Original paper

The perceptions of health care workers on the provision of services amidst COVID-19 pandemic in a maternity care hospital: Qualitative study

Vindya Wijesinghe[a], Probodana Ranaweera[b], Mohamed Rishard[c], Yasasvi Walpita[d]

Abstract

Introduction: COVID-19 infection is speading throughout the world increasing the death tolls. Health care workers are overburdened with increased workload and having to work in unknown territory of disease leading to changes in the quality of service delivery. Therefore, this study aims to explore the perceptions of healthcare workers in a maternity unit of a Sri Lankan Hospital on provision of services during the pandemic.

Methods: In depth interviews were conducted with 25 participants representing different health care worker categories during the second wave of COVID-19 pandemic in Sri Lanka. The sample size was determined by achievement of the saturation point. The interview guide allowed exploration of work related issues, health system related issues, logistical issues, and psychological concerns. Conventional content analysis method was used to analyze the data.

Results: Analyzed data revealed 15 themes which include sense of duty/ self-satisfaction, concerns toward the loved ones, concern towards themselves, doubts about the disease, care to the patient during the pandemic, changes in managing emergencies during the pandemic, support from other HCWs, work related burn-out, pandemic related barriers to serve patients, support from the administration, discrimination by the others, awareness programmes for COVID 19, PPE related issues, ambiguity of national guidelines and equality for all.

Conclusions: COVID-19 has affected the life all personal including the HCWs. They are requested to continue providing services amidst multiple concerns including the scarcity of medical equipment and cadre. Policy makers and government should look into the possibility of financial assistance and psychological support programmes to boost the spirit of the health care workers.

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[a] *Resident Obstetrician and Gynaecologist, Ministry of Health, Sri Lanka.*

[b] *Consultant Obstetrician and Gynaecologist, Department of Obstetrics and Gynaecology, University of Colombo, Faculty of Medicine, Colombo, Sri Lanka.*

[c] *Consultant Obstetrician and Gynaecologist, Department of Obstetrics and Gynaecology, University of Colombo, Faculty of Medicine, Colombo, Sri Lanka.*

[d] *Consultant in Community Medicine, Department of Community Medicine, University of Colombo, Faculty of Medicine, Colombo, Sri Lanka.*

Correspondence: VW, e-mail: vindyanirmani@gmail.com

https://orcid.org/0000-0003-0277-7799

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Introduction

Corona virus disease (COVID-19) or severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is highly infective. It could result in asymptomatic as well as symptomatic infection. Spectrum of symptomatic infection could range from mild to critical. Though majority of cases are mild disease, high mortality is reported among immunocompromised[1]. Currently it has been declared as a pandemic, causing diverse psychological changes in the population in addition to physical and social well-being. Knowledge of COVID-19 is often changing and evolving since its onset.

Health care workers (HCW) face many problems during this challenging time. Most health care systems are overwhelmed with ever increasing number of patients, stretching resources to their maximum. Poorly understood pathology with everyday evolving new knowledge, contributes significantly to the distress of health care workers. Health-care providers often show their resilience and the dedication to overcome difficulties. However, COVID-19 is linked with multiple mental health problems in patients and the HCWs[2,3]. Accumulating evidence suggests need of additional support for mental and psychological well-being[4,5].

The accumulating evidence from around the world suggest that HCWs face many challenges including issues with their own health and being marginalized by the society which demotivates them from their work. A qualitative, study conducted in USA on home health care workers has revealed that inconsistent delivery of information on COVID-19, inadequate PPE, and a heavy reliance on public transportation are the main challenges for them[6].

Few other studies involving health care workers have demonstrated the fact that further support and knowledge on COVID-19 is important for sustainable health care system[3,5,7,8]. The reasons for this being the timeline for COVID-19 pandemic cannot be predicted and absence of an effective curative strategy[6,9].

First local case of COVID-19 was diagnosed in Sri Lanka on 11 March 2020 in a person who had a direct contact with a foreigner. Since then, during the first wave, 197 cases were identified, and 7 deaths within 30 days and the government executed strict lock down during these 30 days. Following exit, it was predicted to have a low case burden[10]. There were no new cases for three months, except from quarantined patients from other countries. The beginning of the second wave was reported on 4th October 2020. The spread was more widespread and intensive. At the time of submission there were 67850 positive cases reported and 343 deaths due to COVID-19.

A good understanding of perception of HCWs within the local settings is mandatory to arrange the necessary support for them during this unprecedented time. Currently limited number of studies are available to describe the experience of HCWs during the COVID-19 pandemic. There is only sparse evidence available from resource poor settings to understand the gravity of the problem. This study aims to shed light in describing the experience of HCWs during the COVD-19 pandemic in a maternity care hospital with limited resources.

