-19 infection or close contact exposure, as well as time constraints for busy HCWs. Instead, we implemented continuous verification processes involving multiple researchers and ensured transparency by including abundant participant quotations in the results.

Ethical considerations

This study was conducted in accordance with the Declaration of Helsinki and the Ethical Guidelines for Medical Research Involving Human Subjects (Ministry of Health, Labour and Welfare of Japan, 2017). The study protocol was approved by the Ethics Committees of TCMCMC (approval number: 2020b-149) and Tohoku University Graduate School of Medicine (approval number: 2020-1-1155). There was no clinical trial number associated with this study. Participants were informed about audio recording of interviews, anonymity, data confidentiality,

voluntary participation, and dissemination of results at academic conferences and in publications. Written informed consent was obtained from all participants.

Results

Participant characteristics, interview duration, and interview format are shown in Table 2. All nine infected participants had mild symptoms without any moderate or severe cases, according to Japanese criteria at that time⁵², with two developing pneumonia but not requiring oxygen. Qualitative descriptive analysis identified two categories: (1) COVID-19-related stigma and collective blame in Japanese context and (2) profound guilt and professional burden during COVID-19-related leave (Table 3). Overall, both infected individuals and close contacts commonly experienced COVID-19-related stigma and discrimination, alongside intense feelings of guilt. However, group-specific patterns emerged in their perceptions of stigma and manifestations of guilt. In the verbatim quotations below, ‘P’ denotes infected individuals, ‘C’ indicates close contacts, ‘N’ represents nurses, ‘D’ represents doctors, and the numbers indicate the assigned participant identifiers within each group.

Category 1: COVID-19-related stigma and collective blame in the Japanese context

Category 1 revealed how participants faced collective blame for their infections or exposures and witnessed institutional shame. They showed strong disclosure reluctance driven by multiple concerns—including causing ‘*meiwaku*’ (burden to others) and fear of discrimination—and experienced both direct and indirect forms of stigmatisation.

Both infected individuals and close contacts felt blamed when COVID-19 cases emerged in their workplace (1–1). They perceived accusations of personal negligence and departmental failure. One infected nurse manager recalled sensing that the hospital’s senior management held departments responsible for any cases within their division. PICU staff faced particularly strict infection control expectations because of the vulnerability of their patient population. Some reported that departments with prior cases received intense scrutiny with each new symptomatic case. Close contacts felt accused during contact tracing, even without intent, and sensed colleagues’ criticism of their actions.

Whenever someone gets infected, regardless of who, hospital management would definitely question our ward management. The responsibility always falls on frontline staff. (P3N)

Category	Tested positive for COVID-19 (n = 9)	Close contact with COVID-19 (n = 14)
	No. or mean ± SD (min–max)	No. or mean ± SD (min–max)
Interview time (minutes)	70 ± 18 (44–109)	42 ± 10 (24–59)
Interview format		
Face to face	1	5
Online	8	9
Sex		
Female	8	10
Male	1	4
Age	37 ± 12	34 ± 7
20’s	3	3
30’s	3	7
40’s	1	3
≥ 50’s	2	1
Occupation		
Nurse	9	10
Physician	0	4
Physical symptoms*		
None	0	14
Mild	9	0
≥ Moderate	0	0
Combined duration of isolation/quarantine and subsequent work restriction (days)	21 ± 9 (16–46)	12 ± 2 (8–17)
Type of isolation/quarantine		
Hospital	5	0
Accommodation	3	0
Home	1	14

Table 2. Characteristics of study participants. *The Japanese Ministry of Health, Labour and Welfare classified COVID-19 severity in 2020 as follows⁵²: Mild: Fever, cough, fatigue, or other symptoms without pneumonia findings, OR pneumonia findings without need for oxygen therapy. Moderate: Pneumonia findings requiring oxygen therapy. Severe: Life-threatening conditions such as acute respiratory distress syndrome (ARDS), OR requiring mechanical ventilation or extracorporeal membrane oxygenation (ECMO) management.

