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From Preventing Physical Infection to Managing Affective Contagion: An Initial Study of Daily Nursing Practices in the Early Outbreak of the COVID-19 Pandemic in Wuhan

Abstract

This paper examines the daily practices of caring for COVID-19 patients in Wuhan, China, in early 2020 and the challenges that nurses faced. The paper shows that the affective contagion, especially among patients, introduced unexpected challenges for nurses in caring for COVID-19-infected patients. Nurses had to contend with the challenges of treating both physical and psychological problems in patients simultaneously. As a result, it was necessary for nurses to adapt to the different rhythm of COVID-19 wards to address these challenges and do so through taking on a range of general and specific nursing tasks and playing a diverse range of roles on the wards, from garbage collector to "psychological counselor." Thus, the paper brings attention to the experiences and demands of providing nursing care in an emergency pandemic context, in particular the necessity of responding to both the physical and the psychological needs of patients. These insights could better prepare health services in China and elsewhere in the world for responding effectively to potential future pandemics.

Keywords: affective contagion, COVID-19, China, general and specific nursing

Introduction

This paper considers the impact of the COVID-19 virus on the caring practices of nurses working in hospitals in Wuhan, China, in late 2019 and early 2020 when tens of thousands of nurses and other healthcare workers were sent from other provinces across China to work in Wuhan. The paper examines not only the impact of the pandemic on nursing and caring practices, but also the impact of a mass migration of nurses and other healthcare professionals into hospitals in Wuhan on nursing and caring practices. Zhang et al.

describe the circumstances and the environment in which healthcare workers were recruited to work in Wuhan:

> During the outbreak of COVID-19 in China, medical teams nationwide have been assigned to support local health workers in Wuhan, Hubei Province, the area that has been worst affected by the pandemic. . . . Theses *[sic]* nurses had at least 3 year work experience in emergency, critical care, respiratory and infection departments. The frontline nurses took over two intensive care units with 34 beds, respectively. They left their families and lived in the designated hotels. Additionally, they cared for COVID-19 infected patients with new colleagues in a new working environment. . . . The unknown and uncertain hospital environment with COVID-19 patients may increase the burden and increase stress among nurses while fighting the epidemic. (Zhang et al., 2020).

The city of Wuhan was the epicenter of the outbreak of what would become the Global COVID-19 Pandemic and thus, this city provides a significant context for gaining insight into the experiences of the nurses who were brought to the city in their thousands to care for patients. . During the pandemic, nurses in Wuhan were represented as heroes of the country and used as agents of the Chinese government for regaining its legitimacy. However, these “nursing heroes” who were sent to Wuhan from all over China also experienced significant psychological and physiological pressures that they had to develop the skills.The focus of this paper is on the nuanced everyday practices that these nurses from other parts of China adopted in treating COVID-19 patients in the hospital wards in Wuhan. Their traditional ways of caring for patients were undermined by the nurses’ unfamiliarity with the COVID-19 virus, their experiences as “imported” healthcare workers who had to provide nursing in unfamiliar wards and hospitals (the authors), and the challenges they faced in trying to offer care while wearing personal protective equipment (PPE), which minimized the

contact the nurses were accustomed to having with patients. The nurses' concern about potentially becoming infected with the COVID-19 virus was an obvious, daily worry; however, they experienced another serious challenge on the wards of Wuhan, which we will refer to as "affective contagion." We argue that fear of physical infection and the impact of affective contagion were exponentially related and as such had a profound impact on nurses' ability to practice.

We first review the pertinent literature, which is followed by an outline of our research methodology. In the three analysis sections, we respectively address various daily activities of nurses in caring for COVID-19 patients and the challenges they mostly faced. We then address more specifically nurses' experience of trying to manage the transmission of affect (Brennan, 2004), or what Thrift (2008) calls "affective contagion."

Literature Review

Nursing in the context of COVID-19 involved significant practices by nurses in which they not only modeled care and empathy for patients but also, we argue, managed fear and affective contagion between patients and nursing staff. Of the more than 40,000 healthcare workers sent to Wuhan, nearly 90% were female. As Zhang et al. (2020) elaborate,

> among the more than 40,000 medical staff sent to Wuhan from all over the country, female doctors accounted for about half, and women accounted for more than 90% of the nurses. That is, 28,600 nurses rushed to help Hubei, among which 25,300 were female nurses, most of whom worked in quarantine areas while facing serious social panic and a substantial shortage of medical resources.

Nursing remains a highly feminized profession where women outnumber men by a ratio of ten to one, and the profession is often seen as synonymous with being female and with femininity. First, nursing is generally associated with characteristics such as empathy,

warmth, love, interaction, personal care, and compassion, qualities and skills that have traditionally been assigned to women (Boschma, 2005, pp. 171–172).