There is paucity of data from Sri Lanka addressing the concerns of HCWs in the current pandemic situation. De Soysa Hospital for Women (DSHW) encounter increasing number of patients from high-risk areas for COVID-19 and cater for many medically high-risk pregnancies as a tertiary care maternity hospital and a referral center. Many areas around the hospital were under lockdown during the second wave of COVID-19. It was prudent to use DSHW as a study setting to evaluate the impact of current situation in the context of HCWs in a limited resource hospital which deals with many obstetrics emergencies and high-risk pregnancies. The findings of this study may benefit to improve the short term and long-term well-being of the HCWs in similar settings.

Methods

The study was conducted in the De Soysa Hospital, a tertiary level maternity care hospital in Colombo, Sri Lanka. Patients from lock down areas, patients who are quarantined, patients with symptoms of COVID and patients who have had contact with COVID positive cases were admitted to the isolation ward of this hospital, where the diagnostic tests were conducted for COVID-19, before transferring to a normal ward. Patients who are tested positive for COVID-19 were sent to a part of isolation ward, which is separated from the triaging ward. “High risk for COVID ward and isolation ward” was used synonymously to describe the above wards in our study.

All categories of health care staff (consultants, medical officers, nurses, midwives, health assistant staff) working permanently in the DSHW was included into

the study. Staff members currently on leave, reported to work recently (within 1 week of the interview after a long leave such as maternity leave) were excluded from the study.

Sample size was determined by considering the saturation point in each category of staff (no new information generated). However, at least a minimum of 5 participants from each category were interviewed as a baseline.

All staff members from different categories were invited to represent the category they belong to. To ensure representativeness, one volunteered member of a staff category was interviewed from one ward, and next member of that same category was interviewed from the next ward. This order was followed till one member from one category was interviewed from all five obstetric units (hence the minimum standard of 5 from each category). Participants were interviewed after taking informed written consent by the Principal Investigator (PI) who was trained on qualitative research techniques. The PI was supervised closely during the interview process.

Health care workers who were willing to enroll, was given a date and a time according to the convenience of the staff member. Appointment book was maintained to prevent overlapping interview times by the PI. Only the PI had access to the names and times. The participants were able to withdraw from the study at any point and the recordings were deleted as per request.

The interviews were conducted following all safety guidelines. Participants who were not willing for face-to-face interviews were offered Zoom or telephone conversations. Purpose of the study was explained to the staff member and she/he was requested to express their ideas freely. The interviews were recorded with permission while the confidentiality and security of information were ensured.

In-depth interview was carried out with open ended questions based on interview guide which was designed by the consensus of the research team and on expert guidance. The following areas were initially explored from the staff members to address their experience, fears, expectations, and ideas. The process was iterative. Depending on the response, additional areas were encouraged and added in the subsequent interviews.

1. Self and family care during the pandemic.
2. Maintaining patient care during the pandemic.
3. Management of emergencies.
4. Social response.
5. Logistic support and administrative support
   Additional areas added during the process.
6. National response.
7. Quality of care.

All the in-depth interviews were either recorded in a tape recorder or in the Zoom platform or phone recorder depending on the mode of interview with consent. The recordings were kept password protected with the enrollment number and always under the principal investigator's supervision. Recorder was password protected. The recorded conversations were transcribed on daily basis. The interviews were continued until all investigators agreed on a saturation point based on the transcripts of each staff category. The transcripts were then coded manually for thematic content analysis.

The content analysis identified common themes and sub themes across different staff categories which were grouped together. Consensus was achieved through discussion of all investigators on themes that were controversial.

Ethical approval was obtained for this study by the Ethics Review Committee (ERC) of the Faculty of Medicine, University of Colombo. Permission was obtained from the Director of the Institution after the ethical approval was granted. Data collection was carried out from 20th of November to 20th of December 2020.

Results

Twenty-seven health care workers were interviewed including 7 medical officers, 2 consultant obstetricians, 8 nursing officers, 5 midwives and 5 health staff assistants. Twenty-one of the twenty-seven participants (77%) were females. 11 (41%) were unmarried. Mean age of the sample was 34.4 years and mean duration of service was 10.5 years. Mean time duration of the interviews was 11.8 minutes (range 6-21 min). Table 1 describes the above parameters by staff category.

Table 1.

