

✧ RESEARCH PAPER ✧

An exploratory study of nurses suffering from severe acute respiratory syndrome (SARS)

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An exploratory study of nurses suffering from severe acute respiratory syndrome (SARS)

In 2003, severe acute respiratory syndrome (SARS) came to be recognized as a newly emergent form of disease that is highly contagious. The aim of this study was to describe the perceptions of nurses with SARS in Hong Kong, as the perceptions of nurses who have suffered from SARS have not been studied. Ten nurses who had suffered from SARS were interviewed, either face-to-face or by telephone, about their subjective experiences. These interviews provided in-depth, descriptive data, which were analysed using content analysis. Nine broad categories were identified: uncertainty, information control, feelings of anger and guilt, lack of preparation and fear of death, feelings of isolation and loneliness, physical effects, support, change of perspective of life, and change of perspective of nursing. Although the dreaded disease affected the nurses tremendously, both physically and psychologically, it has also had its positive side. As a result of experiencing the illness, the participants came to treasure relationships, health and everyday life more. In caring for patients, they came to see the world more from the perspective of the patients. They found that they need to take the time to reassure patients and families and to seriously listen to all of their concerns.

Key words: Hong Kong, perception of illness, severe acute respiratory syndrome.

INTRODUCTION

Severe acute respiratory syndrome (SARS) spread around the world within a few months.¹ The response of the community to this new health threat was breathtaking. At the

time of writing, 1755 persons in Hong Kong had become infected with SARS, and a total of 300 had died. Of these 300, eight were health-care workers, including physicians, nurses and health-care assistants.² The incidence of SARS was reduced by controlling infections that are dependent on public hygiene and personal health habits.

The aetiological agent of SARS is a coronavirus that was identified in March 2003.³ Given the current absence of effective drugs or a vaccine for SARS, the control of this

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disease relies on the rapid identification of cases and their appropriate management, including the isolation of suspect and probable cases and the management of close contacts. At present, the most efficacious treatment regimen for SARS, if any, is unknown. For patients with progressive deterioration, intensive and supportive care is of primary importance. In Hong Kong, antibiotics were given to patients suspected of having SARS; once the patients progressed to the severe stage and experienced shortness of breath, vibavirin and steroids were used.² Some patients had progressed to a severe stage of the disease, characterized by oxygen desaturation. They required intensive care and ventilatory support for a mean period of 6.4 days.^{3,4}

Until now, the studies that have been published on patients with SARS have focused on how to control infections^{5,6} and on the diagnosis and treatment of the disease.^{3,7} This study is the first to explore how nurses who had contracted SARS perceived the experience of illness and to uncover the principal concerns of the informants.

METHOD

A qualitative approach was adopted in this study on the premise that such knowledge cannot be obtained without reference to experience and without being defined by the individuals themselves.⁸ Face-to-face or telephone interviews were conducted with the nurses suffering from SARS, using a semistructured interview guide. The interview was carried out in such a way as to allow maximum freedom of expression for the participant, thus avoiding the imposition of the researchers' concerns.⁹ The informants were required to be nurses who had suffered from SARS and were willing to participate in an interview. The informants were referred to the researchers by a nursing officer in an acute-care hospital that had nurses who had suffered from SARS.

Ethical considerations

Each informant signed a written consent form and was interviewed once. Approval of the study was granted from The Hong Kong Polytechnic University's Human Subjects Ethics Subcommittee. It was clearly explained to the informants that they had the right to withdraw from the study and that participation was on a voluntary basis. They were assured that their data would remain confidential and anonymous, and that no reference would be made to their names or to any other detail that might identify them in the text of the study.

Data collection

Ten informants were interviewed for research purposes, either by telephone or face-to-face, in a room in the university and all of the informants consented to have the interview recorded on tape. The tapes were then transcribed verbatim into Chinese. The interviews lasted between 45 min and 1 h and 15 min.