Second, hospital settings are spaces where nurses attempt to make patients feel at home (Gilmour, 2006, p. 16). The representation of the hospital as a “home” resonates with the notion of a therapeutic landscape, which is a place associated with healing and treatment (Gilmour, 2006, p. 19). It provides a space where patients are looked after, it provides them with a sense of security, and a critical method for encouraging patients to feel that they are closer to home (Brooks, 2019, p. 62). Thus, in this space is found interpersonal warmth in the form of love and friendship, physical comfort involving the personalizing of their environment, that provides patients with a sense of agency (Gilmour, 2006, p. 19).

Third, a good rapport between nurse and patient offers the nurse more than a satisfying or rewarding milieu in which to mobilize technical knowledge and practice. Nurses are instructed to enter conversations with the patient in which the problem of their identity is addressed and assessed (May, 1992a, p. 482). That is, through conversational practice, the authentic person is identified and nurtured (May, 1992a, p. 485). Therefore, the relationship between the nurse and the patient is the site at which the subject is revealed (May, 1992b, p. 598). Given that nursing involves the simple concern of care for the patient’s bodily functions, nursing can also be seen as part of an extensive ‘surveillance’ technology that also monitors the patient’s personal identity (Armstrong, 1983, p. 459). Indeed, nurses are trained in behaviors, relationships, and subtle methods of surveillance of their patients (Bashford, 1998, p. 44). Thus, the nursing process involves a pervasive analysis and constant awareness of the patient’s (and the nurse’s) personal world (Armstrong, 1983, p. 459). Through the practices of nursing, clinical and social histories can become intermeshed, and it is apparent that these involve work that fixes and interprets subjects in surveillant data sets (May, 1992a, p. 484).

However, during the COVID-19 outbreak in Wuhan, traditional ways of nursing and caring were seriously restricted and resulted in the dehumanization of patients. This was caused by critical infection protocols, the wearing of PPE by nurses and other healthcare professionals, and an increasing dependence on video technology, in the context of social distancing and infection prevention. As a result, patients experienced a sense of detachment and isolation from their caretakers, from the nurses, and from their families, which resulted in the unleashing of considerable anxiety among the patient body, and it became the nurse's role to manage this (this is the focus of the final part of the paper).

As we argue in this paper, our participants noted an unexpected daily pressure on their nursing practices, namely the management of the transmission of affect among COVID-19 patients, who were cognizant that some of their fellow patients on the wards, with similar symptoms to themselves, were experiencing a deterioration of their condition, resulting in them becoming critically ill and in some cases dying. This led to heightened anxiety among the patient body, which resulted what we call, following Thrift (2008), "affective contagion."

What is affect? And what is affective transmission or contagion? In recent decades, there has been what some refer to as an "affective turn" in the humanities and social sciences (e.g., Brennan, 2004; Clough, 2007; Gregg & Seigworth, 2010; Massumi, 2002; Thrift, 2008). Just like the "linguistic turn" and the "cultural turn" in these disciplines, the "affective turn" consolidates and extends some of the most productive existing trends in research (Hardt, 2010, p. ix). According to Hardt (2010), a focus on affect draws attention to the body and emotions, but it also introduces an important shift, namely the synthesis of mind and body, and reason and passions (p. ix). The definition of affect suggested by Seigworth and Gregg (2010) is useful as it establishes the relational, in-betweenness, and often nonverbal transmissibility of affect, for example:

> Affect arises in the midst of in-between-ness: in the capacities to act and be acted upon. Affect is an impingement or extrusion of a momentary or sometimes more sustained state of relation as well as the passage (and the duration of passage) or forces or intensities. (p. 1)

For Hardt (2007) affect requires us to enter into the "realm of causality," but demands a complex view of causality because affects belong simultaneously to both sides of the casual relationship. That is, affects illuminate both our power to affect the world around us and our power to be affected by it, along with the relationship between these two powers (Hardt, 2007, p. ix). For Seigworth and Gregg (2010), "affect is found in those intensities that pass body to body," and "affect is in many ways synonymous with force or forces of encounter" (pp. 1 and 2).

Brennan's (2015) contribution to the "affective turn" is to focus exclusively on the transmission of affects. According to Brennan, the socially induced transmission of affects has the power to act on the mind and the body (p. 2). For Brennan, these types of affective transmissions and contagions come via an interaction with other people and an environment, but they have a potential physiological impact too (p. 3). Thus, through the transmission of affect, the affects of one person, for example, fear, depression, and despair, can be spread to another (Brennan, 2015, p. 3). That is, both the "emotional" state and the physical symptoms of fear, depression, and despair can be passed along. Thus, the notion of transmission of affect can be used to capture a process that is social in origin but is emotional and physical in effect (Brennan, 2015, p. 3). We argue, following Barsade and Gibson (2012), that the transmission of affect can be context specific, and that some contexts are more conducive to what they call "the affective transfer process" than others (pp. 19 and 22). Barsade and Gibson refer to such contexts as "affective contexts" or "affective cultures" (pp. 19 and 22).