Staff category[a]	Mean age years	Mean service duration in years	Gender		Marital status		Mean duration of interview (Min)
			Male No (%)	Female No (%)	Married No (%)	Unmarried No (%)	
Consultant Obstetrician (CO)	44	19.5	100	0	100	0	13
MO	32	6	42.8	57.2	28.5	71.5	13.2
NO	36.1	14	0	100	87.5	12.5	12.8
MW	34.8	10.8	0	100	40	60	10.4
HSW	30.6	7.2	0	100	60	40	9

Demographic details of the participants with the duration of the interview. [a] job description of the participants at the time of the study.

Fifteen main themes related to service provision during the pandemic were identified under the areas explored. Few subthemes also emerged from some of the main themes which warrants attention. The Figure 1 highlights the main themes and subthemes emerged from the study.

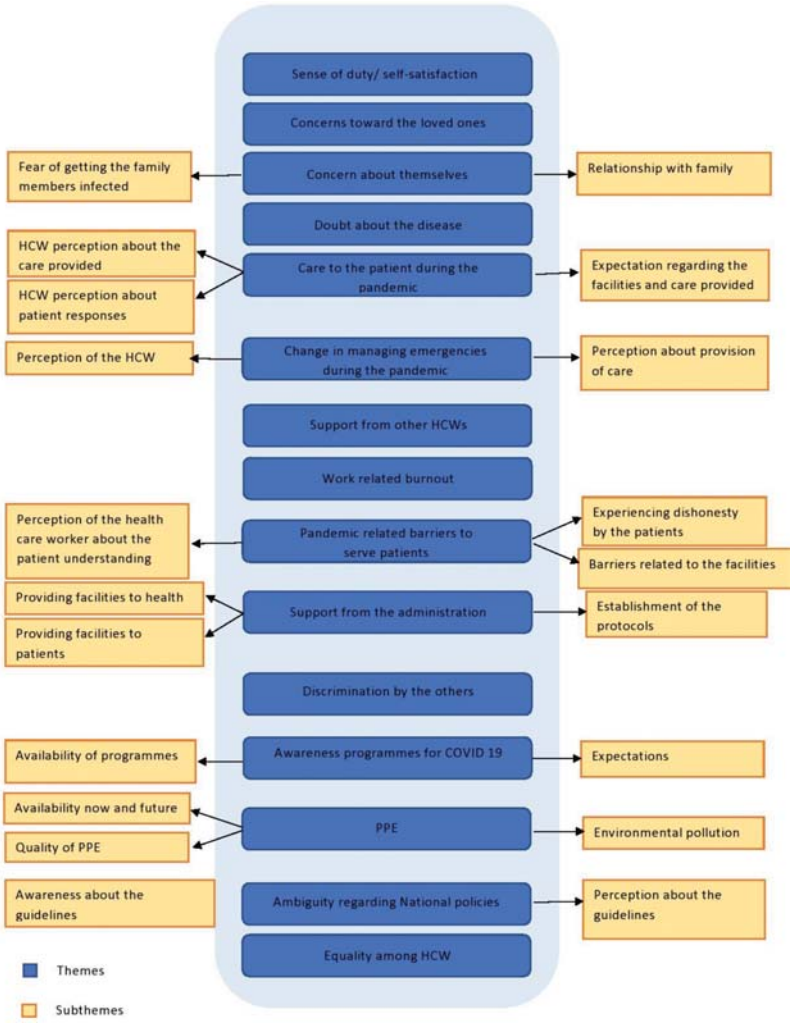

Figure 1. **Themes and the subthemes.**

1. Sense of duty

Some perceived provision of care for suspected patients with COVID as a privilege. Young staff members who were rostered to work in isolation wards described it as an opportunity to contribute to the battle against COVID. Few even regarded selection to work in isolation wards as proxy marker of their medical fitness.

"I'm happy to contribute to the care of COVID patients as a young person. I think, it is my luck that I had opportunity to serve a group of patients that everybody neglects" (MO).

"I'm contented with my work for COVID patients. The work makes me happy" (MO).

"I feel proud about it" (HSW).

The happiness in contribution was noted in all categories. Many volunteered to the work and some even have volunteered to accompany patients to designated hospitals to learn more about the caring for COVID patients.

2. Concerns towards loved ones

Fear of getting the family members infected: Almost all had concerns about loved ones, this was mainly due to the fear that family members getting infected from them and they were worried that physical distancing could affect their relationship. Many were scared that they will take the disease home from the hospital. Infection control measures learned from working in the wards were used protect the family members. Many described measures that they have taken to minimize the risk of infection. Many were worried about the family members with medical disorders and elderly getting infected.