Data analysis

The two approaches to case analysis were employed to analyse the data used in this study: within-case and cross-case analysis.¹⁰ Each informant constituted a case. First, each of the cases was analysed on its own. This is the within-case analysis, the intention of which was to explore and describe the experience in each stage of the illness. The within-case analysis was performed by identifying the important variables and associations in relation to the case. Different tactics of analysis, including clustering, noting themes and patterns, and making comparisons of variables, were employed. The next step was the cross-case analysis, where the data on the cases were compared and contrasted with noted generalizations and particularities. The basic reason for employing a cross-case analysis is to allow the researcher to explore the subject more fully and to deepen understanding of the relevant issues.

The qualitative data for each case were displayed in the format of a matrix with defined rows and columns. The columns were the characteristics of the phases of the illness and the rows were the themes. The themes were dimensions of the experience of illness that were extracted after the researchers had conducted an initial examination of the transcripts. After the matrix had been generated, the transcripts were examined again. The data, in the form of summary phrases and direct quotations, were placed in the appropriate cell of the matrix. The presentation in the format of a matrix was good for 'exploratory eyeballing', as described by Miles and Humberman.¹⁰ It permitted the researcher to conduct a detailed analysis and make inferences. The content of the matrix was reviewed and refined so as to achieve a more logical and coherent presentation of the structure of the data.

FINDINGS

The characteristics of the informants are summarized in Table 1. The nurse participants ranged in age from 20–47 years. Four of them were registered nurses, one was a

Table 1 Demographic characteristics of the participants

Participant	Sex	Age (years)	Marital status	Rank
1	Male	47	Married	Nursing officer
2	Female	30–40	Single	Registered nurse
3	Male	≥ 40	Married	Senior nursing officer
4	Female	≥ 30	Single	Registered nurse
5	Female	≥ 30	Married	Registered nurse
6	Female	≥ 20	Single	Registered nurse
7	Female	≥ 40	Single	Nursing officer
8	Female	≥ 30	Married	Registered nurse
9	Female	≥ 20	Single	Registered nurse
10	Female	≥ 30	Married	Registered nurse

senior nursing officer and one was a nursing officer. The following paragraphs present part of the results of the case analysis, which are summarized in Table 2. The columns present the stages of the illness while the rows present the themes related to the informants' experience of the illness.

Stages of the illness

There are three stages to the illness. The structure is not a rigid one, but each stage is characterized by distinct psychosocial reactions and behaviour. The patients might not exhibit all of the responses, which may be transitory or persistent. The three stages are:

1. Experiencing symptoms, being suspected of having the illness and confirmation of the diagnosis.
2. Isolation and the treatment process.
3. Discharge and recovery.

Experiencing symptoms, being suspected of having the illness and confirmation of diagnosis

The informants commented that they had begun by feeling unwell, had contracted a fever of $\geq 38^{\circ}\text{C}$, had chills and coughed. Initially, they thought they had the flu. It was only when their condition worsened that they went to the accident emergency centre to seek help. Initially, the informants tended to reject the diagnosis of SARS. As one informant said:

I didn't work in the SARS ward. Initially, I thought it was flu. I had fever, chills and fatigue, typical symptoms of influenza.

I took some Panadol, but the fever did not subside. I went to the accident emergency centre and the medical officer advised that I be confined to a ward. I still held the hope that I was not suffering from SARS. When I was sent to the wards, I found that one of the patients I nursed was also in the same SARS ward as I was.

Isolation and the treatment process

Once patients were suspected of having contracted SARS, they were immediately admitted to the isolation wards. The patients would be isolated from all contact with others, except for health professionals. No visitors were allowed. The 10 informants were hospitalized for a period of between 21 and 40 days. None of the informants required intubation. The mean time between the onset of the symptoms and the worsening of lung functions was approximately seven days. The deterioration occurred suddenly and unpredictably. The patients were given 8 mg/kg of intravenous ribavirin every 8 h for 7–10 days and steroids (100 mg of intravenous hydrocortisone every 6 h or 200 mg of hydrocortisone every 8 h over 2–3 weeks).⁷ The informants were placed either in an isolated ward with other SARS patients or in a single room. In the initial stage of hospitalization, some informants tried their best to perform breathing and limb exercises in order to better prepare themselves for a worsening of their lung functions.