Categories	Subcategories	
(1) COVID-19-related stigma and collective blame in the Japanese context	(1) Feeling blamed for infection as departmental failure and personal negligence	P&C
	(2) Witnessing organisational shame regarding staff infections	C
	(3) Worrying about psychological burden on other staff while on COVID-19-related leave	P&C
	(4) Feeling negatively labelled by others solely for infection or suspected infection status	P&C
	(5) Feeling hesitant to openly disclose infection/ close contact status	P&C
	(6) Experiencing discriminatory treatment from colleagues as infected individuals or close contacts	P&C
	(7) Experiencing discriminatory treatment from relatives as infected individuals or close contacts	P&C
	(8) Sensing indirect stigma through others' protective reactions	P
	(9) Experiencing no discrimination despite infection or close contact status, either professionally or personally	P&C
(2) Profound guilt and professional burden during COVID-19-related leave	(1) Feeling guilty about becoming infected or designated as close contact	P&C
	(2) Feeling intense guilt about burdening colleagues and disrupting patient care	P&C
	(3) Feeling minimal guilt about workplace impact	P
	(4) Feeling frustrated due to inability to contribute despite physically well	P&C
	(5) Fearing transmission to family, colleagues, patients, and their families	P&C
	(6) Recognising heightened professional responsibility after witnessing healthcare disruption	P

Table 3. Summary of qualitative descriptive research findings. *P*: Participants who tested positive for COVID-19, *C*: Participants who were close contacts with COVID-19.

A senior colleague said, “You were talking with that infected staff member, weren’t you?” The tone of this single comment made me feel blamed, as if asking why I’d acted that way. That memory persists. (C7N). Some close contacts reported that COVID-19 infection was institutionally regarded as shameful rather than inevitable, as indicated by management’s rejection of proposals to share outbreak experiences (1–2). This perception reflected organisational attitudes rather than participants’ personal feelings of shame. While accepting this institutional response as unavoidable at the time, close contacts expressed disappointment. Participants reflected that this phenomenon mirrored the broader social atmosphere in Japan at the time.

I proposed sharing our experience and lessons learned in managing multiple staff absences in the ward. Management rejected this, wanting to keep the hospital anonymous. I felt the hospital viewed staff infections as shameful—consistent with the broader atmosphere in Japan during the early pandemic. (C4N)

Participants worried about infected colleagues’ psychological burden (1–3). They expressed particular concern for staff members perceived as index cases who might face criticism and reputational damage. One close contact reflected that their own burden was comparatively lighter than that of infected colleagues or those who continued working.

I worried about the first person who developed symptoms. I thought they might feel guilty. [...] If they became the target of rumours and criticism, that would be really unfair. (C7N)

Both infected individuals and close contacts felt that COVID-19 infection alone triggered negative labelling by colleagues and community members (1–4). Some feared being judged for inadequate infection prevention or facing discrimination, regardless of actual transmission circumstances. The mere fact of testing positive or requiring isolation was sufficient to provoke these concerns. Some recalled feeling labelled as ‘someone who made a mistake’ when isolated in a private room for testing. Others feared being identified as an index case, recalling early pandemic media coverage that detailed index cases at other facilities and prefectures.

Testing positive felt like being labelled with a negative sticker. No one thinks well of you when you’re infected. [...] I worried people would assume I’d been socialising carelessly, gossiping about things that never happened. (P1N)

Both infected individuals and close contacts viewed their status as confidential information requiring selective disclosure (1–5). Many participants expressed heightened concern about others’ reactions, reflecting the social pressure they felt regarding their status. Some disclosed only to cohabiting family members during the relevant period. Reasons for non-disclosure included feelings of uneasiness and social discomfort about infection circumstances, concerns about causing worry, and fear of discrimination. However, some faced mandatory disclosure—reporting to family members’ workplaces or schools, notifying potential contacts, or requesting essential support from non-cohabiting relatives. Some infected individuals limited disclosure to their most trusted friends. While reluctance to discuss experiences decreased over time for some, others still considered it an inappropriate topic to raise voluntarily even after considerable time had passed.