"Me and my wife adhered to standard practice at home, I have changed the daily routine at home such as having daily baths" (CO).

"I sent my grandfather to an isolated area of the country to protect him from the potential infection from me" (MO).

"I have given instructions to family members and they adhere to those, they are going out of the house barely" (NO).

"Since my parents have chronic diseases, I'm so scared that I will take it home and may cause severe illness in them" (NO).

Relationship with the family: Working as a HCW during the pandemic has affected the physical relationship with the family drastically. Two participants have not gone home for more than 2 months after COVID second wave. Some others visited their homes infrequently to minimize the risk. Some were concerned regarding the possibility of getting the infection by using public transport. Some other stated, lack of transport facilities as a reason for infrequent visit.

Despite all these limitations, majority stated that their relationship was not affected significantly during this challenging time. However, few who were concerned about the relationship have experienced some major issues.

"I go home once a month, since my home is at Rathnapura, travelling is difficult these days. Also, I have not enough time to go home due to high workload. I feel isolated. Even I go home, I sleep in a separate room. I use separate cutleries to eat, and I talk to them maintaining the distance" (HSW).

"I maintain the distance with my family members as much as possible by trying to avoid kissing and hugging as much as possible" (NO).

"My husband cannot come home as he works overseas but when he was at home last time, I could not be with him due to work. I feel distant from him" (NO).

Though the participants in the study did not mention that their family members restricting / asking them not to go to work, one participant stated that "…I personally know many husbands are having fights with their wives who are HCW to stop them from going to the duty ……this is due to the fear." (CO).

3. Concerns about themselves

Many believed that PPE offer total protection and motivated them to work closely to the patient.

"We are protected due to PPE, I don't think COVID-19 is a threat when we are in PPE" (HSW).

"I'm sure, if I get the disease, it is not from the ward as we take all precautions" (NO).

Many have studied the natural history of the disease. Many believed, that in majority COVID-19 is a milder disease. This belief has led many to continue their duties as normal.

"We continue our duties as usual; nurses are not scared to be with patients as they are protected with PPE" (NO).

4. Doubts about the disease

All were aware of the highly contagious nature of the disease. Many believed young healthy people have a milder course with full recovery. Majority were not concerned about the contacting the disease while working. Nevertheless, few who had chronic illnesses like asthma, were very concerned contracting the disease. All were aware of the mode of transmission of COVID-19. "I was scared initially when we set up the ward, however, now I know how the disease is transmitted …… I fear less". It was interesting to note that many of the participants learnt about the disease from the media but not through any institutional mechanism. The positive attitude of continuous learning to serve the patients and protect themselves were expressed.

5. Care to the patient during pandemic

HCWs perception about the care provided: More than 50% of the participants felt that provision of care has been sub-optimal. Some stated that "We only provide essential care due to the prevailing condition". Few said, "It is evident that there is a reduction in care due to the fact that elective surgeries and gynecological clinics have already stopped", (COs) "Because of this situation patient conditions can get worse without treatment, for an example, we recently had an emergency admission where we needed to transfuse the lady because she could not obtain treatment for heavy menstrual bleeding" (CO), "Another problem is, patients are getting admitted directly to the ward, which could otherwise have been treated in the OPD setting such as for prolapses and mild abnormal uterine bleeding" (CO), "I feel because of the fear, we tend not to treat urgent and even non-urgent cases properly…. I think we should treat all patients with necessary precautions" (MO).

One stated that the care had been compromised due to limited time spent with each patient. "Before the COVID period, we tried to attend to all the needs of the patients. Though, we have not changed the practice, because of the reduced time spent with each patient, I feel that we are not attending to all the needs of the patient…" (NO) "Even though they are isolated in the ward with a mask, we inquire about their issues frequently and try to help" (NO).

"Since we do not go to the patient very often, it affects them psychologically, therefore, I think that itself is sub-optimal care" (NO).

Delay in management was raised by many. The long waiting time due to triage procedure was highlighted. Inability to attend to the patient immediately due to the time taken to wear PPE was mentioned by many.

Some commented about the change in roles of duty. The duties earlier done by supportive care staff like mopping, cleaning the bed are now done by the nurses to preserve the number of PPE used per delivery. Health supportive staff interviewed, confirmed this act is now performed by the nurses.

One even stated that focus should be to stop the outbreak rather than improving individual patient care "Relationship between the nurse and the patient is distant now. We are not catering the psychological touch anymore and even while speaking we maintain the distance. But this is not the time to think about improving the bonding. Everybody should focus on coming out of the outbreak" (NO).