Discharge and recovery

This normally occurred when the informants did not show any symptoms of SARS and when the laboratory

Table 2 A summary of the case analysis

Themes	Having symptoms, suspected of having the illness, and confirmation of diagnosis	Isolation and treatment process	Discharge and recovery
Uncertainty	<p>Uncertainty over how one contracted the illness</p> <p>It takes a while for the diagnosis to be confirmed. Chest X-ray did not show the symptoms until computerized tomography was performed</p>	<p>Uncertain about the efficacy of the treatment</p> <p>Inability to predict the outcome of the disease</p> <p>Need to develop a relationship of trust with one's physician</p>	<p>Uncertain about the long-term effects of the illness and side-effects of the steroids and ribavirin</p>
Information control	<p>The patient has to depend on the care given by others</p>	<p>The patient and his/her family need to be informed about the patient's progress, blood gas and other laboratory values</p>	<p>Need of information for rehabilitation</p>
Feelings of anger and guilt	<p>A lot of information in the media, not sure about its reliability and validity</p> <p>Fear of spreading the disease to family members and friends</p> <p>A burden to their colleagues who need to look after them</p>	<p>The patient and his/her family are involved in discussing the treatment</p> <p>Need to make sure family members are safe</p>	
Unprepared and fearful of death	<p>Not sure about the outcome of the illness</p> <p>Afraid one will not have the chance to see one's relatives for the last time</p>	<p>Although needing the support of a nurse, afraid that the nurse will contract SARS, which is a dilemma</p> <p>Death is a possibility</p> <p>Having to decide whether to consent to intubation when necessary</p> <p>Not psychologically prepared for the suddenness of the situation and of death</p>	<p>Feeling one is lucky that one could recover</p>
Feelings of isolation and loneliness	<p>Communicate with family members by telephone</p>	<p>Shortness of breath prevents talking on the telephone</p> <p>Nurses' presence and encouragement of paramount importance</p>	<p>Glad to be discharged to return to normal life</p> <p>Disappointed about being stigmatized after discharge</p> <p>Felt isolated by family, friends and others</p>

Table 2 *Continued*

Themes	Having symptoms, suspected of having the illness, and confirmation of diagnosis	Isolation and treatment process	Discharge and recovery
Physical effects	Fever, chills and cough	Shortness of breath Care of intravenous infusion site Sweating, shivering Extremities: cold and numbness Palpitation, fatigue	Some still felt mild shortness of breath and palpitations
Support			Support from family members, friends, colleagues, patient-friends and health-care professionals Psychological support very important Communication of support via phone and cards Life is fragile and short: review priorities in life Rather than aiming at being successful at work and gaining prestige and money, have changed priorities to family relationships and the importance of health
Change of perspective on life			Better understanding of the experiences of patients Areas that require specific attention: initiate communication with patients, paying attention to their specific needs, work with patients in a partnership as they need to be informed about their specific condition
Change of perspective on nursing			

results were negative for coronavirus in the blood, urine and sputum. The tests were performed three times at three-day intervals in order to ensure that the patients were free of the coronavirus for a total of 10 days.

Themes

The themes that emerged in relation to the nurses' perceptions of the illness are presented below with supporting quotations.