In this paper, we argue that the COVID-19 wards in the early days of the pandemic in Wuhan were an affective context that amplified the transmission of affect, between the patients and also between the patients and the nursing staff. Furthermore, we suggest that the management of the transmission of affect, or "affective contagion," became an everyday challenge that the nurses who were sent to Wuhan, often without the relevant nursing experience in treating intensive respiratory disease, had to develop "on the job" as part of their professional empathetic practices.

Methodology

In this paper, we adopt an approach that Backhouse et al. (2020) call "institutional ethnography," which offers a means for examining the complexities in enacting and delivering bodywork and associated actions in the acute hospital ward (p. 3). This method of inquiry is concerned with making visible "ordinary" work actions, which are less frequently given explicit attention as work practice. This method can produce descriptions of what is relevant in practice, "mapping" actions undertaken, and so critically clarify the processes and forces in operation (Backhouse et al., 2020, p. 3).Empirical data for this study are based on five months of fieldwork in Shanghai from March to August 2021. We interviewed 12 nurses who were sent from Shanghai to Wuhan in early 2020. Interview sessions ranged from 40 minutes to one and a half hours. Participants worked respectively in the intensive care units (ICUs), psychological, and respiratory departments in five hospitals in Shanghai. Due to the sensitivity of conducting this research, all of interviewees and their institutions are anonymized.

We employed a thematic analysis of the data as advocated by Boyatzis (1998). In taking this approach, in our analysis, we produced an overview thematic grid that generally summed up the data and allowed us to determine and collate the opinions of our participants on the subjects being explored. We adopted an iterative process of moving between the data

and the literature to identify material relevant to the research question, consistent with thematic analysis. We then assigned appropriate thematic codes to relevant sections of the transcripts of the focus groups and interviews, and refined subcategories emerged.

The thematic grid that we then created, allowed us to determine and gather together individual interview on the topics under exploration. In this process, certain low-level codes (such as daily rhythm of caring in COVID-19 wards, breathlessness while wearing PPE, routine activities of nurses in a 24-hour period, "stay[ing] close enough to [give] care but stay[ing] far enough away to prevent infection," psychological distress and its contagion when patients witnessed other patients dying, etc.) were combined into a higher level of code as more abstract themes that inform the current writing (such as daily activities of nurses in treating COVID-19 patients and the perceived challenges they faced, the psychological distress of individual patients and the contagious nature of their distress on the wards). In the end, we would then be able to discuss our findings and draw our conclusions. In the below, we will first introduce our findings about daily practices conducted on the wards by nurses, their perceived challenges associated with providing care on the wards and finally affective contagions they experienced.

Daily Practices Conducted on the Wards

The practice of care involves routinized activity and is embedded within the tacit rhythms and everyday rituals of nursing. Yet "care is difficult to locate within fixed time slots because it is shaped by the unpredictable temporality of bodies and care needs" (Buse et al., 2018, p. 248). For example, during the first few months of the pandemic, the nurses' usual daily rhythms in "normal" wards were greatly disrupted. As a nurse told us,

> Actually, I didn't know what I should do on my first day at work. I was assigned to intensive care. After I got dressed, opened the door to the intensive care unit, and stepped in, I was actually quite confused. Yes, because I felt that

> suddenly my experience was useless. In my more than ten years of working life as a nurse, I really didn't know what I should do. I was very confused at that time. (Nurse8)

Most of the nurses sent to Wuhan had experience working on "general wards" rather than infectious disease wards and respiratory units, or ICUs. As such, they lacked practical knowledge that would have helped them in treating COVID-19 patients. Thus, what the nurse above describes is not just a gradual transition over time, not a simple accumulation of experiences that finally equal "getting used to it," but rather a major shift, "a qualitative transformation of consciousness" (Chambliss, 1996, p. 39).

As our participants started work in the COVID-19 wards in Wuhan, they initially experienced disorientation, helplessness, and confusion. They were overwhelmed by the scale of the patient-body they had to care for, and this was compounded by their unfamiliarity with the hospital, the wards, and the practices of nursing on these particular wards, which in turn negatively impacted on the quality of care they could offer that further impacted on patient safety (Jørgensen et al., 2021, p. 3). As a nurse told us,

> Then I saw the local staff, because [at] that time there were very few nurses, very few medical staff, and many patients. I saw that these local nurses were resuscitating patients. About five nurses had to take care of more than twenty patients, so they were very busy. All of us just stood aside; we couldn't get started at all. One reason was that we were not familiar with their environment, and the second reason was that we were not very familiar with their work process, so I was very confused at the time . . . it was probably after about half an hour when someone finally come over and gave us instructions. (Nurse2)