When I tested positive, I didn’t tell anyone voluntarily. I felt people might assume I’d done something wrong to get infected. I didn’t want misinterpretation. (P5N)

I never considered telling others I was a close contact. [...] I felt somewhat embarrassed—I don't know how to explain it—and feared their discriminatory reactions. If I don't need to tell, I'd rather not—that feeling persists. (C10N)

When asked about actual discrimination experiences, some recalled facing direct discrimination from colleagues as infected individuals or close contacts (1–6). Some felt treated as contaminated objects and experienced alienation when isolated in private rooms for testing or when witnessing colleagues disinfect their workspaces. They accepted these treatments as inevitable.

Once identified as a close contact during my shift, I was immediately isolated in a private room. Everything I touched was wiped with disinfectant—treated like something dirty. [...] I thought, “This is how it is.” Everyone's worried. It can't be helped. (P7N)

Some heard colleagues criticising behind closed doors the behaviours that led to infection or close contact designation. Others encountered comments upon returning to work suggesting close contacts had ‘taken advantage’ through enforced asymptomatic leave, unlike infected individuals who genuinely suffered. Close contacts felt disappointed by such perceptions, given that they neither chose their status nor found quarantine comfortable.

Multiple staff got infected after eating together during break time. Colleagues criticised them behind their backs, saying “How could they do such a thing?” (C7N)

Some colleagues implied, “You had no symptoms but got to rest, so now handle all the accumulated work. Must be nice to have had a break.” They don't say it directly, but the tone is there. [...] That's hard to hear when you're waiting for clearance to return. (C12D)

Some experienced discrimination from relatives as infected individuals or close contacts (1–7). One close contact recalled their relatives avoiding visits even after quarantine ended. They viewed this as irrational yet understandable. Another described their relatives' surprise at learning of their infection or close contact status.

Even after testing negative and completing quarantine, our relatives asked us not to visit for a while. I completely understand. [...] People's psychological fears often outweigh scientific facts. (C13D)

Some infected individuals indirectly sensed that infection or close contact status could invite discrimination based on the reactions of their family members, colleague, and local community (1–8). One recalled their parent hesitating to inform relatives about their status. Another was advised by their mother to avoid being seen by neighbours when heading to the hospital. Some believed that rumours about their infection had likely spread locally, given what they had heard about other cases in their areas. These reactions reflected the cultural importance of maintaining ‘*sekentei*’ (social reputation) and sensitivity to others' opinions, particularly regarding potential discrimination.

Personally, I wasn't particularly concerned, but my mother said, “It would be better if the neighbours don't find out.” It showed me how society views these situations. (P6N)

One infected individual paradoxically sensed an underlying negativity through excessive reassurance upon returning to work, interpreting the frequent consolation as evidence that not all colleagues viewed infected individuals favorably.

When people repeatedly say “Don't worry about it” or “No need to apologise,” I appreciate the words, but I know not all colleagues view infected individuals positively. They're being considerate to me. (P2N)

In contrast, some participants reported experiencing no discrimination (1–9). They attributed this to various factors: supportive workplace environments, non-disclosure of their status, and minimal contact with others during isolation. Several participants noted that colleagues viewed infection as an occupational hazard rather than personal failure, which facilitated non-discriminatory responses. However, some recognised that the absence of discrimination might have been due to their limited social interactions during the relevant period.

I don't recall any discriminatory treatment at work or in private life. My colleagues shared the mindset that infection wasn't any individual's fault—anyone could have been infected. (P4N)

Category 2: profound guilt and professional burden during COVID-19-related leave

Category 2 captured profound guilt experiences rooted in the tension between professional expectations and unavoidable infection risks. Participants expressed self-blame suggesting internalised pressure to achieve perfect prevention, while staff absences in an already strained system generated intense guilt about burdening colleagues and compromising patient care.

Infected individuals felt intense guilt about becoming infected, whereas close contacts felt guilty about their behaviours that had led to the designation (2–1). This persistent self-blame, regardless of actual prevention measures taken, suggested internalised pressure for perfect infection control.