Uncertainty

As SARS is a new disease about which health professionals know little, it generates high levels of distress in people and they find it difficult to cope with the illness. The informants found that they experienced distress resulting from uncertainties over the diagnosis, the efficacy of the treatment, as well as the side-effects of the treatment. Other factors that contributed to the uncertainty were the dramatic change in role (from nurse to patient) experienced by the informants, the sense of powerlessness associated with enforced passivity and the neglect of a person's holistic needs in an environment that focused on physiological priorities. As Lazarus and Folkman stated, uncertainty results from the cognitive appraisal of an event for which the outcome is unclear or the cues are inadequate, unfamiliar, contradictory or numerous.¹¹

During the diagnostic period, the informants were unsure about whether they were confirmed to have contracted SARS. In the initial stage, chest X-rays did not show any opacity or haziness until computerized tomography was employed. Initially, the informants hoped that they had simply contracted influenza, but later they had to accept the fact that they were suffering from SARS. The informants were also uncertain about the efficacy of the treatment, as described below:

Initially, the doctor said I would be safe, as my chest was clear, although I had fever and my lymphocyte count was low. However, I was later confirmed as having SARS.

In the initial stage, the disease was new to the whole world. The treatment was new and we were not certain whether it had effects.

I was confused because one of the doctors said that ribavirin had no effect on the virus. Nevertheless, the drug had an effect on the first group of patients admitted to hospital. The patients were discharged; therefore, even though some experts said it was of no use, I had confidence in it because everyone

is different. It is a matter of life and death and our condition changed dramatically within a very short time. If experience told me the medication worked with some patients, I had confidence in it. This was the only choice. I had no way out.

Information control

Information control was pertinent to the informants when they lived in an uncertain world. One important aspect that contributed to the feeling that they lacked control was when the participants could not obtain information from health professionals. This was especially true of nurses who were caring for infected patients in isolation because they were fearful of contracting the disease themselves and of being seen as negligent. The potential for the nurse to help patients effectively cope with and manage the disease was limited; consequently, the patients continued to feel anxious and depressed:

I was really frustrated. I really wanted to know the results after the blood sample had been taken. I would appreciate it if the nurse would let me know the results. But the nurses would not tell me. I assume they are afraid of coming in, afraid of the possibility of contracting SARS.

When I asked the physicians about my condition, their answers were nothing special, and were more or less the same. Actually, they would never answer my question. I wanted them to explain things to me in more detail and discuss with me what they knew, such as what condition I was in and whether I was going to live or die. I wanted to know my condition. For example, I wanted to know the results of my blood test: what was my lymphocyte count and had my white blood cell count gone up? Had my condition improved, deteriorated or remained the same?

As I was already isolated, this lack of knowledge about my condition made me feel very helpless.

By contrast, another informant mentioned that his medical doctor provided a detailed explanation of his condition, which increased the informant's confidence in the treatment he had been given:

The doctor came in twice a day and closely monitored my situation. He would talk to me to understand more about my condition, to prescribe the appropriate medication. When he decided to put me on steroids, he not only explained why he thought this was necessary for me but also rang my wife to

explain the situation, as I could not ring my wife because of my irritating cough. My trust in the medical physician increased my confidence in the treatment.

The need for information was not only related to the disease, but also to everyday activities in the isolation ward, as depicted by one informant:

I was upset because I was not told about information related to the ward. For example, I did not realize until near discharge that I could have the choice of choosing my menu for breakfast and lunch. I had been asking my colleagues to buy breakfast for me for more than two weeks.

Good information support will lead to an individual approach to care and to the ability to foster a sense of control in patients. Providing them with knowledge allows them to become involved in making decisions and makes them aware of the alternatives and the anticipated consequences of each alternative course of action. Knowledge is one factor that decreases uncertainty.^{12,13} Seligman stated that when individuals are continually exposed to uncontrollable events, they will feel helpless.¹⁴ This includes a lower sense of control over outcomes, depression and a decreased motivation to initiate new problem-solving approaches. All of these factors lead to a poor ability to cope with the illness.