While uncertainty, fear, and confusion were inherent in the early stages of the COVID-19 pandemic, what may be more particular to the stressful impact of an emerging infectious disease, as Maunder (2004) also found when SARS first emerged, is the interpersonal isolation that results from the nature of the threat itself (p. 1122). The relational and interpersonal practice of nursing was profoundly impacted by COVID-19. Our participants felt the effects of this not only at the level of the nurse–patient relationship, but also in terms of the work nurses do in facilitating and coordinating care within complex organizational networks with other nurses, doctors, and healthcare professionals (Liaschenko & Peter, 2004, p. 491). In the case of the nurses sent to Wuhan, nursing became, by necessity, both medical and ancillary, general and specialized nursing. Our participants reported that "general nursing," which comprises activities related to patients' personal hygiene, and to making beds, holding continuous conversations, doing arrival interviews, distributing food, providing treatment, and to greeting patients, was profoundly impacted by COVID-19, as were some of the activities of "specialized nursing" that comprises the distribution of medicines; the giving of injections, infusions, and transfusions; the taking of specimens; and preparation for treatments and operations (Furåker, 2009, p. 272).

However, perhaps the more significant impact of COVID-19 reported by our participants was the increased regimentation of nursing practices and the enhanced sanitization practices necessitated by the highly infectious potential COVID-19 virus. That is, the routine of nursing on the COVID-19 acute wards became driven by set time-linked actions in a 24-hour day. This included, for example, mealtimes, medication rounds, staff shift patterns, and ward rounds conducted by doctors and consultants. These time-linked actions led to tasks such as washing, dressing, and toileting also being routinized, to fit in with the other set actions. Due to the significant needs of patients on the acute wards, staff would regularly undertake "patient observations" of bodily functioning (including monitoring

patients' temperature, breathing, blood pressure), along with the regular turning of patients to prevent pressure ulcers (Backhouse et al., 2020, p. 6). One of our participants described the increased regimentation and enhanced sanitization procedures on the COVID-19 wards in the following way:

> The ECG monitoring data shall be recorded every hour, and the body temperature shall be measured every four hours. Every morning at 5:30 a.m. there will be blood draw, pharynx test paper, anal test paper. In order to prevent cross-infection, the specimens should be wrapped in two layers of plastic bags, and each layer should be sprayed with disinfectant. (Nurse6)

Nursing on the COVID-19 wards in Wuhan was a combination of intensive care specialized nursing and medical work, and strenuous physical labor. As a nurse told us,

> Patients in the ICU are usually treated with tracheal intubation, which means that the patient is completely bedridden. At this time, the patient depends on the nurse for all their care, including diet, urination, and airway management, and you cannot leave the person for a moment. In addition, the condition of patients in the ICU is very serious, and the nurses also need to keep an eye on their patients' status as indicated on various monitoring equipment in the ICU ward at any time and perform professional operations such as rehydration for the patients. Therefore, the expectations for nurses in the ICU itself are very great, and the number of personnel required is relatively large. (Nurse6)

The restrictions imposed by the pandemic meant that the nurses could not rely on the patients' friends and family to provide psychological support during visiting times. As a consequence, the nurses took over many of the caring roles that friends and family would habitually undertake. The nurses had to be "everything" and "everybody" for the patients. It

is well established that nurses typically fulfill a number of roles on wards (Jørgensen et al., 2021, p. 4). However, the nurses sent to Wuhan to work on the COVID-19 wards, reported that they had to fulfill different roles such as social worker, psychiatrist, and counselor. As a result of the social distancing restrictions, they were often the only healthcare professionals who had the ability to establish sustained close contact with patients. In summary, the expectations for nurses working on the COVID-19 wards became so varied that it was difficult to prepare incoming nurses in advance for what they should expect. For example, as a nurse noted in her dairy,

> Today is the seventh day I came to Wuhan to support the fight against the epidemic, and I went to work at 2 a.m. There is no cleaning staff in the ward. The garbage collector comes to pick up the garbage at around 5 a.m. The garbage generated by the patients needs to be cleaned up by us. There are too many trivial things. Of the patients I am in charge of, three are awake, one is receiving high-flow oxygen support therapy, catheterization, and general lethargy. For conscious patients, I want to pay attention to whether the water in their glass has been drunk. If there is urine catheter bag, it should be poured out and measured in time. (Nurse9)

The remarks above reflect the additional duties that nursing during the pandemic demanded of nurses, who were expected to do everything from garbage collection to the general and the specialized duties of nursing. As Buse et al. (2018) argue, in general wards, “the ancillary physical labour of laundry workers or cleaners is often positioned ‘outside of care’” (p. 253). Yet, as we show below, in the case of caring for COVID-19 patients, it is precisely the lower-skilled ancillary tasks associated with cleaning patients’ environments and maintaining patients’ personal hygiene that was significant to their recovery. We argue that these caring

tasks brought order to the wards and the hospital that resulted in the establishing of emotional and physical boundaries around patients (Selberg, 2013, p. 12).