Despite being told anyone could get infected anytime, I still blamed myself. I should have been more careful with prevention. (P7N)

Maybe I relaxed too much at the end of my shift. I kept thinking, “If only I hadn't removed my mask in the locker room.” [...] If I'd been more careful, this wouldn't have happened. (C4N)

Both infected individuals and close contacts felt intense guilt about burdening colleagues and disrupting patient care (2–2). This guilt stemmed from staffing shortages, shift coverage needs, and outbreak response requirements. They also felt guilty about inconveniencing patients and their families. One staff member recalled fearing workplace disruption more than personal infection status while awaiting test results. Another felt heightened remorse after witnessing extended PICU stays and family visitation restrictions upon returning to work. Some infected individuals felt guilty specifically because PICU patients, including infants, had to undergo COVID-19 testing, as well as for creating burdens for colleagues who became close contacts. Several apologised to multiple colleagues upon return for the disruption. Close contacts felt guilty about their leave despite not being infected, being physically well, and being able to work. Many participants explicitly expressed concern about causing ‘*meiwaku*’ (burden) to their colleagues. Conversely, some hospitalised infected individuals reported minimal guilt about the workplace impact of their infection and absence (2–3).

When I got COVID, my first thought was “This will cause huge problems at work.” I was so terrified of the workplace impact that I tried not to even imagine a positive test result. [...] I felt guilty about needing shift coverage and sorry for colleagues who’d need PCR testing because of me. (P8N)

Upon returning, I saw firsthand how colleagues managed during my two-week absence. [...] I’d inconvenienced hospitalised children and their families. That’s when the guilt really hit. (C6N)

Participants recalled feeling powerless and frustrated about being unable to contribute even though they were physically well, while their colleagues worked under challenging conditions due to staff infections (2–4). Some attempted to do administrative work from home but lacked access to necessary documents and could not reach colleagues for consultation due to sudden leave. These responses suggest that enforced absence, though mandatory, felt like a failure to fulfil professional obligations during the crisis, causing considerable distress.

I felt guilty—is it right to be idle while everyone’s working so hard? (P7N)

Being completely healthy yet unable to work was painful—knowing that others were working while I couldn’t was extremely hard. (C2N)

Both infected individuals and close contacts feared transmitting infection to their family members and others (2–5). Infected individuals worried about patients and families they had cared for before symptom onset, continuing to worry about their condition while on leave. They feared triggering widespread outbreaks leading to PICU closure and regional healthcare disruption. Some worried about colleagues designated as close contacts developing symptoms. One recalled significant stress of having to personally notify potential close contacts. Similarly, close contacts worried about transmitting to the patients and their families, people encountered before or during testing, and their own households. Some felt like ‘pathogens’ even after quarantine ended and they were clear to return, fearing that they might infect their colleagues or patients.

When four nurses tested positive simultaneously, I feared it had spread to patients. I’d been caring for patients and their families bedside—my primary worry was having infected them. (P4N)

I treated myself like a germ, questioning if touching anyone was safe. Returning to work terrified me—I feared infecting children through touch. [...] I was genuinely afraid of interacting with others. (C9N)

Some recognised heightened responsibility as HCWs after witnessing major disruption from multiple staff infections—including temporary PICU and ED closures—and subsequent media coverage (2–6). One staff member felt apologetic towards their hospital for being amongst the first infection cluster during the early pandemic period.

Our positive tests meant tiny children had to endure painful PCR testing. The PICU and ED closed, halting the regional paediatric emergency transport system. [...] We affected healthcare overall, which heightened my awareness of being a healthcare worker and strengthened my sense of responsibility. (P1N)

The visible system-wide impact of their infections strengthened participants’ sense of professional responsibility.

Discussion

Our qualitative descriptive analysis revealed complex patterns of stigma and psychological burden among Japanese HCWs during the early COVID-19 pandemic, with both shared experiences and distinct group-specific manifestations between infected individuals and close contacts. The following sections discuss stigma manifestations, psychological burden, and cultural context, examining both commonalities and differences between the two groups.

Stigma manifestations

Both groups experienced stigma through blame, labelling, and avoidance. Participants reported feeling ‘labelled’ through isolation procedures or avoidance behaviours, with some experiencing direct discrimination while others, notably, reported none. The absence of discrimination in some cases may have been influenced by supportive workplace environments and the scope and timing of disclosure, though specific factors were not explored in this study and thus warrant future investigation.