One felt that reduced interaction between HCW and patient may be even beneficial to reduce the transmission "we have limited frequent interactions with the patient, but I think it is for the best of the patient and for us." (NO).

Many confessed that they feel "frustrated" and "sad" because they could not provide proper care due to the scarcity of the equipment, facilities and restrictions imposed.

HCW perception about patients' responses: Many were concerned that patient felt isolated and separated. "They are isolated and separated ……" (MO).

"all high-risk patients have to undergo PCR …. Sometimes PCR reports take long time to come" "I have observed that some patients have become aggressive and blame us when the reports get delayed. They may be wondering why they have been isolated

and kept in an unfamiliar ward and not being discharged quickly" (NO).

"It feels like it has happened to me, I feel very sorry for patients who are isolated" (MW).

Many expressed concerns about patients' knowledge and attitude. Majority were frustrated since many patients do not adhere to safety precautions and regulations while in the hospital. All participants strongly believed in providing more knowledge to patients by the government and hospital authorities to reduce the contamination.

Expectation regarding the facilities and care provided: Many raised issues of "Lack of adequate distance between the patients and all patients have to use a common washroom…. Delays in receiving PCR reports cause isolation ward to be overcrowded … this may act as source of infection". Staff in the isolation ward were unsatisfied with facilities available for them for changing and resting during the shifts.

Currently, special care baby unit and routine postnatal care is located in the same isolation ward. Staff was concerned regarding optimum care provided in the same set up in the future as the number of patients are increasing rapidly. "Need more facilities such as CPAP and oxygen. Area is not enough to provide care. We might need more and more facilities in the future" (NO) "facilities such as boilers and washrooms should be increased" (NO).

Lack of uniformity in management and heterogeneity were emphasized. "We should start managing patients according to a protocol…. Care should be patient centered rather than HCW centered…." (CO).

"Nurses were worried about the frequent changes in protocols of management of COVID positive / suspected patients… patients were not happy as their regular consultants have been changed …. some patients criticized the management done by different consultants stating that their regular consultants managed them in a different way …which makes us feel uncomfortable" (NO).

"By this time many countries have established providing routine care during pandemics …We are late to start due to lack of vision…I feel we should not limit routine care. In fact, we should provide our care with necessary precautions" (CO).

6. Changes in managing emergencies during the pandemic

Perception of the healthcare worker: "So far, no serious incidents happened, mainly because a well experienced team is looking after the labour room. But if the workload increases, the situation might change in the future" (MO).

"In case of an emergency, delays can happen due to donning of PPE. Due to the limited number of care providers able to attend to an emergency it may be difficult to manage" (HSW). However, many were confident that they can manage emergencies effectively in the given circumstances as they were experienced.

"I think having a little delay due to donning into PPE is acceptable as it benefits both patient and us" (HSW). In contrary, irrespective of the category, many stated "In an emergency we will attend without taking many precautions as we are saving lives…"

Many express feelings of regret due to delays in attending to emergencies and were concerned about the consequences to the patient.

Perception about provision of care: "I consider that provision of emergency care has no exemption, if we do not act promptly patient's health can be compromised, as an example, in the current situation for emergency caesarean section, more than one hour is taken for preparation. I believe there should be a pre-prepared emergency team to expedite it even further" (MO).

"If the staff is well trained on the precautions and pre-prepared for emergencies like cord prolapse and abruption. It is possible to attend to emergencies in a given time frame… I'm ready to take part in this endeavor at any given time" (CO).

Having a dedicated emergency team would reduce the number of PPE been used. "it will preserve the number of PPE used per day as well" (CO).

7. Support from other HCWs

People who work together were supporting each other physically and psychologically. "everybody tells me and reassure I'm capable of doing this task successfully.…" (NO). Duties in the ward were shared among the available staff.

However, many medical officers expressed the distress of senior members avoiding the duties by putting the less experienced juniors into the forefront "Some seniors tend to avoid duties and allocate the juniors to work more in the frontline" (MO). Some even highlighted notable disparity in the Rota.

Issues with the senior staff was evident in further comments "Support from the seniors vary depending on the situation, it took some time for us to learn how to carry out our tasks in the new normal, we felt uncomfortable that some seniors frequently questioned and checked on our work, and we tend to feel that they were not satisfied with what we do at work. They should know there is a learning curve for everything" (NO).

Whereas some seniors were constructive and supported the juniors to catch up with work at the early stage of the pandemic "Whenever we had issues, they supported" (NO).

"Nursing sister in charge supported us in every possible way" (MW).