Feelings of anger and guilt

The informants were agitated when they discovered that the wards in which they worked had admitted patients who suffered from an invisible form of SARS:

When I found out that the patient, whose bed was opposite to me, had spread the disease to me, I felt angry and agitated, as our ward should not admit SARS patients.

Feelings of guilt emerged when the informants contracted SARS. They were worried that family members, colleagues, friends and patients might contract SARS, as they had come into contact with these people before the diagnosis was made. Adding more work for their colleagues also induced feelings of guilt:

As a result of my illness, my family, friends and those who have come into contact with me have to go through 10 days of quarantine. I am more concerned about their condition. I

knew that my family was very worried because they didn't expect me to contract SARS.

I felt bad that I have added to the burden of my colleagues, as they have to look after me.

Lack of preparation and fear of death

All of the informants stated that they were preoccupied by the possibility of death, which is understandable given the acute and severe nature of the disease and the aggressiveness of the treatment. Once they were diagnosed with the disease, they were frightened of death. Worse still, they were not prepared for sudden death, as they had to attend to unfinished business. Usually, when patients were suspected of having SARS, they were immediately admitted to the hospitals and given no time to finish what they were doing. A male nurse gave the following account:

I was really frightened and, when I slept, I was afraid that I would not wake up. During my waking hours, my thoughts were muddled. Nevertheless, I wrote down my plans and my will. I needed to set my affairs in order before I died.

During the acute stage, I had a very difficult time for 5–6 days. Each breath was difficult for me. The physician increased my dosages of ribivarin and steroid. Using computerized tomography, opacification and consolidation of the lungs was found. I was really frightened, and my respiration went up to 50/min. I thought about death. I was afraid that I would not see my family for the last time. I was not psychologically prepared, as I haven't written my will and hadn't arranged my affairs. There were a lot of things I hadn't told my family yet. The issue was not only of whether one would be intubated, but the issue of death.

The informants had to deal with thoughts of death because of the suddenness and severity of the disease. Dealing with thoughts of death involved acknowledging its possibility and then trying to concentrate on something else (e.g. using distraction as a means of dealing with these thoughts). Some did breathing exercises and limb exercises. These informants acknowledged such thoughts when they occurred, but were also concerned about maintaining a positive attitude.

Feelings of isolation and loneliness

All of the informants accepted the reality of isolation because they realized it was important not to spread the virus to others. However, being left alone was very stress-

ful. The informants described themselves as feeling bored, lonely and abandoned. As time progressed, isolation became a source of frustration. There was an increasing desire to go back to normal life and to re-engage with the outside world. The informants had a desire to get on and live their lives again:

I was hospitalized for 22 days. Each day seemed like a year to me. I found it so difficult to pass a day. Every day I waited for the doctor's round and looked forward to hearing about my condition, whether it was getting better or worse.

The informants were frustrated by their withdrawal and isolation from others. It was not only during hospitalization that the informants felt lonely; one informant mentioned that she felt the same when she returned home:

When I was discharged, I looked forward to seeing my family. However, there were a lot of changes in the family. My mother-in-law would not come to see me because she was afraid of contracting the disease. My domestic helper had resigned. My children had moved out for two weeks so I could have some rest at home and my spouse looked after me instead. I felt so lonely. I just turned on the television to have some noise in the unit. I felt depressed. I found that it was difficult to go back to normal life after being discharged. I cried for no reason.

Being isolated, the informants would have liked to have information about the outside world to keep them updated with what was happening in the world:

We need to be in touch with the outside world. For example, in my ward, one newspaper had to be shared among five beds. If we had had a choice, I wouldn't have minded paying for the newspaper. This would at least have given us some sense of choice. However, when I was admitted, it seemed as if I had no choice in my daily life. I would like to emphasize that we were isolated for 30 days, not three days. The minimum length of stay was 21 days. Some of us had television, some hadn't. I started having the television from the ninth day of my admission. It was very difficult, very difficult to pass the time. When I returned to work, I would certainly buy newspapers for the patients if they requested it.