A prominent commonality between the two groups was hesitation to disclose their status, with three distinct reasons emerging from our data. First, concern about causing worry or anxiety to others, possibly related to the Japanese cultural value of avoiding ‘*meiwaku*’ (being a burden)^{34,39}. Second, fear of discrimination. During the early pandemic in Japan, detailed media coverage³³ and regional labelling³⁸ framed infection as a result of personal

behavioural choices, meaning that disclosure could expose individuals and families to potential discrimination. Participants received advice from their families to prevent information leakage to their neighbours, suggesting that stigma extended beyond individuals to affect their social networks⁹. Third, the influence of shame. Some participants expressed uneasiness and social discomfort about disclosure, while hospital management attempted to conceal staff infections, both reflecting shame's self-concealing nature²². These factors appeared to shape participants' selective disclosure patterns, limiting essential reporting to workplaces, potential contacts, and trusted individuals. Additionally, some individuals' continued avoidance of disclosure after considerable time suggests the persistent impact of the stigma experience.

Some infected individuals sensed indirect stigma through others' protective reactions rather than direct discrimination. This treatment—'*haremono ni sawaru*' (handling with excessive care)—where excessive kindness paradoxically reveals negative sentiments, reflects the Japanese duality between '*honne*' (true feelings) and '*tatemae*' (public facade)⁴⁰. Meanwhile, close contacts faced criticism for 'asymptomatic leave'—mandatory absence despite being healthy. Given the culture of presenteeism in Japanese healthcare, this was poorly understood and sometimes perceived as professional negligence. Some close contacts also witnessed criticism of behaviours leading to designation (e.g., eating together), which was perceived as resulting from 'avoidable actions'. Although close contacts could include cases of unavoidable occupational exposures, this study did not systematically examine designation circumstances. Government messaging about 'avoiding the Three Cs'³⁷ may have framed close contact as a personal choice, reinforcing such criticism. Furthermore, the patterns of witnessing management treating COVID-19 as institutionally shameful—refusing to share information and insisting on anonymisation—were particularly prominent among close contacts in our study. The groups' different workplace positions may explain this observed difference. Infected individuals were physically isolated and protectively treated as 'affected parties'. In contrast, close contacts faced shifting treatment. They witnessed negative responses at work before designation, became targets of criticism for taking asymptomatic leave, and remained unprotected upon return. This trajectory—from being an observer to becoming criticised and unprotected—shaped their unique experiences. These structural differences reveal how positionality within healthcare influences stigma manifestations and intensity, with individual infections becoming matters of collective accountability in the Japanese healthcare context.

Psychological burden

Both infected individuals and close contacts experienced multifaceted psychological burden, with distinct patterns of guilt and shame emerging in each group.

The architecture of guilt: shared foundation, different manifestations

Both groups expressed guilt about their personal behaviours leading to their status, potential harm to patients linked to transmission fear, and colleagues' increased workload. Despite infection being possible even with appropriate precautions, the gap between Japan's public health slogans, such as 'avoid the Three Cs', and societal expectations of 'perfect prevention' for HCWs likely amplified their guilt. Both groups strongly feared transmitting infection to their families, colleagues, and patients. Additionally, guilt about increasing colleagues' workload was frequently expressed, reflecting Japanese values of avoiding '*meiwaku*' (burden to others)^{34,39,40}. This guilt was amplified by staff absences, which inevitably increased colleagues' burden, as Japanese healthcare settings lacked sufficient replacement staff. Furthermore, both groups experienced significant distress from being unable to fulfil professional duties during the crisis, reflecting cultural expectations that HCWs unite during emergencies—a value particularly emphasised in disaster response.