The feeling of being neglected and palmed off by seniors were expressed "I don't feel that anyone takes the responsibility for us, everybody is verbally indicating that if we get infected, it is your own responsibility…." (NO). "When I was quarantined due to an exposure of another COVID positive midwife, I was not looked after well, my well-being was not inquired by anyone. So, I felt neglected. Since it is an occupational hazard, they should have treated us better…" (MW).

8. Work related burnout

Work related burn out was aggravated by having to use PPE for long periods, inadequate staff per Rota and increased workload. "We are in the same PPE for 2-6 hours it is so exhausting not only physically but mentally too" (MW).

"One day I had to wear the PPE form 7 pm to 3 am, I was so thirsty and hungry, I cried at the end…" (NO). Distress related to discomfort in PPE was very common among the participants. "It is very difficult. At the end of 20 min, we are soaked with sweat." (NO).

"Everybody has issues at home and work, due to increased workload we are so exhausted. Sometimes we cry together" (NO).

9. Pandemic related barriers to serve patients

Perception of HCW about the patient's understanding: "Patients' needs to be educated, their background knowledge is poor, they are not wearing the mask in ward irrespective of our advice" (NO). Patients were requesting for more comfort and more communication with the family during the stay. They were asking to allow food from the home even though the food was supplied by the hospital. Reluctance to stay in the isolation ward was expressed to many HCWs.

Experience dishonesty by the patients: "S"ome patients are not willing to provide the information about their whereabouts, they must be educated to co-operate more with the HCW…. many patients lie about the demographics and the symptoms due to fear of discrimination…. Triaged patients wander inside the hospital irrespective of the advice, leading to contamination…" (NO).

Barriers related to the facilities: Shortage of the number of beds and accommodation facilities were highlighted by some participants. "…We have only 18 beds but sometimes we have to keep 60 patients in the ward till they are cleared" (NO). "Patients have to stay in chairs for several days due to delay in PCR reports, I'm sure at that point we act as a source of infection" (NO).

10. Support from the administration

Providing facilities to HCW: It is worthwhile to note that some participants did not agree to respond to the question. "I cannot comment on that" (HSW). "Staff is less but we share the duties as much as possible" (HSW).

"We have to anticipate higher workload in the future, more cadre should be allocated to prevent burnout. The methods we used to function the system in hospital is not very effective. The risk of contamination is high, if we get infected the whole system is going to collapse" (MO).

"My main issue is the scrubs, scrubs get soaked after wearing PPE, but have no adequate suits to change appropriately. Feeling of being in the same suit for whole day is disgusting……. we all change in the same room …risk of contamination is high …" (HSW).

" …. I think with good administrative strategies we can provide a better care…" (MO).

Providing facilities to patient: Under the present situation, scarcity of facilities was highlighted "Sometimes equipment fails, we have no back up equipment, ward should be fully equipped to carry out resuscitations" (MO). "Sometimes, facilities are not adequate, especially when the patient load is high due to delay in PCR reports…. Fathers cannot see their newborns in the current set up…. Mothers are on the chairs when the beds are fully occupied …this upset me a lot" (NO).

When patients are positive for COVID, they are being put in a separate room where the ventilation is poor "They often ask why they were sent to such a place and patients perceive it as a punishment …… we need more CTG machines and multimonitor to reduce the contamination as we use the same machine for whole ward. Complete cleaning of the machine as per instructions is not possible with the high patient load" (NO).

The benefits of patient education were expressed by some participants. "Patients should be educated before entering into the hospital to increase the compliance" (NO).

Establishment of protocols: "Support is excellent by providing the materials and equipment. But protocols of the hospital changes from time to time and there is a significant delay in receiving the information about the changes. This leads to conflicts…there should be a process to disseminate the information as a continuum" (NO).

"Support should be taken from the people who work in the ground level" (CO). Participation of people involved in direct care for decision making and designing of protocols was emphasized by many.

"There are many practical issues in advice given by the seniors and administrators …. Problem is, protocols are made by people who do not work in the field… There is a huge issue in leading, we need separate independent body to handle issues related to COVID. So, the decision making is not clouded by other internal politics…" (MO).

11. Discrimination by others

More than half of the respondents used the words like "never" "hardly" when asked whether they experienced any discrimination by the others due to the fact that they are HCWs. But some emphasized that, their contact with the outside world has been limited so they may be barricaded from such experience. "I restrict myself in going to places of relatives and friends since I'm a health care worker, it is my decision" (MO).

However, some have undergone the experience of discrimination.

By other HCW "I have been discriminated by other staff members specially in the quarters, I think they think that we are a source of infection since we work in the isolation ward. It is unfair by us" (NO).