Perceived Challenges of Providing Care in COVID-19 Wards in Wuhan

Many challenges faced the nurses in the COVID-19 wards in Wuhan. As Jørgensen et al. (2021) suggest, the highly infectious nature of the virus and the restrictions of social distancing and infection prevention profoundly impacted every aspect of the duties of intimate nursing care, which requires close physical contact, whether through performing personal hygiene tasks with patients or measuring their vitals (p. 1). The maintenance of physical distance versus the need for close physical contact with patients was a daily battle for nurses in the early days of the pandemic, as a nurse told us:

> On the one hand, this virus is very infectious so it would be better that you stay away from the patients. On the other hand, it is important for nurses to comfort patients, actively communicate with conscious patients, and provide comfort, encouragement, and spiritual support to them. For the treatment and care of patients with a mild illness, such as in makeshift hospitals, nurses have to monitor vital signs, collect specimens, and give nutritional support, as well as carry out a lot of disinfection, life care, and psychological care. (Nurse10)

Before the outbreak of COVID-19, in the "general ward," patients' relatives also contributed to the physical as well as the emotional support of patients. However, the lack of such support from family members for COVID-19 patients resulted in nurses having "to walk extra kilometres" (Jørgensen et al., 2021, p. 3) in performing their duties. In this sense, the nurses had a heavier workload, as they had to be everything to the patients—nurse, friend, and relative.

In addition, nurses had to undertake this heavier workload while also wearing unfamiliar and restrictive PPE. Their physical strength became drained while wearing PPE because it caused them to experience anoxia and hypoxia. As during the SARS outbreak, the nurses in this study reported that their interpersonal contact was also greatly diminished by the need to wear PPE, especially masks and face shields, which greatly reduced their ability to hear and be heard by conscious patients, and to pick up on and relay nonverbal expressions and cues, and that PPE even interfered with these healthcare workers recognizing one another (Maunder, 2004, p. 1122). Related to this, touch is an unquestionable form of nonverbal interaction known to establish a sense of comfort and trust in healthcare relationships (Jhawar et al., 2022, p.492. Wearing gloves thus had a significant impact on nurse–patient bonding, especially in the context of "double gloving" to prevent infection.

The nurses all reported a cluster of physical and psychological challenges that they experienced while providing nursing care on the COVID-19 wards. For example, they all remarked on the considerable discomfort associated with excessive sweating during prolonged shifts working under PPE, and they all reported hunger as an issue due to not having enough time to eat on account of the intensity of the work. In addition, they were prohibited from "snacking" in the wards as they risked infection if they removed PPE. Similarly, they all reported being dehydrated while on duty, as again, it was necessary to remove PPE in order to take a drink of water. The nurses also reported that menstruation was particularly challenging because the work was so intensive, they could not take enough breaks to replace sanitary products, and this made some nurses feel self-conscious and alienated. In addition, they all mentioned skin abrasions, rashes, and also chaffing on their noses and ears caused by having to wear masks during long shifts for many weeks.

Moreover, the participants observed that caring for COVID-19 patients involved the management of both physical and psychological contagion (see below). The nursing

challenges caused by wearing PPE were not just operational. PPE also became a boundary between patients and nurses that nurses had to try to surmount while performing intimate care with patients. For example, a nurse said,

> I think that no matter how dangerous it is, this is my job. And then I put on the protective cover, because at that time there was only one face shield. According to the current requirements, a face shield alone is not enough, but it was all I had at that time. I did suction for the patient, just wearing a face shield. Then I tried to make patients as cooperative as much as possible so that they would not choke too violently, and then used something like small diapers as cover while doing the suctioning. I just tried my best to relax when performing intimate treatments. (Nurse3)

Indeed, caring for COVID-19 patients required not only physical effort, or self-sacrificial acts on the part nurses in fulfilling various tasks, such as working away from their homes (see the authors), but also brought real life-threatening risks of being infected with the virus. As a nurse told us,

> Within a few days, the patient had a pneumothorax again. That was my first independent operation in the isolation ward. Eight hundred milliliters of air from his chest were drawn out one syringe at a time. I remember when I was drawing and I thought, I am drawing out the virus, not air. I will remember the uncomfortable and sweaty feeling of wearing that protection suit for a lifetime. (Nurse6)

Our participants had to suppress their anxiety in order to do the best possible job in the most challenging of circumstances. Establishing rapport with conscious patients, keeping them calm, and working with them to perform care is tantamount to contemporary nursing

practice. It was not just PPE that negatively impacted on rapport building but also language. As noted above, our participants were sent from Shanghai to Wuhan, and as such they experienced communication issues, in particular unfamiliar dialects spoken by the older patients in the COVID-19 wards. As one of the nurses told us, “The biggest challenge for this kind of rapport building and chatting in the ward is the language barrier, because some locals speak the Hubei dialect and the Wuhan dialect naturally, but I don’t understand it” (Nurse1).