However, there were qualitative differences between the groups. Close contacts reported guilt about specific behaviours leading to designation, such as 'talking while unmasked'. Being able to identify the exact moment of exposure made their actions seem retrospectively 'avoidable', potentially reinforcing counterfactual thinking ('if only I had...') and prolonging self-blame. In contrast, infected individuals reported guilt about broader impacts on healthcare provision following their infection and stronger professional self-reproach. While transmission fears were common to both groups, infected individuals faced higher realistic risk as infection sources, amplifying their guilt. They specifically felt guilty about patient isolation procedures, prolonged family visitation restrictions, and the impact of PICU closure on regional healthcare provision. HCWs recognised adverse effects of visitation restrictions on paediatric patients and families⁵³, and PICU closure compromising access of critically ill children to appropriate care. Potential patient harm triggered excessive self-criticism in HCWs¹⁷, framing infection as 'professional failure'. Notably, some infected individuals reported minimal guilt towards workplace colleagues. This suggests that infected individuals, facing physical symptoms, may have developed a self-protective cognitive coping strategy, recognising that infection is inevitable (i.e., external attribution). Meanwhile, close contacts' 'non-infection' outcome may have led to sustained self-blame for perceived inadequate precautions.

Suppressed personal shame and manifested organisational shame

This study revealed contrasting patterns of shame at personal and organisational levels. Participants expressed uneasiness and social discomfort about disclosing their infection status, but they rarely expressed explicitly a sense of personal shame about infection or being a close contact. This suppressed expression may reflect the characteristics of shame—concealment and withdrawal²². In other words, greater shame creates greater reluctance to discuss the emotion or triggering events.

In contrast, organisational shame regarding hospital COVID-19 occurrences was evident, as demonstrated by management's refusal to share outbreak experiences and insistence on anonymity. Organisational shame occurs when employees internalise institutional failures as personal defects⁵⁴. Such failures include ethical violations, performance deviations, or colleagues' actions^{55,56}. Healthcare institutions are expected to provide high-quality care^{24,25}. Yet, facilities with infection cases faced public criticism as 'deviant' during the early

pandemic period in Japan³³. In this context, intra-hospital infection was perceived as an organisational failure threatening institutional '*sekentei*' (social standing), evoking shame across all staff levels. Organisational shame depletes psychological and social resources⁵⁵, adversely affecting occupational health. Our findings suggest a cyclical process: organisational shame amplifies individual stigma⁵⁷, which then returns to affected individuals.

Cultural context

This study revealed distinctive manifestations of stigma and psychological burden within the Japanese healthcare context. While HCWs universally share a desire to help others and tend to ruminate on negative emotions during difficulties⁵⁸, these professional characteristics interacted with the Japanese cultural context to produce unique pandemic experiences. We observed indirect stigma through others' protective reactions to infected individuals, strong disclosure reluctance, and suppressed personal shame alongside manifested organisational shame. These patterns reflected a heightened concern for others' evaluations and how individual failures affect entire organisations—features rooted in Japanese cultural foundations of '*sekentei*' consciousness, '*meiwaku*' avoidance, and '*honne-tatemae*' duality. While cultural frameworks often contrast individualistic and collectivistic societies⁵⁹, or guilt-based versus shame-based cultures²², our findings revealed greater complexities beyond such dichotomies—the organisational shame and social pressures we documented likely resonate globally⁶⁰, and emotional responses within organisations reflect both cultural values and situational factors⁵⁵. These findings suggest that pandemic stigma and psychological burden among HCWs manifest through the interaction of shared professional challenges and specific cultural contexts.

Limitations

This study has several limitations. First, sample size and recruitment scope were limited, as we included only 23 HCWs from a single institution. Given the sensitive nature of COVID-19 infection and close contact experiences, ethical and practical constraints limited broader recruitment, leading us to focus on this accessible single site. This may have resulted in selection bias, warranting careful interpretation of generalisability. Furthermore, we did not explicitly assess content saturation. This study employed a qualitative descriptive study design to comprehensively describe HCWs' experiences within a single PICU during a specific period. While we included participants with diverse characteristics and considered that the data provided sufficient depth and richness for our objectives, the absence of formal saturation assessment means our findings might not represent the full spectrum of experiences and some themes may have been missed. Systematic content saturation assessment would have further enhanced methodological rigour.