"I experienced verbal discrimination by the other staff members in the hospital …" (NO).

"Some people refused to eat with me. I felt sad" (MW).

"Some directly told me, not to come near them" (HSW).

"One person jumped into the gutter to avoid me" (MO).

But most of the HCW who were discriminated understood the fear of the other HCWs. No conflicts were reported between the staff members due to discrimination. Even though there was an element of sadness initially now it has disappeared from their minds.

By the society Both positive and negative attitudes were revealed. "Some treat me well, When I went to buy some goods, I was given the priority" (MW).

"Some drivers refuse to take us into the vehicle but on the other hand some are welcoming and praise our service" (MO).

"Some people inquire from my parent whether I am home or not to decide on visiting my place" (MO).

12. Awareness programmes for COVID

Availability of the programmes: Most were not satisfied with the availability of the programmes. "Hardly any" "never" were the words used to describe the educational programmes.

"I self-learn, I never received a formal education about it" (MO).

"Not everybody gets the equal chance to participate. As a result, some HCW knows how to wear PPE and some do not, I think training should be given to all" (NO).

Few had direct knowledge from the respective consultants, and they were content about it. But almost all, insisted on continuous update on the knowledge on COVID for better care for patients. "Finding the correct protocol consumes most of my time" (MO).

Expectations: "There is a no process to educate us as a continuum. At least we should be educated weekly" (NO).

"So far, I gathered information from the internet, I like to improve my knowledge further …." (NO).

All were preceptive for new knowledge. Some medical officers pointed out since the national guidelines were long it was necessary to convert it into a summary format. Distribution of summary format will benefit all. Further, reduce the heterogenicity in the management.

13. PPE related issues

Availability: "Currently adequate, but we are wasting a lot, still there is room for preservation. At this rate we will be exhausted soon" (MO).

Many expressed the difficulty of being in full PPE "it is difficult to be in the suite, sometimes we have to stay for a long time, it is better if we can change frequently" (MW)

"PPE is used liberally, and PPE is used as a false indicator of concern towards the HCW, with the rate that we are using PPE, we will exhaust soon. COVID will persists for a long time. I don't think the stocks are adequate to function in long term. There is no long-term plan for PPE. I think issues on PPE will come soon…" (MO). Lot of criticisms was coming from some participants on inappropriate usage of PPE.

Quality: Many claimed, "Some PPEs are good". Most were satisfied with the PPE quality, but some mentioned the poor quality of N 95 masks. CO mentioned that some donated lots were labeled as "not for medical use" but still we use them for medical use.

"Due to warm weather, we cannot stand the PPE for a long time, I think PPE guidelines should be changed accordingly" (MO).

Environmental pollution: Some raised the issue regarding the discarding of the massive load of PPE. Emphasis on the biodegradable PPE was noted. Many perceived that the authorities have not anticipated this issue.

14. Ambiguity regarding National policies

Awareness: All were aware about availability of National guidelines, but many had no time to read it with the workload. Many expected the hospital to launch a programme to increase the awareness.

Perception: Alarmingly "We really do not adhere to guidelines…it is our weakness" (MO).

Satisfaction about the National COVID management programme was expressed by some "Government is doing the best considering the economy of the country, complete lock down is not possible" (NO), but the deficiencies were pointed out as well "No proactive thinking, guidelines are prepared once we face the issue, but this should be the other way" (MO).

"We had enough time to get ready for the second wave, but we did nothing …" (CO).

"Quarantine policies are not adequate. People have no money to purchase clothes and discard the used ones in positive patients. So, many people from quarantined families visit to get the used items of positive patients and take infected material home" (NO).

"Difficult to imagine further improvement by the government …Government can increase the awareness, but individual responsibility should not be neglected…" (NO).

15. Equality among the HCW

Most claimed that all were treated and provisioned in the same way. But only few had concerns "Not all are involved in the management, if everyone is involved the risk per person is less" (MO) ."Risk management should be done in instances where things go wrong. But the proceedings should be similar to all circumstances" (MW2).

Discussion

This study showed that the participants have a major degree of fear towards the family members rather than themselves. Due to the contagious nature of the disease, HCW are forced to live away from the family. Many expressed worries over having to stay away from the family and changes in relationship. The prolonged pandemic has aggravated these worries. Authors suggest exploring the possibility of providing the facilities to virtually connect with the family while at work. Another study carried out among health care workers has revealed similar findings indicating the need of looking at innovative solutions across health care communities[11]. However, it has been noted that the fear is less with time and experience working with the disease. Many expressed the reason for fear is the prevalence of risk factors for severe disease among the family members. Knowledge has helped them to come out of the fear. However, lack of an organized mechanism to update the HCWs with the evolving knowledge was highlighted by many participants.