The language issue had a significant negative impact on nurses’ ability to communicate effectively and care for patients—which often compounded patients’ sense of isolation as they were not permitted visitors. Regarding those patients who were conscious and could speak Mandarin, the nurses reported engaging more with them patients than they would normally do. Furthermore, the nurses themselves reported that this level of engagement had a transformative effect on the patients (see the authors). As a nurse told us,

> It was a completely different experience. I was really touched, and it’s a completely different experience from my working life in the past few decades. Because in the past we might only pay attention to the patient, to the control of the disease. We rarely paid attention to their subjective well-being. Basically, we would not take their emotions and their psychological state into account. (Nurse5)

As Watanuki et al. (2006) find, empathy, warmth, and genuineness with patients are necessary and sufficient for therapeutic changes to occur (p. 45). Our nurses remarked that they were often physically and emotionally exhausted after a shift on the COVID-19 wards. In the context of caring for COVID-19 patients, we argue that nurses had to explicitly engage in physical and psychological caring. Thus, in this particular context, where care for the body is simultaneous with care for the patient’s mental health and well-being, there was potential

for both the patients and the nurses to be "touched" by this enhanced and holistic caring. Another participant elaborated on this theme, saying,

> In fact, we have discovered in this pandemic that a healthy body for patients requires good psychological health. So, the psychological aspect is very important. But nowadays, nurses in normal wards don't have so much time to communicate with patients. This is what I think is the biggest difference between normal wards and wards in Wuhan. (Nurse6)

In summary, caring for COVID-19 patients is an exhaustive endeavor because (1) nurses had to perform many different roles, as "mother," cleaner, psychiatrist, and so on; therefore, they had a much heavier workload; (2) the physical strength of nurses became drained due to the restrictions of PPE and the impact of that on their physiology, nutrition, hydration, and personal hygiene; (3) caring COVID-19 patients is both physically and psychological demanding for nurses; (4) nurses had to put much more effort into rapport-building and communicating with patients in the absence of support from friends and family; (5) nurses had to accept that there were some elderly patients who spoke unfamiliar dialects that they had to try even harder to reach and comfort during the pandemic to alleviate their feelings of alienation.

Psychological or Affective Contagion

One of the most significant challenges that our participants reported during their interviews was that there was a strong emotional tendency among COVID-19 patients that could spread and destabilize mental well-being among patients in the wards. This could in turn significantly impact on the nurses' ability to maintain order within the ward. As a nurse told us,

> We chat and communicate with each other very often, so people's attention will be distracted, and psychological problems will not be magnified. This is because, in a normal ward, the severity of each patient's condition is not the same. Yet, everyone infected with the coronavirus has similar symptoms. If someone suddenly got worse, then others would feel scared because they were also sick. They worried that their condition would suddenly worsen, too, and then the patient would think too much and would become dispirited when they thought too much. (Nurse2)

In other words, mental stability among patients in COVID-19 wards was much harder for nurses to control than in regular wards. In "normal wards," patients are assigned to the same ward based on the type and severity of their illness. Yet, in the COVID-19 wards, patients were gathered together in one place because of similar causes. Namely, they were displaying symptoms of the COVID-19 virus. As we now know, the effects of the virus on individual patients can vary greatly, especially among patients with underlying vulnerabilities. As such, on the COVID-19 wards in the early phase of the pandemic, our participants were nursing a diverse mixture of patients, with similar symptoms but with varied medical histories, where some patients became critically ill, some died, and some were ill but survived. The impact of these diverse outcomes created what we referred to earlier as an "affective context" in which "affective contagion" was rife. For example, as a nurse told us,

> The deterioration of one patient affects the mood of other patients in the entire ward, because everyone suffers from the same virus, which is different from a normal ward. Because the symptoms of two people are exactly the same, and the course of one patient's disease is getting worse, the other patient might guess that their own situation will be the same as the first patient. They were

> very scared. At that time, the atmosphere in the ward was very depressing. Everyone felt depressed when they saw this, and no one spoke. (Nurse2)

Thus, because of the unknown nature of the virus in the early weeks and the similar symptoms it produced, patients in the same ward would be easily affected psychologically by the physical deterioration of other patients. This is what Brennan (2015) calls the transmission of affect. Whether grief, anxiety, or anger, it is social or psychological in origin (p. 1). The transmission of affect can alter the biochemistry and neurology of the subject (Brennan, 2015, p. 1). In this context, the distinction between the "individual" and the "environment" is blurred (Brennan, 2015, p. 6). In other words, our participants reported that patients on the ward could tip into a collective state of depression initiated by an unspoken knowledge that a fellow patient had experienced a sudden decline.