Second, researcher positionality and reflexivity warrant consideration. Some researchers' personal COVID-19 experiences may have introduced bias in data collection and interpretation, although these experiences may have facilitated trust-building during interviews. Similarly, collegial relationships between some researchers and participants may have introduced social desirability bias, yet may also have enabled frank discussions based on shared organisational context. We addressed these potential biases through continuous verification among multiple researchers. However, member checking was not conducted due to participants' psychological burden and time constraints, meaning interpretations were not validated by participants. While inter-researcher verification and abundant quotations helped mitigate this limitation, member checking would have strengthened interpretive validity.

Third, detecting qualitative differences between infected individuals and close contacts may have been methodologically constrained. The small subgroup sizes both limited detection of subtle differences and warrant cautious interpretation of observed patterns. Additionally, individual interview format and interview guide design were potentially insufficient for eliciting group-specific differences. Future research would benefit from a larger sample size, refined interview guides, and focus group discussions.

Fourth, this study focused on a specific pandemic period, providing a temporal snapshot that may not apply to other phases. Longitudinal research would be necessary to capture temporal changes in infection and close contact experiences.

Finally, timing and environmental constraints potentially affected data collection. Interviews conducted 6–12 months post-experience may contain recall bias, although this timing was intended to balance psychological burden during the early pandemic period with memory retention. Additionally, online video interviews necessitated by infection prevention may have limited the capture of non-verbal cues compared to face-to-face interviews.

Conclusion

This qualitative study of Japanese HCWs' experiences during the early COVID-19 pandemic revealed that both infected individuals and close contacts experienced multifaceted stigma and guilt, with strong disclosure reluctance reflecting a heightened concern for others' evaluations. Group-specific patterns emerged. Infected individuals experienced indirect stigma and intense guilt about healthcare disruption, while close contacts faced criticism for mandatory absence perceived as professional negligence and witnessed organisational shame threatening institutional '*sekentei*'. This study contributes to stigma theory by demonstrating how cultural concepts of collective responsibility transform individual health events into organisational crises, amplifying both stigma and psychological burden. These findings reveal that pandemic stigma operates through complex interactions between universal healthcare challenges and specific cultural contexts, transcending simple cultural dichotomies.

This study offers concrete guidance for healthcare organisations and professionals. Organisationally, institutions must reframe infections as an inevitable risk rather than shameful failure, ensure adequate staffing to prevent burden amplification, and provide transparent communication that protects institutional reputation without concealing reality. Support must address group-specific needs. Infected individuals require relief from

excessive self-blame and attention to indirect stigma, while close contacts need organisational validation that mandatory absence is not professional negligence—particularly crucial in cultures valuing ‘*meiwaku*’ avoidance and collective responsibility during crises. At the individual level, HCWs benefit from understanding these psychological phenomena to develop self-compassionate coping strategies, with facilitated peer connections potentially providing valuable support. Furthermore, these insights can foster mutual understanding across different staff experiences, contributing to reduced stigmatisation and organisational shame.

These insights underscore the importance of culturally informed interventions that address both shared professional experiences and their culture-specific manifestations, essential for building resilient healthcare systems capable of supporting staff wellbeing during infectious disease outbreaks.

Data availability

The datasets used and analysed that support the findings of this study are not openly available due to reasons of sensitivity and are available from the corresponding author upon reasonable request.

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Author contributions

MK and AA had full access to all the data in the study and take responsibility for the integrity and accuracy of the data analysis. All authors contributed to the study's concept and design. MK conducted the interviews and wrote the first draft of the manuscript and prepared all tables. AA, OS, AE, and TO critically reviewed and revised the manuscript. All authors read and approved the final manuscript. MK served as the corresponding author.

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Declarations

Competing interests

The authors declare no competing interests.

Ethics approval and consent to participate

This study was conducted in accordance with the ethical principles of the Declaration of Helsinki and the Ethical Guidelines for Medical Research Involving Human Subjects (Ministry of Health, Labour and Welfare of Japan, 2017). The study protocol was approved by the Ethics Committees of Tokyo Metropolitan Children's

Medical Centre (approval number: 2020b-149) and Tohoku University Graduate School of Medicine (approval number: 2020-1-1155). There was no clinical trial number associated with this study. Participants were informed about audio recording of interviews, anonymity, data confidentiality, voluntary participation, and dissemination of results at academic conferences and in publications. Written informed consent was obtained from all participants.

Additional information

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