There was some variety in the wards where the participants stayed, in that some stayed in a single room and some stayed in a ward with a total of eight people. Below are two participants' accounts:

I had a single room, but I needed to share the toilet and bathroom with another patient. While I was on my way to recovery, I found the patient with whom I shared a bathroom coughing severely. I was frightened that I might contract the disease again. My after-thought was that we were in the same boat and that I should not be afraid. I hoped that I already had enough antibodies to fight against SARS.

Although we were in a general ward, we had curtains around us. Since the mode of infection is via droplets, we were given plenty of space between our two beds. I did think the precaution was sufficient. I liked being in a general ward because I had two nurses next to me and we were very supportive of one another.

As a result of restrictions on visits, the families of the informants communicated with them mainly by mobile phone. Difficulties arose when the informants were too tired to answer the phone but were concerned about members of their family:

Sometimes, I was too tired to talk over the phone but I still wanted to switch on the mobile because I was concerned about my family's condition; I was afraid my family might have contracted SARS. They were required to be quarantined for 14 days. I found I could not control my temper during that period. After two sentences of talk with my family, I felt short of breath and became very frustrated. I understood that my family would like to listen to my voice, but I just could not talk. Later, when they understood my situation, the encounters were better. They would listen to me talk first in case I became out of breath later. They would then tell me news about the family. When I was tired, I would tell them to hang up.

During the SARS period, video conferencing was set up in some hospitals to help the patients see their relatives via television. There were different responses to the video conferences. Some informants appreciated it, while others thought it was of not much use. This was because some family members lived far away and did not think it was worth travelling so far to see their relatives through the screen for only 10 min.

Physical effects

Shortness of breath was described by the informants as the most severe and difficult problem that they encountered. They also complained about diarrhoea, numbness in their

legs and arms, and pain in their arms because of the intravenous infusion of medication:

During the acute stage of the illness, I didn't have the energy to even go to the toilet. After going to the toilet, I needed to rest for 15 min. When I had my daily chest X-ray taken to monitor my progress, I simply could not hold my breath. When the doctors were going about their rounds, I could not say more than one sentence. I could only nod or shake my head. I was in great distress. My hands were all stiff and cold because of the intravenous infusion of medication. Maybe my condition was worse because of the high dose of medication. I was tired.

Support

All efforts to overcome interpersonal isolation, from a word of encouragement to calls and cards from families, colleagues and friends, are important in times of intense strain and stress. Such shows of support helped sustain the morale and motivation of the informants in fighting with SARS:

My family rang me and my colleagues sent me cards. They wrote a lot of kind words and words of encouragement on the cards, which brightened me up. I felt that others cared about me, which was very important.

My family sent cards to me. Also, when I received cards or messages from my old colleagues, it really warmed my heart. Sometimes I rang up my colleagues and had a good chat. I felt better afterwards. I felt that others were supporting me. I really felt that psychological support was very important. Its effect might be more significant than the medications, as we were not certain about the extent to which the medication worked and the severity of its effects.

Health-care professionals were also frequently mentioned by informants during the interviews. Some were referred to favourably, while others were described more negatively. The important areas of care included the reassuring presence of a nurse, words of encouragement, support and information, especially during the periods when they were undergoing dyspneic attacks:

When facing such a crisis, it is crucial to feel that one is not alone.

I really needed encouragement at the acute stage of my illness. If the nurse simply said something like, 'There has been some improvement', I would feel much better.

It was important that the nurses give extra care over the intravenous infusion or heparin block so that the patients would not further suffer the need to change the sites of infusion.

We not only needed physical care but, also, psychological and spiritual support because we were isolated; actually, in absolute isolation.

When I was in the severe dyspneic stage, I would feel better only when the nurse came in and applied the oximeter or increased the oxygen flow or took my respiration. I was sure that this would increase my confidence.