In response to this, nurses' empathy toward patients became even more important in terms of trying to maintain patients' collective emotional well-being on the wards in the affective context produced by diverse patient outcomes, on a continuum ranging from patients displaying COVID-19 symptoms to patients dying from COVID-19. In many ways the nurses' empathy evolved into what could be referred to as "sympathetic concern." Sympathetic concern consists of aligning another person's well-being with one's own, based on an awareness of their pleasures and pains. Yet, there is an easy equation of sympathy with contagion (Pinker, 2012, p. 576). All too often, sympathy determines contagion, as Nurse 4 explains:

> The person was OK, but after a few days got worse rapidly, and then his health condition just went downhill, yet the patient still looked at you and said that he could persist. I felt very bad. I worked in the Department of Oncology in Shanghai. I have witnessed lots of deaths, but for those cancer patients, you have a sense of expectation, of a timeframe. Yet, at that time in Wuhan, it was

> very hard to see a person die so unexpectedly within a few days. I think this was the most uncomfortable thing among the many things we experienced in Wuhan. (Nurse4)

When this contagion grew too rapidly, the patient would lose control, become threatening, and sometimes refuse to be treated any longer. One of our participants described this in the following terms: "It is a kind of psychology, passive will, and it developed slowly but exploded very quickly" (Nurse5). As a consequence, the spreading desperation in the wards would seriously impact on the physical recovery of the patients, as Nurse 7 explains to us:

> People who are seriously ill usually prefer their family members to be by their side. However, these patients had no family members, and they had seen some [other] patients' conditions deteriorate rapidly. They were actually very sad. When I first went there, there was a patient. He started to be fine. But this man was out of control for a period of time. He refused treatment. He took out the infusion needle and beat us and pulled at us. Several people couldn't control him and he refused treatment. At that time, his breathing function was not very good. He might have been uncomfortable, disappointed, and in pain. At the time, we didn't know what to do with him. No matter how we tried to persuade him, he wouldn't listen, and he said he didn't want treatment. (Nurse7)

In this case, the rapid deterioration of a patient's physical condition caused frustration and related irrational behavior. As noted above, this can have a considerable impact on the cooperation of patients under nurses' care, and as a consequence their suffering can worsen, and their recovery become precarious. Our participants reported that in some cases, patients would demand or refuse particular treatments that they had seen others receive in order to try to improve their chances of survival, for example:

> Later, I learned that the patient opposite him had been intubated because his blood oxygen saturation could not be stabilized. He [her patient] witnessed all this and was afraid that the next person to be intubated would be himself. Due to the unstable oxygen pressure in the ward, many patients who were intubated on a ventilator were using oxygen tanks to supply oxygen. Therefore, the old man thought that the oxygen tank was lifesaving and asked me to give him an oxygen tank and put it next to his bed, saying that he would not let anyone move it away. People are really fragile. In the face of the virus, everyone became weak and helpless; they were facing a test of life and death, and as long as there was a glimmer of hope, they would hold on to it tightly. (Nurse5)

This is a unique characteristic of COVID-19 patients, who suffer both physical and psychological challenges. Many nurses with numerous years of nursing experience compared this phenomenon with other types of disaster relief, such as the Wenchuan earthquake in Sichuan in 2008, which caused hundreds of thousands of deaths. As a nurse observed,

> In fact, comparing the Wenchuan earthquake with this, the psychological impact after the Wenchuan disaster is quite traumatic. The coronavirus produces a condition where a physical disease and a psychological disorder occur at the same time. In Wenchuan, it was first the physical and then the psychological. There is a sequence. We were focusing on saving lives. After lives are saved, then the medical teams will conduct psychological interventional treatment. And this pandemic occurred simultaneously from both a physical and a mental aspect. If one’s mentality is not strong, then the illness cannot be overcome, and the will to survive must be strong. (Nurse5)

At that time, in the early days of the COVID-19 outbreak, the unknown and contagious nature of the virus presented not only some unique challenges for nurses in

carrying out their routines but also, more importantly, two levels of simultaneous challenges, one physical and the other psychological. The confusion, desperation, and alienation from their loved ones that patients experienced during the initial stage of the pandemic, had a great impact on their ability to recover. This in turn, required more targeted responses from nurses despite the operational challenges of providing care while wearing PPE. Thus, for our participants, psychological care and rehabilitation were just as important as physical care—for the recovery of their patients. In many respects, there is a hierarchy of necessity in caring for COVID-19 patients. Physical health is seen as a prerequisite for mental health, and mental health must be nurtured and supported simultaneously as the patient's physical health recovers. The patients' bodies were acted upon by both social and psychological factors, and in an emergency situation, like in the early months of the COVID-19 pandemic, this relationship between physical and psychological health was not fully appreciated.