In this study HCW expressed the fear of getting infected with the virus due to its contagious nature which is similar to other studies conducted during the previous pandemics[12,13]. But the symptoms of severe anxiety or depression was not expressed by the HCW who participated in the study compared to the previous studies which shows psychological distress among the HCW[2,4,14,15]. Only 2 participants reported crying but those were incidental and showed no signs of mental illness. However, authors recommend exploring about the psychological distress with validated questionnaires in a larger population.

Wearing PPE was reported to be unpleasant by many especially due to warm weather and absence of proper ventilation to the ward. This has led to more exhaustion. Having a longer shift has contributed to the distress due to PPE[16,17]. Some express the possibility of fear getting the infection due to longer shifts. We suggest that this concern can be alleviated by considering the shorter shifts. Also, the cooling and ventilation amenities can be considered to mitigate the exhaustion. Lack of therapeutic touch by nurses due to use of PPE has changed the care given by them. But the necessity of PPE in this unprecedented time was appreciated. PPE was abundant at the time of conducting the study.

In this study, it was reported that the HCWs were experiencing significant deal of infrastructure issues in providing care to high risk for COVID patients. Similar issues were reported in previous studies[18,19]. Reducing the patient load must be considered by changing the admission protocols. More space allocation for high-risk ward should be considered. Promoting home based care country wide will be the only option as the load of patients increase.

Willingness to work was seen among the healthcare workers during the pandemic. However, some had to face demoralizing incidents. Senior staff involvement in physical and psychological wellbeing of the healthcare worker was expected. As the pandemic progresses, training the supervising staff on psychological issues will mitigate the distress among the HCW. This fact has been emphasized by many studies[4,14,18].

"No-emergency in pandemics" is misinterpreted to delay the emergencies by some of the healthcare staff to prepare with the PPE for the emergency. Consequently, it has been found significant delays in emergency caesarean section. Adapting the accepted protocols to operating theatres to be prepared will alleviate this issue.

Discrimination by others was observed to a significant degree in previous studies[20,21]. But the participant did not reveal anxiety, in contrary they had understanding of the reason. This is seen as a positive finding by the authors compared to previous findings[21].

Ignoring the instructions by the patients were experienced by the HCW. This finding has been in line with other communities as well[22,23]. Negligence can lead to propagation of the disease throughout the country. It is a need of the day to influence people to adhere to instruction and comply with the HCW to minimize the contamination. As perceived by many HCWs taking personal responsibility in quarantine procedures without capitalizing own needs such as food from home may reduce the propagation of infection to others. Education of public before coming to hospital using public health sector is a possibility. In comparison the major reason behind the non-adherence was the economic crisis – funding the poor during this crisis will reduce the wandering outside for work by quarantined people.

Many pointed out the reduced contribution to policies and protocols from the frontline staff. This will reduce the validity of the healthcare. This has negative bearing as the pandemic progresses. This was highlighted by other studies as well[18,19]. Authors suggest this will improve the work satisfaction and efficiency of the healthcare during the COVID.

Staff was ready to make sacrifices and devote to patient care. This will ensure the quality care during this unprecedented time. Strengthening the HCW with financial incentives and mental support to boost the spirit will maximize the health care even with limited resources.

About the limitations of the study, the data collection was carried out during a short period of time in a confined community. Authors believe the possibility of more ideas outside the hospital. Nevertheless, our population represented various categories and data collected until saturation.

Conclusion

Policies and protocols must be influenced by the ground level workers to have a practical approach and prevent marginalizing the front-line workers. Updated educational programmes to mitigate the heterogenicity in the care county wide may support the HCW by reducing the workload and mental burden. Information flow to the ground level workers should be through the reliable sources such as experts in the field using contact less methods such as Zoom meetings.

Encouraging the pubic to adhere and support the HCW is needed to be established by any means, even by using penalty.

COVID-19 has affected the life all personal including the HCWs. They are actively providing the service with scarcity of medical equipment and cadre. Policy makers and government should initiate the financial programmes and psychological support programmes to boost the spirit of the work. Social media and mass media are suitable sources to upgrade the mental strength of the HCWs.

Availability of data and materials

The datasets generated and/or analysed during the current study are not publicly available due to the qualitative nature of the work but are available from the corresponding author on reasonable request.

Abbreviations

COVID/ COVID-19: Corona virus disease
HCW: Health care worker
PPE: Personal protective equipment

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