Although the informants wanted to see the nurses come in more often to reassure them, they also expressed fear that the illness would infect the nurses, even though the nurses wore protective clothing:

Maybe because we were in a dyspneic state, the nurses were frightened of becoming infected through droplets. Although we wore a surgical mask and they had protective personal equipment (with an eye shield covering their eyes, a mask covering their nose and mouth, a cap covering their hair, and a gown covering their body), there was still a chance that they could contract the disease. I understood the situation.

The support given by fellow patients was also a tremendous help to the participants:

When I was placed in a ward, there were two nurses next to me who supported me and encouraged me. We were in the same boat. The support they gave me, especially when I was in great distress, meant a lot to me.

The love and spiritual strength provided by personal religious practices, faith, prayer and beliefs also need to be recognized and encouraged by nurses if this dimension is valued by patients:

As I am a Christian, I had confidence that my God would keep me in His hands.

Change of perspective on life

Having the illness prompted the informants not only to understand that life is fragile, short and uncertain, but also helped them to put life into a broader, more meaningful perspective. The informants stated that they had redefined their priorities in life:

I have redefined my priority in life. Before SARS, I spent a lot of time studying, pursuing a degree and certificates, earning more money, aiming at promotion, etc. Now, I have changed my priorities: health and family are the most important things to me. I would like to spend more time with my family.

Change of perspective on nursing

The fact that the informants had themselves experienced what it was like to be a patient caused them to reflect on the role of nursing. They found that caring for patients and giving holistic care, especially psychological care, was of the utmost importance in times of severe distress for the patients:

I have been a nurse for 10 years, but it was the first time I became a patient. When I was a patient, I was aware of the patients' needs and feelings. With these experiences, I felt that I could understand the patients better. I would care for their physical needs, as well as their psychological and spiritual needs. I found that if I initiated conversations with the patients and encouraged and cared for them, they would feel much better.

DISCUSSION

The findings of this study are similar to those in the study conducted in Canada by Maunder *et al.*, which identified feelings of fear, loneliness, boredom and anger as having the greatest emotional effects on patients with SARS.¹⁵ Patients with SARS worried about the effects of quarantine and contagion on loved ones. As for the physical symptoms reported by the informants, these were similar to those in the Canadian study reported by Avendano *et al.*, which determined that dyspnoea and hypoxaemia were the most common symptoms.¹⁶ Some patients also reported numbness and tingling in their hands and feet.

The importance and value of nurses in isolation also emerged, particularly in relation to communication. The nurse has a critical role to play in ensuring that the psychological demands, stressors and uncertainty of the patient in isolation are not compounded by a lack of interventions by nurses, so that effective coping is promoted.

Health-care leaders, such as frontline caregivers, must also recognize their responsibilities. They need to provide equipment and environmental controls that maximize the safety of their health-care staff.¹⁷ Amid the fear of intubation and death, compassion and the human touch is something that will make a difference.

Limitations of the study

This study is based on a convenience sample of 10 informants who volunteered to participate. The fact that the nurses were self-selecting introduced a selection bias, and their views might not be representative of the views of those who did not take part. Although a broad range of experiences was described by the informants, the researcher does not claim that these are exhaustive and any generalization of the findings should be carried out with caution.

CONCLUSION

In this paper, the psychological and physiological processes and characteristics of nurses with SARS were discussed. The psychological characteristics of individuals with SARS included uncertainty, fear of death, high anxiety and frustration, and the loss of control. The physiological characteristics were sudden and severe shortness of breath, fatigue and diarrhoea. Isolation was found to be a source of stress because it led to boredom, loneliness and frustration. Having control over information was important for the patients as it gave them the feeling that they were maintaining some sort of control over themselves. From the findings, it seems that holding perceptions of support from health-care professionals, family members and friends, having a trusting attitude towards the physicians and the treatment, being informed about one's progress and having a balanced attitude towards the illness all directly help the patient cope with the illness.

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