Discussion

Nursing on the COVID-19 acute wards in Wuhan presented significant challenges for our participants. First, they had to negotiate the social distancing protocols for minimizing cross-infections, despite recognizing that intimate contact with patients is one of the key features of nursing care. Our participants also reported about the additional duties (social worker, cleaner, garbage collector, etc.) they had to perform in the context of the social distancing and cross-infection protocols that restricted the number of other staff and healthcare professionals who were admitted to the wards. As such, the nurses had to become mother, sister, and daughter to the patients. Second, the physical strength of the nurses became drained while wearing PPE, especially due to the impact of masks and shields on their breathing, and to skin conditions caused by chaffing, the necessity of wearing uniforms that were constantly damp from perspiration, and their experiences of hunger and dehydration during long shifts, as they were unable to break protocol to snack and drink while on duty.

Furthermore, interpersonal contact was also greatly diminished by the need to use PPE, particularly masks and face shields, which significantly reduced the ability to communicate verbally and pick up on the nuances of nonverbal expression, and even interfered with healthcare workers recognizing one another. They found this aspect of PPE particularly challenging, as the nursing practices demanded by COVID-19 required enhanced caring in terms of the extraordinary lengths that nurses went to, to establish rapport with the patients, as they attempted to fill the void associated with the restrictions on patients receiving visitors and the lack of all of the support, physical and emotional, that friends and family normally provide. Third, caring for COVID-19 patients is both physically and psychologically demanding, and our participants were required to manage these interrelated types of contagions. Fourth, because these female nurses came from other provinces of the country, they sometimes also experienced language and dialect barriers between themselves and patients.

Conclusion

In this paper, we introduced insights about the daily practices and experiences of nurses from Shanghai who were sent to provide nursing services on Wuhan's wards in early 2020. As we showed, during their time working in Wuhan, their daily rhythms in what they call "normal" wards was greatly changed. After an initial period of disorientation and confusion, these nurses had no choice but to give themselves over to the rhythm of the acute wards in Wuhan. It was in the context of their "getting on with the job" that they realized they were being enlisted into an enhanced type of nursing service where they had to be everything and everyone to the patients because of the social distancing restrictions, which meant that the nurses were the primary point of contact and comfort for the patients. This call to provide enhanced care was carried out in extreme circumstances, that is, social distancing protocols and the wearing of PPE. However, added to this was the nurses' lack of knowledge

of how to provide care in unfamiliar hospitals and wards in an unfamiliar city. Moreover, many of the nurses who were sent to Wuhan were general nursing staff who did not have the specialized knowledge, experience, and skills required to treat patients on acute, intensive care wards that specialize in respiratory disease and viral infections. We argue that it was the context of the highly infectious COVID-19 virus, in conjunction with their experiences of, and their attempts to manage, the highly infectious affective culture on the wards that these in combination were the catalysts for the enhanced care that the nurses described being called upon to provide. As we have discussed, our participants had no choice but to put their own fears and anxiety to one side in their attempt to disrupt the impact of the affective contagion through bringing to the fore enhanced relational and interpersonal practices, despite wearing PPE. We argue that these enhanced caring practices resulted in what Chambliss (1996) refers to as a major qualitative shift in consciousness, which was transformative. That is, it changed relatively inexperienced nurses who were disoriented and confused by the context they found themselves in, into highly skilled, empathetic with enhanced carers.

Thus, the main challenge of nursing COVID-19 patients is not only the highly infectious nature of the virus, but also how to manage the highly contagious affective transmission among these patients. In this paper, we explored the impact of the affective contagion, in the affective context of COVID-19 wards in the early days of the pandemic. The affective contagion experienced on the wards became, for our participants, *the* major challenge for maintaining order on the ward. Affective contagion also became, following the stabilization of patients' physical symptoms, the primary complex challenge related to patients' psychological well-being that our participants had to respond to, to maximize the patients' chances of recovery. We would emphasize that due to the particular focus of our study, the participants we interviewed are dominantly female and thus would have given impressions that affective contagion only happens among female healthcare workers. As a

result, affective contagion might be viewed as gendered notion. In fact, we foresee similar experiences occurring among male healthcare workers who work in similar environment. Thus, we call for more studies on the notion of affective contagion among different groups in order to detect more nuanced experiences of affective contagion.

We conclude that a hierarchy of necessity emerged in the context of caring for COVID-19 patients in the early days of the pandemic in Wuhan. Physical health is seen as a prerequisite for mental health, whereas mental health problems are perceived as developing along with the recovery of the physical body. It was the patients' bodies that were acted upon by both social and affective factors. Thus, by identifying the combination of physical and psychological challenges our participants had to manage, this study aims to provide a firsthand understanding of nursing practices in the care and treatment of COVID-19 patients to enable health workers and authorities to better prepare themselves in the face of unknown and contagious pandemics in the future.

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